

End Semester Examination, May 2023

B. Sc (FST) - Fourth Semester

STATISTICS AND RESEARCH METHODOLOGY (THEORY) (BFST-402)

Time: 3 hrs.

Max Marks: **100**

No. of Pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Describe the following:

- a) Research designs.
- b) Methods of collecting qualitative data.
- c) Primary and secondary data.
- d) Methods of data representation.
- e) Median.
- f) Positive co-relation.
- g) Open and closed questionnaire.
- h) Confounding variables'.
- i) Difference between 'samples' and 'population'.
- j) Two measures of variability in distribution.

2 × 10

PART-A

Q.2 Compare and contrast between qualitative and quantitative study designs. Also, examine their advantages and disadvantages. [L5/L3 2] **20**

Q.3 Describe the various factors which threaten the internal validity of a research study. [L2;3] **20**

Q.4 Calculate mean, median and mode of the following data:

Marks Range	No. of Students
0-5	7
5-10	10
10-15	16
15-20	30
20-25	24
25-30	17
30-35	10
35-40	5
40-45	1

[L3/L5;1] **20**

PART-B

Q.5 Design a research proposal for your study on a topic of your choice. [L6; 2] **20**

Q.6 Describe the characteristics of a hypothesis. Classify different types of hypothesis. Justify the significance of a p-value. [L2/L4/L5; 1] **20**

Q.7 Summarize the various ethical principles to be followed in clinical research. Describe informed consent in detail. Also explain such situations where informed consent cannot be obtained and suggest remedial measures for it. [L5/L6; 2] **20**

End Semester Examination, May 2023
B. Sc. (FST) – First Semester
PRINCIPLES OF FOOD PROCESSING AND PRESERVATION
(BFST-DS-104)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 What is food preservation? Explain in detail any four common methods of food preservation. **20**

PART-A

Q.2 What is pasteurization? Explain the process and how it helps in food preservation? [CO-1][L-4] **20**

Q.3 Explain the role of microorganisms in cleaning the environment in detail. [CO-2][L-3] **20**

Q.4 Write short notes on the following in brief:

- a) Canning.
- b) Blanching.
- c) Sterilization.
- d) Chilling.

[CO-4][L-1] **5 × 4**

PART-B

Q.5 Explain the processing and preservation by low temperature and effect of thawing in food. [CO-2][L-2] **20**

Q.6 Describe the principles and application of preservation by chemicals and microorganisms. [CO-2][L-3] **20**

Q.7 Explain principles and application of microwave heating in food processing. [CO-4][L-3] **20**

End Semester Examination, May 2023

B. Sc. (FST) - Second Semester

TECHNOLOGY OF CEREALS, PULSES AND OILSEEDS (BFST-DS-201)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Explain different types of wheat on the basis of protein content and hardness. Draw the flow diagram of milling of wheat along with explanation of each steps involved in milling. [CO1][L2] **20**

PART-A

- Q.2 Draw the structure of rice and explain milling of rice along with explanation of each steps involved in milling? Define parboiling and give disadvantages and advantages of parboiling? [CO2][L3] **20**

- Q.3 Define 'baking'. What are the various ingredients used in production of bread and cookies? Explain function of each ingredient used in the production of bread? Explain straight dough method of bread making in detail? [CO3][L3] **20**

- Q.4 What are different types of millets and explain any one in detail? Explain milling of oats, and any one pulse with explanation of each steps involved in milling? [CO4][L2] **20**

PART-B

- Q.5 Draw the structure of corn grain and describe the various types of corn produced along with their characteristics and scientific names? Draw the flow diagram for wet milling of corn with explanation of each step. [CO4][L2] **20**

- Q.6 What are oil seeds and explain the process of extraction by screw expeller of soybean oil? Explain Hydrogenation, inter-esterification and winterization. [CO2][L3] **20**

- Q.7 Define 'favism and lathyrism'. Explain the processing (Soaking, germination, cooking and fermentation) of pulses in detail. [CO3][L4] **20**

End Semester Examination, May 2023
B. Sc. (FST) - Second Semester
TECHNOLOGY OF MILK AND MILK PRODUCTS (BFST-DS-202)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Discuss in brief about present scenario of milk industry in India. Explain in details the different components present in milk. [CO2][L2] **20**

PART-A

- Q.2 Explain the procedure for manufacturing of yoghurt and butter with the help of flow chart. [CO3][L4] **20**

- Q.3 Difference between soft and hard cheese explain it with the help of various examples? Explain in details the manufacturing of cheese with the help of flow chart along with the defects in cheese? [CO3][L1] **20**

- Q.4 Define 'platform tests'. What are the various platform tests performed during reception of milk in the milk industries? Discuss. [CO1][L2] **20**

PART-B

- Q.5 Discuss the production method of market milk using pasteurization along with schematic diagram of plat pasteurizer. [CO3][L1] **20**

- Q.6 Explain cleaning in place and cleaning out of place process? What are various the cleaning and sanitization agents used in dairy equipments a dairy industry with examples. [CO4][L2] **20**

- Q.7 What are various types of casein present in milk, explain. Write down about various enzymes catalase, alkaline phosphatase, lipases and proteases to identify freshness of milk? [CO3][L3] **20**

End Semester Examination, May 2023

B. Sc. (FS&T) - Second Semester

FOOD AND NUTRITION (BFST-DS-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 "Meal planning is an integral part of each family system". Justify the statement. What are the non-nutritional factors, which affect meal planning? **20**

PART-A

- Q.2 Elaborate on the different methods of food preparation. Discuss the changes that occur in carbohydrates and pigments during food preparation. Give examples to illustrate the changes you describe. [CO-3][L-3] **20**

- Q.3 What is acid-base balance? How is the acid-base balance regulated in the human body? Discuss the reactions of foods; acidosis and alkalosis. [CO-1][L-2] **20**

- Q.4 List the fat soluble vitamins and their precursors. What are their main sources? Explain the role played by (a) Vitamin A in vision, (b) Sunlight in synthesis of Vitamin D. (c) Vitamin K in the blood clotting process. [CO-4][L-3] **20**

PART-B

- Q.5 What are fatty acids? Discuss the role of triglycerides, phospholipids and cholesterol in the body? [CO-2][L-2] **20**

- Q.6 "Proteins are the main solid matter in the muscles", elaborate on the statement. What are the protein deficiency causes and symptom among under-five year age children? [CO-4][L-4] **20**

- Q.7 Explain the terms nutrition, nutrients, reference Men and reference women, balanced meal and under-nutrition. "Food is also used to satisfy social and psychological needs". Explain this statement by giving examples. [CO-3][L-3] **20**

End Semester Examination, May 2023
B. Sc. (FS&T) – Second Semester
FOOD LAWS AND REGULATIONS (BFST-DS-204)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Write the importance of export (quality control & inspection), act, 1963 and rules. **20**

PART-A

- Q.2 Discuss main features of BIS in detail. [CO-1] [L-4] **20**
- Q.3 Why CODEX alimentarius commission is important? Explain in detail. [CO-2] [L-3] **20**
- Q.4 What is the role of legal metrology in India? [CO-4] [L-1] **20**

PART-B

- Q.5 Write the importance of food safety and standards (FSS)-rules and regulation, 2011. [CO-2] [L-2] **20**
- Q.6 Write short notes on any one international organization for standards. [CO-3] [L-1] **20**
- Q.7 Describes the export (quality control and inspection), Act, 1963. [CO-2][L-3] **20**

End Semester Examination, May 2023
B.Sc. (FST) - Second Semester
ENZYMES IN FOOD PROCESSING (BFST-DS-205)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Define immobilisation of enzymes and what are the different methods of immobilisation explain each method in detail with the help of schematic diagram?
[CO2][L3] **20**

PART-A

- Q.2 Explain in detail the role of enzymes in dairy and bakery industry in detail.
[CO4] [L3] **20**

- Q.3 Discuss the role of enzymes in meat, fish and egg processing?
[CO3][L1] **20**

- Q.4 Define enzymes and what are its different sources, classification, properties and characterization?
[CO1][L2] **20**

PART-B

- Q.5 Explain in detail the role of enzymes in beverage (apple juice, cider, beer, whiskey and citrus juice) production in detail.
[CO4][L3] **20**

- Q.6 Define enzyme kinetics and explain with the help of equation. What are the factors affecting the reaction rate of enzyme kinetics explain each factor in detail?
[CO1] [L2] **20**

- Q.7 Explain in detail the enzymes used for starch and protein modification and explain the production of HFCS?
[CO2] [L4] **20**

End Semester Examination, May 2023
B. Sc. (FST) – Third Semester
FOOD MICROBIOLOGY AND FOOD SAFETY (BFST-DS-302)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 What is the application and function of food microbiology in allied food sectors? Give classification of microbes on the basis of morphological characteristics. **20**

PART-A

- Q.2 "Microbes are classified on the basis of their morphology", justify the statement on the basis of staining characteristics of microbes. Explain the use of microbes in enzyme development. [CO-1] [L-2] **20**

- Q.3 Write short notes on the following (**any two**):

- a) Microbial growth curve.
- b) Intrinsic growth factors.
- c) Extrinsic growth factors.

[CO-1] [L-1] **20**

- Q.4 Discuss the microbial spoilage of fruits, cereals, milk and egg. [CO-2] [L-2] **20**

PART-B

- Q.5 Enlist various types of food fermentations. Give health benefits of fermented foods. Explain the processing of yoghurt manufacturing. [CO-3] [L-4] **20**

- Q.6 Define food borne diseases and food infections. Explain about any two food intoxications and food borne infections. [CO-2] [L-1] **20**

- Q.7 What do you mean by GHP and GMP? Explain HACCP principles with example.

[CO-4] [L-2] **20**

End Semester Examination, May 2023
B. Sc. (Hons.) Food Science & Technology - Fourth Semester
FOOD CHEMISTRY-II (BFST-DS-401)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Differentiate between fat and water soluble vitamins. Explain structure, importance and stability of all water and fat soluble vitamins. [CO4] [L3] **20**

PART A

- Q.2 Differentiate between fat and oil. Explain in details the various physical and chemical properties of fats and oils. [CO2] [L2] **20**

- Q.3 What do you understand by food pigment? Explain structure, and importance of chlorophyll, carotenoid, anthocyanin and flavonoid pigment. [CO3] [L3] **20**

- Q.4 Explain different minerals and stability of minerals during food processing and storage. [CO4] [L2] **20**

PART B

- Q.5 Define 'lipids'. Explain in detail the hydrolytic and oxidative rancidity. [CO2] [L2] **20**

- Q.6 Enlist major minerals present in foods. Discuss in detail the role of sodium and potassium in human body and its various sources. [CO4] [L3] **20**

- Q.7 Define 'basic tastes'. Explain various food flavours and food enhancers in used in the various food products and their importance in food processing. [CO1] [L3] **20**

End Semester Examination, May 2023
B. Sc. (Hons.) FST – Fourth Semester
FOOD PACKAGING TECHNOLOGY (BFST-DS-402)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 'Food packaging is the first line of defense towards maintaining food safety'. Elaborate.
[CO-1] [L-4] **20**

PART-A

- Q.2 Differentiate between:
a) MAP and CAP.
b) Bursting strength and tearing strength.
c) HDPE and LDPE.
d) PET and PS.
[CO-3] [L-3] **5 × 4**
- Q.3 'Food packaging exists in varied forms with different applications'. Comment.
[CO-1] [L-5] **20**
- Q.4 Define 'intelligent packaging'. Also, state its advantages over conventional food packaging.
[CO-4] [L-2] **20**

PART-B

- Q.5 Explain the working and principle of the following:
a) Vacuum packaging machine.
b) Seal and shrink packaging machine.
c) Water absorptivity test.
d) Form fill and sealing machine.
[CO-3] [L-3] **5 × 4**
- Q.6 "The packaging and labeling requirement are decided upon the type of food". Explain.
[CO-4] [L-4] **20**
- Q.7 Which type of packaging material should be used in order to preserve confectionary based food products for a longer time? Also state the reason with appropriate examples.
[CO-2] [L-4] **20**

End Semester Examination, May 2023
B. Sc. (FST) - Fourth Semester
FOOD QUALITY EVALUATION AND MANAGEMENT (BFST-DS-403)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 What are the four principal quality factors in food? Discuss in detail. [CO-1] [L-1] **20**

PART-A

Q.2 Classify tastes and discuss any two classes of taste in detail. [CO-1] [L-5] **20**

Q.3 Discuss in detail about rheological analysis of food. [CO-2] [L-2] **20**

Q.4 Define 'food additives'. Discuss any five classes of food additives. [CO-2] [L-2] **20**

PART-B

Q.5 What do you mean by contamination? Discuss its types in detail. [CO-4] [L-1] **20**

Q.6 Enumerate the importance and functions of quality control and quality assurance.
[CO- 4] [L-3] **20**

Q.7 Justify the role of national and international agencies in risk assessment and maintaining quality standards. [CO-3][L-5] **20**

End Semester Examination, May 2023
B. Sc. (FST) - Fourth Semester
SCIENTIFIC WRITING IN AGRICULTURAL SCIENCES
(BFST-DS-404)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FOUR** questions in all; Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Discuss the objectives and importance of scientific writing in area of food science and technology. [CO-1] [L-2] **20**

PART-A

- Q.2 Write short notes on:
a) Monograph.
b) Systematic analysis. [CO-1] [L-1] **10×2**

- Q.3 Give classification of outlines in research. Discuss in detail. [CO-2] [L-3] **20**

- Q.4 Drafting of titles, sub titles, tables and illustrations plays important role in effective scientific writing. Justify your reasons by giving suitable examples. [CO1,2][L-5] **20**

PART-B

- Q.5 Discuss in detail about CONSORT for trials. [CO-3] [L-2] **20**

- Q.6 Justify the role of different keys in development of research manuscript. [CO-4][L-3] **20**

- Q.7 Outline the steps of peer-reviewing research manuscript. [CO-1,4][L-5] **20**

End Semester Examination, May 2023

B. Sc. (FST) – Fourth Semester FOOD BEVERAGES (BFST-DS-405)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Define following terms (**any five**):

- a) Vinification.
- b) Malt.
- c) Whiskey.
- d) TSS.
- e) Must.
- f) Spring water.
- g) Cordial.

[CO-] [L-1] **4×5**

PART-A

Q.2 Give detailed classification of beverages and discuss any two classes in detail.

[CO-1] [L- 4] **20**

Q.3 Discuss in detail about different methods of treatment of water.

[CO-2, 4][L-2] **20**

Q.4 Outline the brewing steps and discuss malting of barley as a brewing step in detail.

[CO-2,4][L-3] **20**

PART-B

Q.5 Give a flow chart of red wine manufacturing depicting minor ingredients and time and temperature controls

[CO-1] [L-4] **20**

Q.6 What are carbonated beverages? What are the different ingredients and their role in its manufacturing?

[CO-3] [L-1] **20**

Q.7 Formulate a beverage (cordial) from orange and give flow chart of manufacturing steps.

[CO-2,4] [L-5] **20**

End Semester Examination, May 2023
B. Sc. (FST) – Fifth Semester
EMERGING FOOD PROCESSING TECHNOLOGIES (BFST-DS-504)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 What do you understand by emerging food processing technologies? How these technologies contribute to the foodeconomy? **20**

PART-A

- Q.2 Explain about the principles of high-pressure processing. Discuss the effects of high pressure on food quality. [CO-2] [L-3] **20**
- Q.3 Differentiate between Ohmic heating and microwave heating. List down their functions in food preservation. [CO-3] [L-2] **20**
- Q.4 What do you understand by hurdle concept? How is this useful in preservation of food? [CO-4] [L-2] **20**

PART-B

- Q.5 What are the different types of membrane separation processes? Discuss its principle and applications in preservation in detail. [CO-2] [L-1] **20**
- Q.6 Discuss about mechanism of ultrasound processing in food preservation. [CO-1][L-4] **20**
- Q.7 What do you understand by radio-frequency processing and dielectric heating? Explain in detail. [CO-3] [L-5] **20**

End Semester Examination, May 2023
B. Sc. (FST) – Sixth Semester
FUNDAMENTALS OF FOOD ENGINEERING (BFST-DS-601)

Time: 3 hrs.

Max Marks: **100**

No. of Pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 a) Explain in detail the Newton's Law of viscosity along with properties of Newtonian and Non-Newtonian fluids. [CO3] [L3]
b) Mention properties of a refrigerant in a VCR system. [CO3] [L2]
c) Draw a diagram and set up equations representing total mass balance and component mass balance for a system involving the mixing of pork (15% protein, 20% fat, and 63% water) and back fat (15% water, 80% fat, and 3% protein) to make 100 kg of a mixture containing 25% fat. [CO4] [L3]
d) Summarize the main objectives of a good plant layout. [CO2] [L1]
e) Explain the thermal properties of food. [CO3] [L3] **5×4**

PART A

- Q.2 What are the various modes of heat transfer? Explain different types of heat exchangers used in food industry. Derive Fick's law of diffusion. [CO4] [L5] **20**
- Q.3 What are various types of food plant layout along with the designing of food plants (location, land and building)? [CO2] [L1] **20**
- Q.4 Explain the different components in a liquid transport system used in food industry. [CO3] [L3] **20**

PART B

- Q.5 Explain the different components of a refrigeration system and derive freezing time expression using plank equation. [CO4] [L5] **20**
- Q.6 Explain various types of evaporators. Also discuss design of single effect evaporators along with drying process and moisture content of various evaporated food products. [CO3] [L3] **20**
- Q.7 a) Calculate the power available in a fluid that flows down the raceway of a reservoir at a rate of 525 lbm/min from a height of 12.3 ft. The potential energy (PE) is $PE = mgh$ where m = mass, g = the acceleration due to gravity = 32.2 ft/s², and h is the height. [CO1] [L3] **10**
b) The heat loss through the walls of an electric oven is 6500 BTU/h. If the oven is operated for 2 hours, how many kilowatt hours of electricity will be used just to maintain the oven temperature? [CO1] [L3] **10**

End Semester Examination, May 2023
B. Sc. (FST) - Sixth Semester
NUTRACEUTICALS AND FUNCTIONAL FOODS (THEORY)
(BFST-DS-603)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Discuss the role of nutraceuticals in traditional health sciences. [CO-4] [L-2] **20**

PART-A

Q.2 Write short notes on:

- a) Probiotics.
- b) Prebiotics.
- c) Pigments.
- d) Fibre.

[CO-4] [L-2] **5×4**

Q.3 Give classification of functional foods. Discuss in detail about the classification according to chemical nature. [CO-2] [L-3] **20**

Q.4 Nutraceuticals and functional foods both have health promoting action but are different in terms of food sources. Justify your reason by giving five suitable examples. [CO-1,2] [L-5] **20**

PART-B

Q.5 Yogurt, fermented milk is most research surpassed probiotic product. Associate the functional properties of yogurt with the health effects. [CO-3] [L-4] **20**

Q.6 Discuss in detail about safety, regulatory issues and labelling requirements of functional foods and nutraceuticals. [CO-2] [L-2] **20**

Q.7 Write in details about stability and bio-availability of functional foods. [CO-1,4] [L-1] **20**

End Semester Examination, May 2023

B. Sc. (FST) – Sixth Semester

FOOD BIOTECHNOLOGY (BFST-DS-604)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 'Biotechnology has vast applications in food industries'. Elaborate. [CO-4] [L-4] **20**

PART-A

Q.2 Differentiate between:

- a) DNA and RNA.
- b) Upstream and downstream processing.
- c) Restriction endonuclease and DNA ligase.
- d) Standard PCR and RT-PCR.

[CO-1,2,3] [L-3] **5×4**

Q.3 'The use of microorganisms has proven to be beneficial in food biotechnology.' Comment. [CO-3] [L-5] **20**

Q.4 Define 'molecular cloning'. Also, state some of the commonly used cloning techniques in food application. [CO-2] [L-3] **20**

PART-B

Q.5 Define 'food fermentation'. Describe the different types of fermentation with special reference to their application in food products. [CO-4] [L-3] **20**

Q.6 'Can transgenic plants be considered boon to the field of food biotechnology? Explain using a suitable example. [CO-3,4] [L-4] **20**

Q.7 'Bacteriocins can be considered as a safest approach to preserve food products.' Elaborate. [CO-1,4] [L-4] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – First Semester
FUNDAMENTALS OF BIOCHEMISTRY (BND-DS-102)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 What are biomolecules? Discuss the important monomeric units of these biomolecules along with their biochemical significance in body. [CO-3] [L-4] **20**

PART-A

- Q.2 A cell with a true nucleus is different from a cell without a true nucleus. Elaborate your answer with the help of a well labeled diagram showing the two types of a cell with examples. [CO-3] [L-4] **20**

- Q.3 What are homopolysaccharides? Give suitable examples. Differentiate the two components amylose and amylopectin present in starch. Draw the structure of these two components showing the types of glycosidic bond. [CO-2] [L-3] **20**

- Q.4 MUFA and PUFA are different types of unsaturated fatty acids. What are fatty acids? Give detailed classification of fatty acids. Summarize your answer explaining the definition of MUFA and PUFA. Also give the structure of any two MUFA and two PUFA. [CO-3] [L-1] **20**

PART-B

- Q.5 Proteins have different levels of organization. Justify your answer explaining primary, secondary, tertiary and quaternary levels of organization. [CO-3] [L-4] **20**

- Q.6 What are fat soluble and water soluble vitamins? Give the biochemical functions of any two fat soluble vitamins and water soluble vitamins. Also, indicate the dietary sources, RDA values and deficiency diseases associated. [CO-1] [L-1] **20**

- Q.7 Tabulate the important differences between macro and micro-minerals with suitable examples. Also, indicate the dietary sources, RDA values and deficiency diseases associated with both macro and micro minerals. [CO-4] [L-2] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – First Semester
HUMAN ANATOMY AND PHYSIOLOGY-I (BND-DS-103)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Draw a well labeled diagram of cell. What are the functions of ribosomes and mitochondria? Discuss in detail. [CO-1] [L-3] **20**

PART-A

- Q.2 How do movement of materials across plasma membrane takes place? Discuss in detail. [CO-1] [L-1] **20**

- Q.3 How liver plays an important part in human body? Discuss it by giving suitable statements. [CO-3] [L-3] **20**

- Q.4 Give a detailed classification of blood cells. [CO-2] [L-4] **20**

PART-B

- Q.5 Draw a well labeled diagram of human heart and discuss any two parts of it in detail. [CO-2] [L-2] **20**

- Q.6 Discuss in detail about the spleen, its formation, composition and function. [CO-1] [L-2] **20**

- Q.7 How respiration is regulated in human body? Discuss in detail. [CO-4] [L-3] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – First Semester
COMMUNICATION AND EXTENSION EDUCATION (BND-DS-106)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Explain the role of Extension educator and application of extension education in the field of nutrition with example. [CO-4] [L-6] **20**

PART-A

- Q.2 Discuss about the concept, philosophy and principles of communication. [CO-1][L-3] **20**

- Q.3 What is the importance of assessing the nutrition status of the community and which is the suitable aids for communication to the community? [CO-2][L-2] **20**

- Q.4 Define 'communicator–receiver relationship'. What are the five levels of communication? [CO-2][L-3] **20**

PART-B

- Q.5 Describe philosophy, principles and aims of extension education. [CO-3][L-2] **20**

- Q.6 Discuss about qualities and role of extension worker. [CO-3][L-5] **20**

- Q.7 Explain the impact of extension education on rural development. [CO-4][L-6] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) - Second Semester
BIOCHEMISTRY AND METABOLISM (BND-DS-201)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Enzymes have an important role to play in different biochemical pathways. Discuss the different enzymes involved in carbohydrate metabolism. **20**

PART-A

- Q.2 Glycolysis pathway involves three different irreversible steps. Explain these three steps giving well defined reactions. Also explain the energetics of Glycolysis giving ATP production at each step. [CO-1] [L-3] **20**

- Q.3 What is understood by transamination and deamination reactions in amino acid metabolism? Explain their role in the pathway of amino acid metabolism. [CO-1] [L-2] **20**

- Q.4 Km is important in defining affinity of enzyme to substrate. How? Also draw well defined diagram explaining the effect of substrate concentration on the rate of enzyme catalyzed reactions. [CO-3] [L-4] **20**

PART-B

- Q.5 What is Beta oxidation of fatty acids in lipid metabolism? Explain in detail the different reactions of this pathway giving energy production. [CO-1][L-3] **20**

- Q.6 DNA and RNA molecule are made up of different nucleotides. Draw the structure of any one nucleotide found in the molecule of DNA. Also discuss the structure of DNA molecule in detail. [CO-3] [L-3] **20**

- Q.7 Write notes on the following terms:
a) Epigenetics in the field of nutrition.
b) Nutrigenomics. [CO-3][L-3] **10×2**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) - Second Semester
NUTRITION: A LIFE CYCLE APPROACH (BND-DS-202)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 What are the factors to be kept in mind while planning meals for any physiological age group? **20**

PART-A

- Q.2 Describe the nutritional needs during infancy and explain the importance of weaning foods. [CO-4] [L-2] **20**

- Q.3 Give examples of any four low cost balanced diet for adults with explanation of nutrient content. [CO-2] [L-1] **20**

- Q.4 Explain the complications during pregnancy with the nutritional management. [CO-3] [L-4] **20**

PART-B

- Q.5 Describe the process of ageing and explain the nutritional requirements during ageing. [CO-1][L-3] **20**

- Q.6 Write short notes on:
a) Food security.
b) BPNI. [CO-1] [L-2] **10×2**

- Q.7 Explain the physiological changes occurring during Lactation and explain the importance of exclusive breast feeding. [CO-2][L-2] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Second Semester
HUMAN ANATOMY AND PHYSIOLOGY-II (BND-DS-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Draw a well labeled diagram of an eye. Also, discuss the various disorders associated with the organ. [CO-3] [L-3] **20**

PART-A

- Q.2 Differentiate between:
a) Sympathetic nervous system and parasympathetic nervous system.
b) Autonomic and somatic nervous system. [CO-1] [L-4] **10×2**
- Q.3 Discuss the structure and classification of bones. [CO-1] [L-2] **20**
- Q.4 Describe the hormones secreted by the pituitary gland. Also, discuss the disorders caused due to over/under secretion of these hormones. [CO-3] [L-2] **20**

PART-B

- Q.5 Draw the structure of a nephron and explain the process of urine formation. [CO-2] [L-3] **20**
- Q.6 Discuss the process of spermatogenesis with a help of well labeled diagram of sperm. [CO-4] [L-3] **20**
- Q.7 Discuss the importance of water and electrolytes in sports physiology. [CO-2][L-2] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Second Semester
FOOD AND NUTRITION LABELING (BND-DS-204)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.2 "Food label is the first mirror for the consumer while buying any food product". Elaborate. [CO-1] [L-5] **20**

PART-A

- Q.1 Differentiate between:
a) Nutritional claim and risk reduction claim.
b) Use by date and best before date.
c) PDP and nutritional panel.
d) Labeling with regard to frozen foods and irradiated foods. [CO-2] [L-3] **5×4**
- Q.3 Design any food label for a beverage and interpret its labeling details. [CO-3] [L-6] **20**
- Q.4 a) Explain the labeling requirements for imported foods. [CO-4] [L-2] **10**
b) State the principles for labeling pre-packaged foods in India. [CO-4] [L-2] **10**

PART-B

- Q.5 "The history of food and nutrition labeling dates back to early centuries". Comment. [CO-1] [L-3] **20**
- Q.6 Define a 'food label'. Discuss the different parts found in a food label and state the regulation for mentioning food preservatives on a label. [CO-2] [L-2] **20**
- Q.7 Demarcate any five commonly seen symbols and their relevance in a food label. [CO-4][L-3] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Third Semester
FUNDAMENTALS OF FOOD SCIENCE (BND-DS-301)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Define the following:

- a) Gluten.
- b) Nutricereals.
- c) Blanching.
- d) SNF.
- e) Hydrogenation.

[CO-1] [L-1] **4×5**

PART-A

Q.2 Analyze the role of browning reactions in food on its different aspects of quality.

[CO-1] [L-2] **20**

Q.3 Classify the pigments present in vegetables and fruits. Write a short note on its each pigment.

[CO-2][L-4] **20**

Q.4 Discuss in detail about crystallization of sugars and factors affecting them.

[CO-3] [L-2] **20**

PART-B

Q.5 What is pasteurization? Explain different methods of pasteurization in detail.

[CO-3] [L-1] **20**

Q.6 Illustrate the role of the different parts of egg with detailed discussion and diagrams.

[CO-2][L-3] **20**

Q.7 Analyze the role of water and oxygen in deteriorating the quality of fats and oils. Also recommend some methods by which we can avoid this.

[CO-4] [L-4] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Third Semester
HEALTH, FITNESS AND SPORTS NUTRITION (BND-DS- 303)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Discuss anthropometric measurement and dietary assessment, components to nutritional status in detail. **20**

PART-A

- Q.2 Explain how to estimate fat free mass, % fat and fat mass among athletic groups in detail? [CO-2] [L-3] **20**
- Q.3 Discuss the effect of carbohydrates and B-complex on physical performance of the athlete. [CO-1] [L-2] **20**
- Q.4 A 12 year old girl has a cyclist competition within a week. Discuss how hydration and glycogen storage can be enhanced before competition? Design her dietary pattern for pre-game, during game and post-game meal during competition. [CO-3] [L-5] **20**

PART-B

- Q.5 Rohan is a badminton player. He is 17 year old boy and plays for 4 hours every day. Discuss the role of carbohydrate and fat metabolism during his activity. [CO-4] [L-5] **20**
- Q.6 "Sports supplements and sports drinks have become necessity for sports players". Provide your comment on the above statement. [CO-2] [L-5] **20**
- Q.7 Differentiate between different types of gunas and various stages of meditation. [CO-5] [L-4] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Third Semester
PREVENTIVE MEDICINE AND PROMOTIVE HEALTH (BND-DS-304)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Define concept of health and etiology of non-communicable disease. What are the preventable measures of NCD? [CO-4] [L-6] **20**

PART-A

- Q.2 Describe health and well being and explain determinate of health in detail. [CO-1][L-3] **20**

- Q.3 Explain concept of disease and causation write natural history of a disease in detail. [CO-2][L-2] **20**

- Q.4 Write a few strategies and skills necessary for the implementation of food and nutrition services in professional settings. [CO-2][L-3] **20**

PART-B

- Q.5 Write a note on: "General principles of prevention and control of communicable disease and explain the preventive measures of respiratory disease, cholera and intestinal disease". [CO-3][L-2] **20**

- Q.6 What is CVD and diabetes? Write the etiology and prevention strategy of CVD and diabetes. [CO-3][L-5] **20**

- Q.7 Write concept of epidemiology and epidemiological study design. [CO-4][L-6] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Third Semester
BASICS OF FOOD MICROBIOLOGY (BND-DS-308)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 'Irradiation preservation is a not so widely accepted preservation technique'. Comment.
[CO-2][L-4] **20**

PART-A

- Q.2 Describe the following:
a) Microbial taxonomy.
b) Morphological differences between bacteria and fungi. (CO-1, L-1) **10×2**
- Q.3 Graphically explain various phases in the growth of a unicellular microorganism contained in a batch culture. Also, state various intrinsic factors associated with growth of microorganisms
[CO-2][L-2] **20**
- Q.4 a) Define 'food spoilage' outline various types of food spoilage. [CO-2][L-3] **10**
b) Enlist the course of spoilage occurring in egg and fish products w.r.t their spoilage causing microorganism. [CO-2][L-3] **10**

PART-B

- Q.5 'Traditional fermented foods have wide applicability with added health benefits'. Summarize the statement using a suitable example. [CO-3][L-4] **20**
- Q.6 Define 'chemical preservation'. Discuss various advantages and disadvantages associated with this method. [CO-4][L-2] **20**
- Q.7 Differentiate between:
a) Drying and freeze drying.
b) Spray drying and roller drum drying.
c) Probiotics and prebiotics.
d) Homolactic and heterolactic fermentation. [CO-1,2][L-1] **5×4**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Third Semester
INTRODUCTION TO FIRST AID AND NURSING (BND-DS-309)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 What are first aid and its application principles? What do you understand about its importance in day-to day life? [CO-2] [L-2] **20**

PART-A

- Q.2 Elaborate the process a nurse should follow to assess the condition of patients? Explain the ethical principles of nursing. [CO-2] [L-4] **20**

- Q.3 Analyze the strategies of first aid in a flood and famine affected state. [CO-1] [L-4] **20**

- Q.4 Explain the process of artificial respiration in emergency using an appropriate example. [CO-3] [L-5] **20**

PART-B

- Q.5 Analyze the role of nursing care and hospital infrastructure in patient's recovery. [CO-2][L-5] **20**

- Q.6 Categorize the different techniques of bed making and discuss their advantages. [CO-4] [L-4] **20**

- Q.7 Discuss the steps of initial top to toe assessment of first aid. [CO-1] [L-5] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Third Semester
INTRODUCTION TO HERBAL SCIENCE (BND-DS-310)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Explain the following:

- a) Centella asiatica.
- b) Curcuma longa.
- c) Herbal remedy for hair care.
- d) Herbal remedy for throat infections.

[CO-1] [L-2] **5×4**

PART-A

Q.2 Discuss the common plants which can be used as medicines.

[CO-2] [L-3] **20**

Q.3 What is culinary herb? Discuss nutritional value of these herbs.

[CO-3] [L-2] **20**

Q.4 Write down the classification of herbs. Also, discuss the history of herbs in brief.

[CO-4] [L-3] **20**

PART-B

Q.5 Discuss the beneficial use of herbs as food supplements.

[CO-1] [L-2] **20**

Q.6 Discuss the types of herb gardening (indoor and outdoor).

[CO-2] [L-3] **20**

Q.7 What is herbal remedy? Discuss the home remedies for common cold, fever, headaches, migraines and digestive disorders.

[CO-3] [L-4] **20**

End Semester Examination May 2023
B.Sc. (Nutrition and Dietetics) - Fourth Semester
THERAPEUTIC AND CLINICAL NUTRITION (BND-DS-401)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

- Q.1 Plan a Nutrition Care Process (NCP) for 21 year old male who is suffering with diabetes Type 2 and lost his 6 kg weight in last 1 month. He is a pure vegetarian and belongs to the middle income group. [CO2] [L5] **20**

PART-A

- Q.2 Why is the basis of therapeutic diet is a normal diet? Explain the full fluid, clear fluid, soft and regular diet in detail. [CO2] [L3] **20**

- Q.3 Suggest suitable dietary modifications for a patients suffering from:
a) Osmotic diarrhea b) Celiac disease [CO3] [L3] **10×2**

- Q.4 Describe the different stages of HIV/AIDS. Outline the dietary recommendation for HIV patients. [CO1,3] [L3] **20**

PART-B

- Q.5 a) Differentiate between anorexia nervosa and bulimia nervosa. [CO-1] [L-4] **10**
b) How does the set-point theory explain the problem of weight management? [CO-1] [L-3] **10**

- Q.6 Discuss the metabolic changes occurred due to diabetes. Illustrate the role of dietary modifications in regulation of blood glucose levels. [CO-1,3] [L-3] **20**

- Q.7 Describe the etiological factors of renal diseases. Illustrate the dietary modifications required for controlling the renal calculi. [CO-1,3] [L-5] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Fourth Semester
INSTITUTIONAL CATERING MANAGEMENT (BND-DS-402)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

- Q.1 Discuss the factors to be considered while establishing a catering institute. Explain providing suitable examples. [CO2][L3] **20**

PART-A

- Q.2 Explain the functions of management with respect to food service unit. [L3][CO1] **20**
- Q.3 What are the factors to be kept in mind while designing kitchen. Elaborate. [L3] [CO3] **20**
- Q.4 What is Work simplification? Explain the factors affecting service areas. [L2] [CO2] **20**

PART-B

- Q.5 Explain the factors affecting selection of equipment in a food service organization with suitable examples. [L4] [CO4] **20**
- Q.6 Describe in detail the methods used in catering organization for purchasing food and materials. [L 2] [CO1] **20**
- Q.7 Write note on Absenteeism and employee turnover and describe the Maslows hierarchy of needs. [L2] [CO3] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Fourth Semester
INSTRUMENTATION FOR FOOD ANALYSIS (BND-DS-403)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Explain in details the principle, components and procedure of HPLC along with the schematic diagram. [CO-3] [L3] **20**

PART A

- Q.2 Name various types of electrophoresis and explain in detail the principle, components and complete procedure of SDS-PAGE. [CO2] [L4] **20**

- Q.3 Explain in detail the principle, components and complete process of double beam spectrophotometer. [CO3] [L1] **20**

- Q.4 What are different food standards and regulations? Explain any three food standards in detail. [CO4] [L4] **20**

PART B

- Q.5 Explain in details the principle, components and process of GPC with the schematic diagram. [CO3][L1] **20**

- Q.6 Explain in detail the complete process of atomic absorption spectrophotometry. [CO2] [L3] **20**

- Q.7 Discuss the procedure and set up for determination of moisture, fat, crude fibre, and protein content of various food samples. [CO1] [L3] **20**

End Semester Examination, May 2023
B. Sc. – Fourth Semester
COUNSELLING TECHNIQUE IN NUTRITION (BND DS-404)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Discuss the important factors required for good counseling sessions. [CO2] [L-5] **20**

PART-A

Q.2 'Counseling theories are expansive'. Comment on it. [CO2] [L-4] **20**

Q.3 What are the pre-requisite qualities a counselor should possess? [CO3] [L-3] **20**

Q.4 Why evaluating a follow up result is so important after a counseling session?
[CO1,3] [L3] **20**

PART-B

Q.5 Demarcate the role of counseling resources and aids for educating the masses.
[CO1] [L3] **20**

Q.6 Enumerate the steps of action that need to be taken care of while establishing rapport with client.
[CO1,3] [L3] **20**

Q.7 Prepare a counseling prescription for a 17 year old girl suffering from hypertension.
[CO3] [L5] **20**

End Semester Examination, May 2023

Bachelor of Physiotherapy – Fourth Semester PUBLIC HEALTH NUTRITION (BND-DS-405)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART A** and **TWO** questions from **PART B**. Marks are indicated against each question.*

- Q.1 Discuss about the health care delivery system in India and the role of public health nutritionist in national development. [CO-2][L-3] **20**

PART-A

- Q.2 Explain the methods of nutritional assessment used at community level. [CO-3][L-3] **20**

- Q.3 Illustrate the factors which influence food habits and dietary patterns of people in India. [CO-1][L-4] **20**

- Q.4 How do you identify protein energy malnutrition and obesity among children in a community based study? Develop an integrated public health approach to improve the current situation. [CO-2,3][L-4,6] **20**

PART-B

- Q.5 Describe focus group discussion and in-depth interview techniques of data collection used in community based studies. [CO-2][L-2] **20**

- Q.6 Describe the aim and scope of public health nutrition in India. [CO-2][L-2] **20**

- Q.7 Illustrate the etiology of occurring diabetes and cancer. Write about public health strategies to manage diabetes at community level. [CO-3][L-3] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Fourth Semester
PUBLIC HEALTH NUTRITION (BND-DS-405)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

- Q.1 What are the epidemiological aspects of relationship between nutrition, health and disease? [CO4][L4] **20**

PART-A

- Q.2 Discuss about the scope, aim and current context of public health nutrition. [L1][CO3] **20**
- Q.3 Give the details of national health care system and definition of health determinants. [L2] [CO2] **20**
- Q.4 Write two methods of rapid nutritional assessment in the community and its impact on their health behavior and food habits. [L2] [CO3] **20**

PART-B

- Q.5 Define 'anemia'. What are the type of anemia, etiology and prevention strategies. [L3] [CO2] **20**
- Q.6 What is the current malnutrition status in India, define under-nutrition and etiology of PEM? [L3] [CO5] **20**
- Q.7 What is non communicable disease (NCD), its etiology and preventive strategies of obesity, diabetes and coronary heart diseases? [L4] [CO6] **20**

End Semester Examination May 2023
B. Sc. (Nutrition and Dietetics) – Fourth Semester
INDIAN TRADITIONAL FOOD (BND-DS-407)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Write in detail about history of Indian foods. [CO1] [L1] **20**

PART-A

Q.2 Throw some light on traditional Indian dietary pattern. [CO2] [L3] **20**

Q.3 Illustrate with examples about role of Indian ethnic cuisines in the history of India. [CO3] [L3] **20**

Q.4 Summarize the nutritional/medicinal quality of traditional foods. [CO4][L4] **20**

PART-B

Q.5 Differentiate between Satvik, Tamasic and Rajasic foods with suitable illustrations. [CO2] [L3] **20**

Q.6 Justify the role of traditional food processing technologies in preserving and relishing the properties of food for longer time period. [CO3] [L5] **20**

Q.7 What are traditional food beliefs? What are their significance in ayurveda? [CO4] [L1] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Fourth Semester
HUMAN HEALTH PSYCHOLOGY (BND-DS-408)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Define the term health psychology and its goals. Discuss its application in modern day health care system. [CO-1] [L-1] **20**

PART-A

- Q.2 What do you understand by patient adherence? Discuss the factors affecting it. How does the psychological theories helpful to improve the patient adherence? [CO-2] [L-2] **20**

- Q.3 Stress is an automatic response to external stressors. Discuss. [CO-4] [L-4] **20**

- Q.4 Discuss the mind-body relationship and its implication for illness and health. [CO-3] [L-3] **20**

PART-B

- Q.5 Apply the theories of health promotion to treat adolescent group addicted to alcohol and tobacco consumption. [CO-4] [L-5] **20**

- Q.6 Define the terms illness, sickness and diseases. Elaborate the leventhal's self-regulatory model of illness cognitions. [CO-3] [L-4] **20**

- Q.7 Discuss the inert treatments and its theoretical bases in health and wellness. [CO-2] [L-4] **20**

End Semester Examination, May 2023

B. Sc. – Fifth Semester

STATISTICS AND RESEARCH METHODOLOGY (BND-DS-502)

Time: 3 hrs.

Max Marks: 100

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Describe the various steps conducting a research dissertation in detail **20**

PART-A

Q.2 Differentiate between questionnaire and schedule. Discuss any two secondary methods of data collection. [CO-2] [L-4] **20**

Q.3 Differentiate between coding for quantitative data and qualitative data. Explain both with suitable examples. [CO-2] [L-3] **20**

Q.4 Create the frequency and cumulative frequency distribution table for the following data:

10	08	26	32	49
38	55	25	38	36
40	25	19	11	54
45	32	50	37	42

[CO-3] [L-6] **20**

PART-B

Q.5 Create a frequency polygon graph, histogram and cumulative percentage graph of the following data:

10	08	26	32	49
38	55	25	38	36
40	25	19	11	54
45	32	50	37	42

[CO-3] [L-6] **20**

Q.6 Calculate Mean and Median of the following data:

Marks	No. of students
1-5	7
6-11	10
11-15	6
16-20	30
21-25	24
26-30	17
31-35	10
36-40	5
41-45	1

[CO-4] [L-3] **20**

Q.7 Calculate Mode and Median of the following data:

Age Group	No. of person
35-40	242
40-45	220
45-50	268
50-55	70

[CO-4][L-3] **20** 39

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Fifth Semester
NUTRITION AND FOOD SECURITY (BND-DS-505)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Analyze current status of food security and nutrition security status of India. Discuss various factors based related to it for alleviating malnutrition. [CO-4] [L-4] **20**

PART-A

- Q.2 Evaluate the effects of population trend and climate change on food security in India. [CO-3][L-5] **20**
- Q.3 What do you understand by demographic cycle and demographic dividends? How can India take advantage from demographic dividends? [CO-1][L-2] **20**
- Q.4 Evaluate major public programs and partnerships working to improve nutrition security in India. [CO-2][L-5] **20**

PART-B

- Q.5 Discuss the role of women in food and nutrition security at household's level and national level. [CO-2][L-2] **20**
- Q.6 Discuss government initiatives and partnerships to improve food security in India. [CO-4][L-3] **20**
- Q.7 Critically analyzes the trends of agriculture production, food and nutrient intake in India. [CO-2][L-6] **20**

End Semester Examination, May 2023
B. Sc. (Nutrition and dietetics) – Fifth Semester
HEALTH AND WEIGHT MANAGEMENT (BND-DS-506)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Explain in detail about the scientific principles of weight management and improving health. **20**

PART-A

- Q.2 Write about body weight components and measurement of obesity. [CO-2][L-1] **20**
- Q.3 Enumerate the theories related to weight management. [CO-2][L-3] **20**
- Q.4 Analyse the role of psychologist and nutritionist in treating a patient with severe anorexia nervosa. [CO-4][L-4] **20**

PART-B

- Q.5 Explain the multifactorial aspects of undernutrition in India and nutrition management to be suggested in under nutrition. [CO-2][L-6] **20**
- Q.6 Discuss the plateau effect in weight management. [CO-3][L-2] **20**
- Q.7 Critically analyse the 'pros and cons' of fad diets. [CO-4][L-5] **20**

Annual Examination, June 2023

Bachelor of Physiotherapy — First Year

ANATOMY (BPT 101 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **PART-A is compulsory**. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.

PART-A

Q.1 Answer the following in brief:

- a) Define synovial joints. List down its properties.
- b) Explain cubital fossa.
- c) Describe the sensory supply of face and the danger area of face.
- d) Discuss about the elastic cartilage.
- e) Describe the covering of heart.

[CO-1][L-2] **2×5**

PART-B

Q.2 Describe the type of muscle fibers.

[CO-2][L-2] **8**

Q.3 Discuss about the arches of foot.

[CO-1][L-1] **8**

Q.4 Explain the bronchopulmonary segments and its clinical significance.

[CO-3][L-4] **8**

Q.5 Discuss lymphatic system in detail. Also discuss about axillary lymph nodes.

[CO-6][L-5] **8**

Q.6 Draw the neat and labelled diagram of heart. Discuss the systemic and coronary circulation.

[CO-3][L-4] **8**

Q.7 Explain stomach, its parts along with blood supply. Enumerate its relations.

[CO-4][L-2] **8**

PART-C

Q.8 Explain ascending tract in detail along with suitable diagram.

[CO-2][L-4] **15**

Q.9 Write origin, insertion, nerve supply and action of following muscles, (Draw suitable diagram):

- a) Deltoid.
- b) Serratus anterior.
- c) Quadriceps.
- d) Tibialis anterior.

[CO-4][L-1] **15**

Q.10 Discuss brachial plexus in detail. Also discuss its clinical anatomy.

[CO-5][L-6] **15**

Annual Examination, June 2023

Bachelor of Physiotherapy— First Year

PHYSIOLOGY (BPT 102 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **PART-A is compulsory**. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.

PART-A

Q.1 Answer the following in brief:

- What is cerebrospinal fluid (CSF), and what is its site and circulation in the central nervous system?
- What is the difference between the sympathetic and parasympathetic nervous systems?
- What is the role of Antidiuretic Hormone (ADH) in regulating urine output?
- What is the role of the Sinoatrial (SA) node in regulating heart rate?
- What is the function of the Pineal gland in the endocrine system?

[CO-1,2,5][L-2] **2×5**

PART-B

Q.2 How does the clotting process differ between the extrinsic and intrinsic pathways, and what factors are involved in each pathway? [CO-4][L-2] **8**

Q.3 Compare and contrast the menstrual and ovarian cycles, highlighting their key differences and similarities. How do these cycles work together to regulate reproductive function in females, and what factors can impact their regularity and function? [CO-2][L-1] **8**

Q.4 What is the difference between Glomerular filtration and Tubular reabsorption? [CO-1][L-2] **8**

Q.5 Describe the classification of nerve fibers based on their diameter and conduction velocity. [CO-2][L-1] **8**

Q.6 Explain the relationship between the electrocardiogram (ECG) and the electrical activity of the heart. How does the ECG reflect the timing and sequence of cardiac depolarization and repolarization? [CO-3,4][L-4] **8**

Q.7 What is the role of the Pituitary gland in the endocrine system? [CO-6][L-1] **8**

PART-C

Q.8 What is the role of neuromuscular junctions in facilitating communication between nerves and muscles, and how do they contribute to muscle contraction? [CO-4][L-2] **15**

Q.9 How is the heart influenced by the autonomic nervous system, and what are some of the physiological responses that can occur in response to sympathetic or parasympathetic stimulation? [CO-5][L-2] **15**

Q.10 Describe the functions and regulation of gastric secretions, including the roles of hydrochloric acid, pepsinogen, and intrinsic factor. What are the factors that control gastric acid secretion? [CO-3,4][L-6] **15**

Annual Examination, June 2023

Bachelor of Physiotherapy — First Year

BIOCHEMISTRY (BPT 103 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **Q.1 is compulsory**. Attempt any **FIVE** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write the following in brief:

- a) Differentiate between reducing and non reducing sugars. [CO-5][L-3]
- b) Explain biological importance of Iodine. [CO-5][L-2]
- c) Analyze difference between 'IDDM and NIDDM'. [CO-6][L-4]
- d) Describe structure and function of cells in brief [CO-2][L-1]
- e) Difference between 'DNA and RNA'. [CO- 4][L-2] **2×5**

PART-A

Q.2 Show how Glucose is converted to pyruvate in the body? [CO-1][L-3] **8**

Q.3 Write sources, functions, biochemical role and deficiency disease of vitamin C and analyze its relation with everyday life. [CO-5][L-4] **8**

Q.4 Describe urea cycle in detail. Evaluate significance of blood urea estimation estimation. [CO-3][L-5] **8**

Q.5 How are lipids classified? Explain all types with examples. Also mention their functions. [CO-3][L-4] **8**

Q.6 What is importance of proteins in our diet? Describe PEM in detail. [CO-5][L-3] **8**

Q.7 Discuss beta oxidation of fats and its significance. [CO-3][L-2] **8**

PART-B

Q.8 Explain gluconeogenesis cycle and its significance in body. [CO-6][L-1] **15**

Q.9 How the blood pH is maintained? Explain all the mechanisms. [CO-1][L-2] **15**

Q.10 What are Iso- enzymes? Why CPK, LDH, ALP, AST and ALT enzymes are called diagnostic enzymes? [CO-2][L-5] **15**

Annual Examination, June 2023
Bachelor of Physiotherapy — First Year
ELECTROTHERAPY (BPT 104 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **Q.1 is compulsory**. Attempt any **FIVE** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Ohm's Law-and uses of Ohm's law in physiotherapy. [CO- 1][L- 1]
- b) Explain 'chronaxie'. [CO- 3][L- 2]
- c) Define 'electromagnetic radiation'. [CO-1][L-2]
- d) Differentiate between 'neuropraxia and axonotmesis'. [CO3][L-3]
- e) Explain modes of TENS. **2×5**

PART-A

- Q.2 Describe the characteristics of low frequency current along with its indication and contraindication [CO-3][L-2] **8**
- Q.3 Describe and illustrate any two basic laws of electromagnetic radiation. [CO-2][L-3] **8**
- Q.4 Conceptualize theories of pain relief by TENS explaining types of TENS along with its indication and contraindication. [CO-4][L-2] **8**
- Q.5 Explain 'NCV'. Differentiate motor and sensory nerve conduction velocity explaining technique for motor nerve velocity calculation. [CO-5][L-5] **8**
- Q.6 Explain Techniques for Faradic currents and add a note on physiological effects. [CO-6][L-2] **8**
- Q.7 What is Lewis Hunting phenomenon? Explain physiological effects for cryotherapy. [CO-6][L-3] **8**

PART-B

- Q.8 Elaborate rheobase and explain factor affecting it. Add note on SD curve for innervation, denervation and partial innervation. [CO-4][L-5] **15**
- Q.9 Explain currents and classification of current along with techniques for galvanic currents and its physiological effects. [CO-5][L-2] **15**
- Q.10 Explain superficial heat along with its physiological effects. [CO-4][L-3] **15**

Annual Examination, June 2023
Bachelor of Physiotherapy — First Year
EXERCISE THERAPY 1 (BPT 105 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **Q.1 is compulsory**. Attempt any **FIVE** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) Assisted movements.
- b) Define 'Lever'.
- c) What is tension?
- d) Difference between 'mobilization' and 'manipulation'.
- e) Enumerate parts of a Goniometer.

2×5

PART-A

Q.2 Explain indications and contraindications of soft tissue manipulation. [CO-2][L-3] **8**

Q.3 Explain in detail the indications and effects of suspension therapy. [CO-1][L-4] **8**

Q.4 What is the setup and importance of therapeutic Gymnasium? Enumerate any two uses of equipment used in the therapeutic gym. [CO-3][L-5] **8**

Q.5 Define 'relaxation'. Explain procedure for whole body relaxation. [CO-6][L-4] **8**

Q.6 Describe the testing position and procedure of range of motion of shoulder flexion and shoulder abduction. [CO-4][L-1] **8**

Q.7 Explain the physiological effects of soft tissue manipulation. [CO-6][L-2] **8**

PART-B

Q.8 Classify 'movements'. Explain in detail the indications and contraindications of resisted exercises. [CO-5][L-4] **15**

Q.9 Classify 'massage'. Discuss petrissage and stroking techniques of massage in detail. [CO-2][L-1] **15**

Q.10 Explain the types of active movements. Explain the indications and contraindications of active movements. [CO-2][L-5] **15**

Annual Examination, June 2023
Bachelor of Physiotherapy — Second Year
PATHOLOGY AND MICROBIOLOGY (BPT 201 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **PART-A is compulsory**. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.

PART-A

Q.1 Answer the following questions:

- a) What is the use and full form of BCG vaccine? [CO-2] [L-3]
- b) Define 'disinfection and sterilization'. [CO-1] [L-2]
- c) Give 4 differences between healing by primary and secondary union. [CO-3] [L-2]
- d) List the stages of shock. [CO-1] [L-1]
- e) Define 'gangrene' and name its types. [CO-4] [L-3] **2×5**

PART-B

- Q.2 Classify hypersensitivity reactions and elaborate type 1 hypersensitivity. [CO-3][L-3] **8**
- Q.3 Draw the stages and describe the life cycle of Plasmodium falciparum. [CO-4][L- 4] **8**
- Q.4 Describe an ELISA test and write its uses. [CO-3] [L-4] **8**
- Q.5 Discuss the bone tumors osteosarcoma and osteoclastoma. [CO-3][L-4] **8**
- Q.6 Describe Hemophilia and von willebrands disease. [CO-5][L-2] **8**
- Q.7 Define 'metastasis'. Discuss the routes of spread and its mechanism. [CO-2][L-3] **8**

PART-C

- Q.8 Classify mycobacteria and write in detail the diagnosis of pulmonary and extra pulmonary tuberculosis. [CO-4][L-5] **15**
- Q.9 Define immunoglobulins and tabulate the differences between classes of immunoglobulins. [CO-3][L-3] **15**
- Q.10 Define and classify anaemia. Discuss Iron deficiency anaemia in detail. [CO-6][L-6] **15**

Annual Examination, June 2023
Bachelor of Physiotherapy — Second Year
PHARMACOLOGY (BPT 202 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **Q.1 is compulsory**. Attempt any **FIVE** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 a) Mention the advantages and disadvantages of oral and intramuscular route of drug administration. [CO-3][L-1] **5**
b) Explain the indications and adverse effects of NSAIDs. [CO-2][L-2] **5**

PART-A

- Q.2 What is the difference between cholinergic and anticholinergic drugs? Describe by giving suitable examples of drugs. [CO-4][L-5] **8**
- Q.3 Critically evaluate benzodiazepines and barbiturates with suitable examples of drugs in each class. [CO-5] [L-4] **8**
- Q.4 How do antihistaminic drugs (H₁ blockers) act? Mention the indications and side effects. [CO-3][L-3] **8**
- Q.5 What are the indications and adverse effects of amino glycosides? Mention the mechanism of action also. [CO-4][L-5] **8**
- Q.6 What is the management of diabetes? Explain in relation to various classes of drugs. [CO-5][L-3] **8**
- Q.7 Write the management of anaphylactic shock. [CO-3][L-4] **8**

PART-B

- Q.8 Critically evaluate anti-tubercular drugs and mention their adverse effects also. [CO-5][L-5] **15**
- Q.9 Explain various classes of antianginal drugs. Write the management of myocardial infarction. [CO-3][L-4] **15**
- Q.10 What is the treatment of peptic ulcer? Explain various classes of drugs with respect to their mechanism of action. [CO-6][L-3] **15**

Annual Examination, June 2023
Bachelor of Physiotherapy – Second Year
ELECTROTHERAPY-II (BPT 203 (T))

Time: 3hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **EIGHT** questions in all; **PART-A** is compulsory. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- | | |
|------------------------------------|-----------------------|
| a) Define 'didynamic current'. | [CO-4][L2] |
| b) Elaborate EMG. | [CO-2][L1] |
| c) Define 'rheobase'. | [CO-4][L3] |
| d) Explain half wave rectifier. | [CO-1][L5] |
| e) Full form and classes of LASER. | [CO-3][L4] 2×5 |

PART-B

- | | |
|---|----------------------|
| Q.2 Explain production, therapeutic effects of MWD. | [CO-4] [L2] 8 |
| Q.3 Explain physical principles of IFT along with treatment parameters. | [CO-6][L1] 8 |
| Q.4 Write in detail about principles of application for LASER. | [CO-2][L3] 8 |
| Q.5 Define 'instrumentation and techniques for NCV'. Add a note on difference between technique of sensory and motor NCV. | [CO-3][L5] 8 |
| Q.6 Principles of biofeedback. | [CO-4][L6] 8 |
| Q.7 Explain dosimetry of UVR. | [CO-3][L4] 8 |

PART-C

- | | |
|---|------------------------|
| Q.8 Explain SD curves for innervation, denervation and partial innervation. | [CO-4][L-5] 15 |
| Q.9 Explain UVR classification, its production and physiological effects. | [CO- 2][L-4] 15 |
| Q.10 Explain physical principles, therapeutical effects and indication of ultrasound. | [CO-6][L-2] 15 |

Annual Examination, June 2023
Bachelor of Physiotherapy – Second Year
EXERCISE THERAPY II (BPT 204 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **EIGHT** questions in all; **Q.1** is compulsory. Attempt any **FIVE** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following in brief:

- | | |
|------------------------------------|-----------------------|
| a) Define functional re-education. | [CO-4][L2] |
| b) Treatment plane. | [CO-2][L1] |
| c) Define motor control. | [CO-4][L3] |
| d) Parts of axillary crutch. | [CO-1][L5] |
| e) Antalgic gait. | [CO-3][L4] 2×5 |

PART-A

- | | |
|---|---------------------|
| Q.2 Theories of motor control. | [CO-4][L2] 8 |
| Q.3 Describe procedure and effects of Bhujangasana. | [CO-6][L1] 8 |
| Q.4 Enumerate postural abnormalities in sagittal plane and write any one in detail. | [CO2][L3] 8 |
| Q.5 Describe the grades of mobilization. | [CO-3][L5] 8 |
| Q.6 Principles of hydrotherapy | [CO-4][L6] 8 |
| Q.7 Describe group therapy. | [CO-3][L4] 8 |

PART-B

- | | |
|--|----------------------|
| Q.8 Discuss axillary crutch measurement. Write in detail about non weight bearing walking gait pattern. | [CO-2][L1] 15 |
| Q.9 Describe indications and contraindications of mobilization. Add a note on wrist joint mobilization to improve flexion and ulnar deviation range. | [CO-5][L3] 15 |
| Q.10 What is static and dynamic balance. Write in detail about balance assessment. | [CO-2][L4] 15 |

Annual Examination, June 2023
Bachelor of Physiotherapy – Second Year
BIOMECHANICS (BPT 205 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **EIGHT** questions in all; **PART-A** is compulsory. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.*

PART-A

Q.1 Answer the following questions:

- | | |
|---------------------------------|------------------------|
| a) What are the primary curves? | [CO-1][L-1] |
| b) Define 'kinematic chain'. | [CO-2][L-2] |
| c) Classification of joints. | [CO-3][L-3] |
| d) Coxa vara. | [CO-4][L-2] |
| e) Carrying angle. | [CO-5][L-5] 2×5 |

PART-B

- | | |
|---|-----------------------|
| Q.2 Define lever and its classification with appropriate example in human body. | [CO4][L4] 8 |
| Q.3 Structure and function of menisci in knee joint. | [CO-3] [L-3] 8 |
| Q.4 Prehension. | [CO-5] [L-5] 8 |
| Q.5 Effect of immobilization on muscles. | [CO-1] [L-3] 8 |
| Q.6 Lumbo pelvic rhythm. | [CO-2] [L-2] 8 |
| Q.7 Ligaments of hip joint. | [CO-6] [L-1] 8 |

PART-C

- | | |
|---|------------------------|
| Q.8 Write in detail about the osteo and arthro-kinematics of shoulder complex. | [CO-5] [L-6] 15 |
| Q.9 Discuss in details ligaments of spine and their functions. Add a note on intervertebral disc. | [CO-1] [L-2] 15 |
| Q.10 Write in detail the phases of gait and add a note on muscle work during initial contact to mid stance. | [CO-3] [L-4] 15 |

Annual Examination, June 2023
Bachelor of Physiotherapy – Second Year
SOCIOLOGY AND PSYCHOLOGY (BPT 206 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **PART-A is compulsory**. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Explain problem of juvenile delinquency. [CO-4] [L2]
- b) Initiative of government to reduce beggary. [CO-2] [L1]
- c) Define 'social work' and its forms. [CO-4] [L3]
- d) Explain modern and new era of caste system. [CO-1] [L5]
- e) Explain schedules of reinforcement. [CO-3] [L4] **2×5**

PART-B

- Q.2 Explain sociology and social factors affecting health status and explain with examples. [CO-3] [L2] **8**
- Q.3 Explain law of learning in detail and its practical implications. [CO-3] [L5] **8**
- Q.4 Explain concept of social group. Write about influence of formal and informal groups on health and sickness. [CO-2] [L3] **8**
- Q.5 Define 'behavior'. What are the various types of behavior? Explain in detail. [CO-3] [L5] **8**
- Q.6 Explain application of knowledge of sociology in physiotherapy and occupational therapy. [CO-4] [L6] **8**
- Q.7 Write in detail about questionnaire method of psychology used in assessment of patients. Illustrate with an example. [CO-3] [L4] **8**

PART-C

- Q.8 Explain learning and with examples of unconditional and conditional learning. [CO-4] [L-5] **15**
- Q.9 Explain classification of types of personality. Also explain id, ego, and superego in detail. [CO- 2][L-4] **15**
- Q.10 Define 'guidance and types of guidance'. Explain difference between guidance and counseling along with types of counseling. [CO- 6][L-2] **15**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Seventh Semester
CARDIOPULMONARY PHYSIOTHERAPY (BPT-DS-702)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) Briefly write about ECG wave form. [CO-2][L-1]
- b) Explain respiratory PNF. [CO-3] [L-2]
- c) Explain steps of autogenic drainage. [CO-1,2] [L-4]
- d) Write about peripheral vascular disorders. [CO-1,3] [L-3]
- e) Define 'decortication'. [CO-1] [L-2]
- f) Differentiate backward and forward heart failure. [CO-2] [L-3]
- g) Differentiate obstructive and restrictive lung disease. [CO-4,5] [L-3]
- h) Explain difference between vesicular and bronchial breath sound. [CO-2,3] [L-2]
- i) What is pursed lip breathing? [CO-4,3] [L-2]
- j) Explain humidification. [CO-2,3] [L-3] **2 × 10**

PART-A

- Q.2 Explain in detail about resection of lobe. Describe the management adopted for lobectomy. Give a brief about the precautions taken. [CO-2,1][L-3] **20**
- Q.3 Describe principle of chest physiotherapy in I.C.U. Enumerate the absolute and relative contraindication in detail. [CO-3,4][L-5] **20**
- Q.4 Briefly explain congenital heart disease pathophysiology. Write stage wise cardiac rehab protocol for a heart patient [CO-4,5][L-4] **20**

PART-B

- Q.5 Write the steps of cardiac rehabilitation for a patient affected with myocardial infarction. [CO-4,5] [L-5] **20**
- Q.6 A Patient having history of RHD. Explain pathology and clinical features and surgical intervention and post operation management. [CO-3,4][L-6] **20**
- Q.7 Enumerate and explain the airway clearance techniques. Write the significance of using airway clearance technique in ICU. [CO-2,4,5][L-4] **20**

Annual Examination, May 2023
Bachelor of Physiotherapy — First Year
ANATOMY (BPT101 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **PART-A is compulsory**. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.

PART-A

- Q.1 Answer the following in brief:
- a) Define 'ball and socket joint'. List down its properties.
 - b) Explain 'carrying angle'.
 - c) Describe the muscles of tongue.
 - d) Discuss about the hyaline cartilage.
 - e) Describe the blood supply of bone.
- [CO-1][L-2] **2×5**

PART-B

- Q.2 Explain pelvic diaphragm in detail. [CO-3][L-4] **8**
- Q.3 Discuss the bursa around the knee. [CO-4][L-5] **8**
- Q.4 Explain the bronchopulmonary segment. [CO-3][L-3] **8**
- Q.5 Discuss lymphatic system in detail. Also discuss about axillary lymph nodes. [CO-4][L-3] **8**
- Q.6 Draw the neat and labelled diagram of heart. Discuss the systemic and coronary circulation. [CO-5][L-2] **8**
- Q.7 Explain pancreas in detail and its blood supply. Discuss the role of insulin in detail. [CO-4][L-4] **8**

PART-C

- Q.8 Explain autonomic nervous system in detail. [CO-3][L-4] **15**
- Q.9 Write origin, insertion, nerve supply and action of following muscles (Draw suitable diagram):
- a) Trapezius.
 - b) Supraspinatus.
 - c) Hamstrings.
 - d) Tibialis anterior.
- [CO-2][L-3] **15**
- Q.10 Discuss brachial plexus in detail. Also discuss its clinical anatomy. [CO-3][L-3] **15**

Annual Examination, May 2023
Bachelor of Physiotherapy — First Year
ELECTROTHERAPY (BPT104 (T))

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; **PART-A is compulsory**. Attempt any **FIVE** questions from **PART-B** and **TWO** questions from **PART-C**. Marks are indicated against each question.

PART-A

Q.1 Answer the following in brief:

- | | |
|--|------------------------|
| a) Define 'Latency'. | [CO-1][L-1] |
| b) Explain M Wave. | [CO-3][L-2] |
| c) Explain types of energy of electromagnetic radiation. | [CO-1][L-2] |
| d) Differentiate between Seddon and Sunderland classification. | [CO-3][L-3] |
| e) Explain Lewis Hunting Phenomenon. | [CO-3][L-3] 2×5 |

PART-B

- | | |
|--|----------------------|
| Q.2 Elaborate sinusoidal currents and physiological affect faradic currents. | [CO-3][L-2] 8 |
| Q.3 Describe laws of reflection of electromagnetic radiation. | [CO-2][L-3] 8 |
| Q.4 Conceptualize various methods of cryotherapy also explain physiological effect of cryotherapy. | [CO-4][L-2] 8 |
| Q.5 Explain electro-diagnostic techniques. Describe sensory and motor conduction velocity | [CO-5][L-5] 8 |
| Q.6 Define 'Faradic foot bath' along with indications and techniques of Faradic foot bath. | [CO-6][L-2] 8 |
| Q.7 Explain moist heat along with physiological and therapeutic effects and methods of applications, indications, contraindications and patient preparation. | [CO-6][L-3] 8 |

PART-C

- | | |
|--|------------------------|
| Q.8 Explain pain gate theory along modes of TENS with its indications. | [CO-4][L- 5] 15 |
| Q.9 Explain currents and classification of current along with techniques for galvanic currents and its physiological effect. | [CO-4][L-5] 15 |
| Q.10 Explain paraffin wax bath along with physiological and therapeutic effects and methods of its applications. | [CO-6][L-2] 15 |

End Semester Examination, May 2023

Bachelor of Physiotherapy – Second Semester

ANATOMY-II (BPT-201)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Fill in the blanks:

- a) The two layers of peritoneum are _____ and _____ arranged inside out.
- b) The genotype of Klinefelter's and Down's syndrome are _____ and _____ respectively.
- c) Lumbar puncture is done at _____ spinal level.
- d) Facial nerve supplies _____ and _____.
- e) Sympathetic and parasympathetic nervous system have _____ and _____ outflow respectively.
- f) _____, _____ and _____ are the meningeal layers of brain.
- g) Implantation occurs at _____ and fertilization at _____.
- h) _____ and _____ are main lymphoid organs.
- i) The inferior border of pleura corresponds to _____, _____ and _____ ribs.
- j) The glial cells in CNS are _____, _____ and _____. **2 × 10**

PART-A

Q.2 Write short notes on:

- a) Corpus callosum.
- b) Basal ganglia.
- c) Circle of Willis.
- d) Fourth ventricle. **5 × 4**

Q.3 Describe briefly:

- a) Meninges of brain.
- b) Internal capsule. **10 × 2**

- Q.4
- a) Describe the following Ascending tracts of spinal cord. **10**
 - b) Cerebellum. **10**

PART-B

Q.5 Discuss the anatomy of lungs and pleura in detail along with blood supply of both. Also explain bronchopulmonary segment and clinical anatomy. **20**

- Q.6
- a) Explain the term fertilization. **10**
 - b) Discuss "Down syndrome". **10**

Q.7 Write short notes on the following:

- a) Pelvic floor muscles and clinical anatomy.
- b) Thoracic duct. **10 × 2**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Sixth Semester
NEUROLOGY PHYSIOTHERAPY (THEORY) (BPT-602)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) Status epilepticus.
- b) Battle's sign.
- c) Rigidity and its types.
- d) Cranial nerve V.
- e) Spinal shock.

[CO-1][L1] **4×5**

PART A

Q.2 Write note on disorders of tone, posture, bladder control, muscle contraction, and pain in incomplete spinal cord injury patient. [CO-2; L3] **20**

Q.3 Elaborate the planning of prevention, early identification, and evaluation. diagnosis, treatment and rehabilitation [CO-1; L1] **20**

Q.4 What is stroke? Explain in detail about its etiology, classification, clinical presentation and physiotherapy management. [CO-4; L6] **20**

PART B

Q.5 What is muscular dystrophy? Discuss in detail about its progression. Explain the role of rehabilitation team in its management. [CO-1; L4] **20**

Q.6 Explain PEM disorders. Write its management in detail. [CO-2; L2] **20**

Q.7 Write down the causes, clinical features, assessment and management of Parkinson's disease. [CO-4; L6] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Eighth Semester
COMMUNITY BASED REHABILITATION (THEORY)-(BPT-801)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) How does a community benefited from Brownfield redevelopment in rural areas?
- b) Describe four types of sensory disabilities.
- c) Enlist any four guidelines to be followed while talking to a person with intellectual disability?
- d) What are the advantages of Community Based Rehabilitation?
- e) Describe the prevalence of disability and the major causes of disability.
- f) What is the role CBR in Rheumatoid Arthritis Prevention?
- g) Write the role of members of a C.B.R team.
- h) What are the preventive measures for falls in elderly?
- i) What is the role of Red Cross Society in CBR?
- j) What is the concept of Barrier Free Environment? [CO-1,L-1,2] **2×10**

PART-A

Q.2 What is National Health program? What do you understand by RNTCP? [CO-5] [L-5, L-6] **20**

Q.3 Explain 'public health'. What are social security policies to protect public health? [CO-2] [L-3, L-6] **20**

Q.4 What is urbanization? Describe various causes for urbanization in detail. [CO-5] [L-1] **20**

PART-B

Q.5 What is the difference between pasteurization and sterilization? [CO-1] [L-2] **20**

Q.6 What do you understand by family planning? Explain various method used for family planning. [CO-3] [L-3] **20**

Q.7 Enlist and explain all health program implemented for child welfare and control of infectious disease in India. [CO-1] [L-6] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Eighth Semester
SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (BPT-802)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) Epistaxis.
- b) Cauliflower ear.
- c) Hyphema.
- d) Tennis leg.
- e) Charley's horse.
- f) Goalkeepers thumb.
- g) Footballers ankle.
- h) Osgood schlatter disease.
- i) Keinbocks disease.
- j) Severs disease.

[CO-1][L1] **2×10**

PART A

Q.2 Write in detail about assessment and management of Grade-II hamstring strain.

[CO-1][L4] **20**

Q.3 Discuss the roles and responsibilities of sports physiotherapist in a team. [CO-4][L2] **20**

Q.4 Describe in detail about the helmet as a protective gear. Its part, usage and benefits. [CO-2][L3] **20**

PART B

Q.5 What do you understand by Exertional Heat Injuries? Classify the Heat injuries with their sign and symptoms of each. [CO-2][L2] **20**

Q.6 Enumerate the problems faced by wheelchair athletes and ways to protect them. [CO-3][L5] **20**

Q.7 A 20 year old Javelin thrower complaining of shoulder pain whenever he lifts his shoulder above 90 degrees of abduction. Have no history of trauma. Write in detail about assessment and rehabilitation for the same. [CO-5][L6] **20**

End Semester Examination, May 2023

Bachelor of Physiotherapy – Eighth Semester

GENERAL PHYSIOTHERAPY (BPT-803)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) Alopecia.
- b) Boils.
- c) Signs of inflammation.
- d) What is a carbunch.
- e) Tonsillitis.
- f) Write about the problem faced by geriatric population.
- g) Enumerate types of incontinence.
- h) Types of Nystagmus.
- i) Causes of prolapse Uterus.
- j) Types of vertigo.

[CO-1] [L-1] **2×10**

PART-A

Q.2 Explain the causes and types of urinary incontinence.

[CO-1] [L-4] **20**

Q.3 A 65 yrs female patient has undergone both breast radical mastectomies. Discuss the principles of physiotherapy management for the same.

[CO-5] [L-6] **20**

Q.4 Define otitis media. Describe the types, causes, treatment and sign and symptoms of otitis media.

[CO-4] [L-2] **20**

PART-B

Q.5 Write about the management of BPPV. Enumerate different maneuver, and describe Apley's maneuver.

[CO-3] [L-5] **20**

Q.6 Define 'psoriasis'. Discuss the types of psoriasis and explain in detail psoriatic arthritis.

[CO-4] [L-2] **20**

Q.7 Describe principles of physiotherapy management in general surgical conditions and complications.

[CO-2] [L-2] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Eighth Semester
DISABILITY PREVENTION AND REHABILITATION (THEORY)
(BPT-804)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following in brief:

- a) If dance is to chorea, then tremors is to _____. [CO-1; L-2]
- b) In which stage of poliomyelitis rehabilitation is advisable? [CO-2; L-2]
- c) Enlist any two techniques of handling wheelchair in public places. [CO-4; L-1]
- d) What do you mean by cognitive impairments? [CO-3; L-1]
- e) How much percentage of burns can be recovered under mediclaim? [CO-5; L-1]
- f) PWD stands for _____. [CO-3; L-1]
- g) Define 'rehabilitation'. [CO-2; L-1]
- h) How can we assess CN-XI? [CO-1; L-1]
- i) Who leads the team of rehabilitation? [CO-6; L-1]
- j) Write the signs and symptoms of psychosis. [CO-1; L-1] **2 × 10**

PART-A

Q.2 Write in detail about the use of therapeutic exercises in old age population. [CO-1] [L-3, L-6] **20**

Q.3 Describe various behavior strategies to improve the psychological level of patients suffering from Alzheimer's. [CO-2] [L-1, L-2] **20**

Q.4 How would you categorize cerebral palsy? Write the assessment and rehabilitation for a six-year female child with a developmental age of 8 months. [CO-5] [L-1; L-6] **20**

PART-B

Q.5 Discuss the common deformities and the role of surgery in rehabilitation. [CO-1] [L-2; L-3] **20**

Q.6 Describe the role of rehabilitation in patient with cardio respiratory dysfunction. [CO-3] [L-3] **20**

Q.7 Differentiate between 'RA and OA'. Write the appropriate rehabilitation for the two. [CO-1] [L-1; L-6] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Third Semester
PATHOLOGY AND MICROBIOLOGY (BPT-DS-302)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- | | |
|--|---------------------------|
| a) Chemotaxis. | [CO-1][L-1] |
| b) Disease. | [CO-3][L-2] |
| c) Edema. | [CO-3][L-3] |
| d) Hot air oven | [CO-1][L-3] |
| e) Bacterial cell wall. | [CO-2][L-2] |
| f) What are Koch's postulates and why are they important? | [CO-1][L-2] |
| g) Write a short note on the different shapes of bacteria. | [CO-3][L-3] |
| h) What is the causative organism of Diphtheria? Mention the symptoms of disease also. | [CO-2][L-3] |
| i) What is hypersensitivity? | [CO-2][L-3] |
| j) Differentiate between sterilization and disinfectant. | [CO-4][L-2] 2 × 10 |

PART-A

- Q.2 Define "Thrombosis". Explain in detail the classification of thrombosis. Explain in brief the "Thrombophlebitis". [CO-3][L-2] **20**
- Q.3 Write the structure of HIV, mode of transmission, laboratory diagnosis and post exposure prophylaxis. [CO-4] [L-3] **20**
- Q.4 Explain the pathology of Osteoporosis and Osteoarthritis in detail. [CO-4][L-4] **20**

PART-B

- Q.5 a) What is the causative organism of typhoid? How do the bacteria cause the disease? [CO-2,5][L-1] **8**
b) Differentiate between exotoxins and endotoxins. [CO-2][L-1] **2**
c) Define 'shock'. Explain in detail the various types of "shock". [CO-1][L-1] **10**
- Q.6 a) Write the pathogenesis and laboratory diagnosis of typhoid. [CO-4][L-2] **10**
b) What is Rabies? Discuss in brief about the transmission vehicles of the disease. [CO-2][L-4] **10**
- Q.7 What is Candidiasis? Explain the morphology and tools for detection and diagnosis of disease. [CO-5][L-4] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Sixth Semester
RESEARCH METHODOLOGY AND BIOSTATISTICS
(BPT-DS-603/ BPT-604)

Time: 3 hours

Max Marks: 100

No. of Pages: 1

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from PART-A and TWO questions from PART-B. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) Define 'research designs'.
- b) Methods of collecting qualitative data.
- c) Primary and secondary data.
- d) Methods of data representation.
- e) Define 'median'.
- f) Define 'positive co-relation'.
- g) Open and closed questionnaire.
- h) Define 'confounding variables'.
- i) Difference between 'samples and population'.
- j) Mention two measures of variability in distribution.

[CO 2,3] [L4,5] **2×10**

PART-A

Q.2 Compare and contrast between qualitative and quantitative study designs. Examine their advantages and disadvantages. [L5/L3; 2] **20**

Q.3 Describe the various factors which threaten the internal validity of a research study. [L2;3] **20**

Q.4 Calculate mean, median and mode of the following data: [L3/L5;1] **20**

Marks Range	No. of Students
0-5	7
5-10	10
10-15	16
15-20	30
20-25	24
25-30	17
30-35	10
35-40	5
40-45	1

PART-B

Q.5 An analysis of monthly wages paid to the workers in a firm A and B belonging to same industry gives following result.

	Firm A	Firm B
No. of workers	550	650
Average monthly wages	Rs 1450	Rs 1400
Standard Deviation	100	140

- a) Which firm A or B has larger wage bill? **5**
- b) In which, A or B, is there greater variability in individual wages?. [L6; 2] **15**

Q.6 Describe the characteristics of a hypothesis. Classify different types of hypothesis. Justify the significance of a p-value. [L2/L4/L5; 1] **20**

Q.7 Summarize the various ethical principles to be followed in clinical research. Describe informed consent in detail. Also explain such situations where informed consent cannot be obtained and suggest remedial measures for it. [L5/L6; 2] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Second Semester
PHYSIOLOGY-II (BPT-DS-202)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following in brief:

- a) Describe the non-respiratory function of lungs.
- b) Describe briefly factors affecting vital capacity.
- c) What are the different functions of spleen and lymph nodes?
- d) Differentiate between pulmonary and alveolar ventilation.
- e) Write a note on 'juxtaglomerular apparatus'.
- f) Write a note on 'metabolic alkalosis'.
- g) Describe briefly the functions of liver.
- h) Describe regulation of growth hormone.
- i) Write the functions of medulla oblongata.
- j) Differentiate between spasticity and rigidity.

2 × 10

PART A

Q.2 Discuss the mechanism of urine formation in detail. **20**

Q.3 Describe the nervous and chemical regulation of respiration in detail. **20**

Q.4 Discuss in detail about the composition, functions and regulation of pancreatic juice. **20**

PART B

Q.5 Explain the role of cerebellum in body posture and equilibrium and maintenance of muscle tone. **20**

Q.6 Explain the mechanism of digestion and absorption of proteins in detail. **20**

Q.7 Describe in detail the organization of central nervous system. **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Second Semester
ELECTROTHERAPY-1 (BPT-DS-203/BPT-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- | | |
|---|----------------------------|
| a) Elaborate 'NCV'. | [CO-2] [L-1] |
| b) Differentiate Motor point and Motor Unit. | [CO-3] [L-2] |
| c) Define 'Rheobase and Chronaxie'. | [CO-4] [L-3] |
| d) Explain various technique of Galvanic Current. | [CO-1] [L-4] |
| e) Explain latency period. | [CO-1] [L-2] |
| f) Elaborate Ramp up and Ramp down. | [CO-3] [L-1] |
| g) What is burst TENS? | [CO-5] [L-2] |
| h) Define surging of current. | [CO-2] [L-4] |
| i) Elaborate "EMG". | [CO-4] [L-2] |
| j) Explain Faradism under tension. | [CO-5] [L-2] 2 × 10 |

PART-A

- Q.2 Classify 'current'. Explain various classifications for currents. Examples and uses for different frequency of currents in physiotherapy. [CO-5] [L-2] **20**
- Q.3 Enumerate and elaborate Seddon and Sunderland classification of nerve injuries. Also explain regeneration in detail. [CO-2] [L-1] **20**
- Q.4 Explain modes of TENS will be applicable for the patient with chronic pain. Also explain different modes of current with its functions on pain gate. [CO-3] [L-2] **20**

PART-B

- Q.5 Explain 'Faradic currents'. Explain physiological effects and indications and explain Faradism under Pressure. [CO-2] [L-3] **20**
- Q.6 Explain strength duration curve for different form of nerve lesion. Explain all factors to rheobase and chronaxie with severity of nerve lesion. Explain with diagrams. [CO-5] [L-6] **20**
- Q.7 What is Iontophoresis? Explain principles and indication for The Technique. [CO-3] [L-4] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Second Semester
EXERCISE THERAPY – I (BPT-204/BPT-DS-204)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 a) Differentiate between 'manual' and 'mechanical' resistance exercises.
 b) What do you understand by the term Muscle Re-education?
 c) What are guidelines for application of stretching procedures?
 d) Write the classification of movements to show the progression of exercises.
 e) Define 'passive movements'. Give two examples. **4×5**

PART-A

- Q.2 What principles need to be worked upon for achieving joint mobility? Write various techniques used for its management. [CO-5][L-4] **20**
- Q.3 Write the progressive exercises in strengthening for hamstrings using various application: (According to Their Muscle Power) Grade I- Grade IV. [CO-2][L-2] **20**
- Q.4 Write a short note on fundamental and derived positions. [CO-2] [L-3,6] **20**

PART-B

- Q.5 Write a short note on: 'movements'. What are the indications and contraindications for active and passive movements? [CO-3] [L-5,6] **20**
- Q.6 Define the structures related to mobility and stretching of upper limb muscles and spinal muscles. [CO-3] [L-3] **20**
- Q.7 Discuss on passive movements. Write the effect of exercises on human body. [CO-1] [L-1,2] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Fourth Semester
BIOMECHANICS AND KINESIOLOGY (BPT-DS-403)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Explain the following:
- | | |
|-------------------------------------|-------------------------|
| a) Open and closed kinematic chain. | [CO-3][L-1] |
| b) Carrying angle. | [CO-4][L-2] |
| c) Anatomical pulleys. | [CO-1][L-2] |
| d) Pad-to-pad prehension. | [CO-2][L-3] |
| e) Painful arc syndrome. | [CO-2][L-5] |
| f) Lumbricals. | [CO-2][L-2] |
| g) Isometric exercises. | [CO-1][L-3] |
| h) Spurt and shunt muscle. | [CO-1][L-2] |
| i) Coraco-acromial arch. | [CO-3][L-4] |
| j) Kinetics and kinematics. | [CO-1][L-1] 2×10 |

PART-A

- Q.2 Explain in detail Newton's law of motion. How these laws are affecting in the human body's motion. [CO-2][L-1] **20**
- Q.3 Explain below-given question with an example and schematic diagram:
- | | |
|--|-------------------------|
| a) Active insufficiency and passive insufficiency. | |
| b) Length-tension relationship and force-tension relationship. | [CO-3][L-2] 10×2 |
- Q.4 Describe the characteristics of a true synovial joint also explain its stability factors. [CO-4][L-3] **20**

PART-B

- Q.5 Write the biomechanics of the shoulder joint and sternoclavicular joint. Explain scapulohumeral rhythm. [CO-4][L-3] **20**
- Q.6 Explain the biomechanical configuration of the superior and inferior radio-ulnar joint. [CO-3][L-4] **20**
- Q.7 Describe the kinematics and kinetics of the wrist complex, including radio-carpeal joints. Also, explain the ligaments of the wrist complex. [CO-2][L-3] **20**

End Semester Examination, May 2023

Bachelor of Physiotherapy – Fifth Semester

ORTHOPEDICS (BPT-DS-501)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) Define 'grades of ligament tear'. [CO-1][L-1]
- b) Write a short note on: 'skin traction' [CO-2][L-1]
- c) Write a short note on: 'CTEV'. [CO-3][L-2]
- d) Define 'closed fracture'. [CO-2][L-1]
- e) Describe the factors affecting fracture healing. [CO-4][L-2]
- f) Give any two indications of ORIF over closed reduction and fixation. [CO-2][L-2]
- g) What is phantom pain? [CO-3][L-1]
- h) Define 'pathological fracture'. [CO-1][L-1]
- i) What is dislocation? [CO-2][L-2]
- j) What is the ideal position of sling application for clavicle fracture? [CO-1][L-2] **2 × 10**

PART-A

- Q.2 Elaborate the classification, surgical and treatment objectives, and goals for fracture shaft of femur for a female patient of 60 years of age. [CO-3,4][L-5] **20**
- Q.3 Elaborate the clinical features, classification, pathogenesis, investigations, differential diagnosis, complications and management of PIVD of lumbar spine. [CO-3][L-3] **20**
- Q.4 Discuss in detail the types of amputations. What are the associated complications and management of complications for below knee amputation? [CO-2][L-2] **20**

PART-B

- Q.5 Discuss the pathology, clinical features, examination, differential diagnosis and surgical management of Pott's spine. [CO-3][L-2] **20**
- Q.6 Define 'fracture'. Classify fracture. Explain in detail the management of open fracture and closed fracture. [CO-2][L-3] **20**
- Q.7 Explain in details the indications, complications of discectomy, laminectomy and spinal fusion surgery. [CO-4][L-2] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Fifth Semester
ORTHOPEDICS PHYSIOTHERAPY (BPT-DS-502)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following in brief:

- a) Explain clinical diagnostic tests of Bicipital tendinitis
- b) Define "bamboo spine"
- c) Differentiate between ligament tear and meniscal tear
- d) Define Sudeck's atrophy
- e) Define rickets
- f) Define pathology for Carpal Tunnel Syndrome
- g) Define crutch palsy
- h) Differentiate between Arthrodesis and Osteotomy
- i) Differentiate between open and closed amputation
- j) Define Cobb's angle

2 × 10

PART-A

Q.2 Describe the pre & post-immobilization PT treatment of fractures. Also describe the precautions for the same. [CO2][L3] **20**

Q.3 Differentiate between congenital and acquired deformities. Describe the signs, symptoms and physiotherapy management options for CDH. [CO5][L5] **20**

Q.4 Describe the importance of history taking during evaluation of a patient. [CO3][L6] **20**

PART-B

Q.5 Describe the stages of adhesive capsulitis. Explain the possible causes and treatment options for the same. [CO2,4][L1] **20**

Q.6 Discuss the components for pre-prosthetic evaluation. Also describe the parts of above knee prosthesis. [CO2][L3] **20**

Q.7 What do you understand by THR? Describe the rehabilitation procedure along with contra-indications and precautions. [CO1][L2] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy– Fifth Semester
APPLIED BIOMECHANICS, KINESIOLOGY AND ERGONOMICS
(BPT-DS-503)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Write short notes on:

- a) Trendelenburg sign and use of cane. [CO-1] [L-4]
- b) Active insufficiency and passive insufficiency. [CO-1,3] [L-2]
- c) Closed chain lumbo-pelvic rhythm. [CO-1,5] [L-5]
- d) Kinematics of Pelvic motions. [CO-2,3] [L-4] **5×4**

PART-A

- Q.2 Discuss in details about intervertebral disc and its mechanics. Also discuss the kinematics and kinetics of lower cervical region. [CO-2,5] [L-2] **20**
- Q.3 Explain the structural adaptation to hip joint during unilateral stance. Explain the kinetic characteristics of rectus femoris in relation with knee joint movement. [CO-5,1] [L-3] **20**
- Q.4 Describe in detail about the biomechanics of subtalar joint. Supination and pronation in weight bearing foot [CO-2,5] [L-3] **20**

PART-B

- Q.5 Compare the biomechanics (characteristics and cause) during increased and decreased lumbar lordosis. [CO-2,5] [L-5] **20**
- Q.6 Write the kinetic changes at ankle and knee joint during different gait phases with schematic diagram. [CO-4,5] [L-2] **20**
- Q.7 Describe the various ergonomically changes for a professional working for long on the computer. [CO-5,6] [L-5] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Sixth Semester
NEUROLOGY AND NEUROLOGY-SURGERY (Theory)
(BPT-DS-601)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) DEFINE disdiadokokinesia
- b) Discuss Lhermitte's sign.
- c) Define 'GCS'.
- d) Write short note on Parkinson's plus syndrome.
- e) Enumerate the cause of myositis.
- f) Name the cranial nerves.
- g) Define 'kernig's sign'.
- h) Define "ventriculo-peritoneal shunt".
- i) Mention the pathology of myasthenia gravis.
- j) Define 'deep brain stimulation'.

2 × 10

PART-A

Q.2 Discuss in detail about Guillain barre syndrome, its clinical features and management. [CO-1] [L-3] **20**

Q.3 Explain in detail about multiple sclerosis, clinical manifestations. [CO-3] [L-2] **20**

Q.4 Elaborate various neural tube defects and its management. [CO-2] [L-3] **20**

PART-B

Q.5 Enumerate and explain different muscular dystrophies and management of DMD. [CO-5] [L-3] **20**

Q.6 Discuss in detail both operative and non-operative management of spasticity. [CO-4] [L-3] **20**

Q.7 Assessment of spinal cord injury in detail. [CO-3] [L-4] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Sixth Semester
NEUROLOGY AND PAEDIATRIC PHYSIOTHERAPY (BPT-DS-602)

Time: 3 hrs.

Max Marks: **100**

No. of Pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) Discuss the clinical feature of Scurvy.
- b) Discuss Brudzinski sign.
- c) Describe levels of consciousness.
- d) Write short note on RLA Classification of head injury.
- e) What is utoff's phenomenon?
- f) Explain Parachute and Moro's reflex.
- g) What are the various developmental stages from birth to walking?
- h) Describe measurement of scoliosis.
- i) Describe Gower's sign.
- j) Write a short note on 'syringomyelia'.

2 × 10

PART-A

Q.2 Discuss in detail the laws of growth, factors affecting growth and GDD. [CO1][L-3] **20**

Q.3 Define 'stroke'. Explain its types cause clinical features of MCA effect and physiotherapy management impact. [CO-3] [L-2] **20**

Q.4 Enumerate types of CP and its detailed PT management post Tendon Achilles lengthening surgery. [CO-2] [L-3] **20**

PART-B

Q.5 Enumerate various types of anemia. Discuss treatment methodology adopted for Anemia. [CO-2] [L-3] **20**

Q.6 Explain in detail about Parkinson disease and its PT management. [CO-4] [L-4] **20**

Q.7 Enumerate and discuss in detail about muscular dystrophy clinical features and PT management. [CO-2] [L-3] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Eighth Semester
BASICS OF MANUAL THERAPY (BPT-DS-604)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART A** and **TWO** questions from **PART B**. Marks are indicated against each question.*

Q.1 Answer the following:

- a) Enumerate various techniques of stroking manipulation. [CO-2][L-2]
- b) What are the principles of neural mobilization? [CO-3][L-3]
- c) Write the step for lower limb massage. [CO-4][L-4]
- d) Difference between percussion and shaking technique of massage. [CO-1][L-5]
- e) Explain with diagram ULTT1 test. [CO-5][L-3] **2×5**

PART-A

- Q.2 Enumerate the physiological and therapeutic effects of massage. Add a note on contraindications and points to be remembered during massage. [CO-2][L-3] **10**
- Q.3 Write in detail about the effects and uses of pressure technique of massage. [CO3][L3] **10**
- Q.4 What is neural mobilization? Write in detail about its indications and contraindications. Add a note on slump test and its interpretation. [CO-4][L-5] **10**

PART-B

- Q.5 Write in detail about the principles of McKenzie mobilization. Add a note on McKenzie exercises used for PIVD (Prolapse Intervertebral Disc) [CO-5][L-6] **10**
- Q.6 Discuss effects, indication and contraindications of manual therapy. [CO-5][L-6] **10**
- Q.7 Write in detail the technique of mobilization to improve elbow joint flexion and supination range. [CO-3][L-4] **10**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Seventh Semester
CARDIOPULMONARY AND CARDIOPULMONARY SURGERY
(BPT-DS- 701)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Explain the following:
- a) Flail chest. [CO-1] [L-1]
 - b) Postoperative preventive care. [CO-2] [L-6]
 - c) Types of Pneumonia. [CO-3] [L-1]
 - d) Bronchopulmonary fistula. [CO-2] [L-1]
 - e) Types of incision. [CO-3] [L-2]
 - f) Process of open suctioning system. [CO-2] [L-5]
 - g) Dypnea. [CO-1] [L-1]
 - h) Type-I respiratory failure. [CO-2] [L-4]
 - i) Lobectomy. [CO-2] [L-5]
 - j) Emphysema. [CO-2] [L-5] **2 × 10**

PART-A

- Q.2 Explain clinical features and management of Carcinoma of lungs. Explain Pneumonectomy for Carcinoma Lung [CO-3] [L-5] **20**
- Q.3 Write about the operations in congenital disorders, precaution and postsurgical management. [CO-2,4] [L-5] **20**
- Q.4 Classify respiratory failure. Enumerate the absolute cause and management. [CO-1,2] [L-5] **20**

PART-B

- Q.5 Discuss the preoperative and post-operative management of the open heart surgeries. [CO-2,3] [L-5] **20**
- Q.6 Explain following:
- a) Briefly discuss myocardial infection.
 - b) Discuss the peripheral vascular disease of veins. [CO-2,3] [L-5] **10 × 2**
- Q.7 Write rheumatic fever and its post effect seen as extra articular manifestation. [CO-1,2] [L-4] **20**

End Semester Examination, May 2023

Bachelor of Physiotherapy – Eighth Semester SPORTS PHYSIOTHERAPY (BPT-DS-801)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define 'doping'. [CO-1] [L-1]
- b) Enumerate protective equipment used by foot-ball players. [CO-2] [L-2]
- c) What is late onset Hypoglycemia in diabetic athletes? [CO-3] [L-3]
- d) Mention stages of tissue healing. [CO-4] [L-2]
- e) Name the common injuries seen in racket sports. [CO-5] [L-5]
- f) Describe the importance of iron in sports performance. [CO-3] [L-5]
- g) What is the meaning of Ergogenic aids? [CO-2] [L-4]
- h) Enumerate professional involved in pre participation examination. [CO-5] [L-1]
- i) Mention the Parts of wound. [CO-1] [L-4]
- j) Expand WADA and its role. [CO- 4] [L-5] **2×10**

PART-A

Q.2 Enumerate types of wound write in detail about assessment of wound and add a note on ultrasound therapy for management of a wound. [CO-2] [L-3] **20**

Q.3 Classify sports injuries. Add a note on the phases of rehabilitation for soft tissue injuries. [CO-5] [L-3] **20**

Q.4 Discuss in detail about the role of nutrition in sports performance. [CO-3] [L-5] **20**

PART-B

Q.5 What is Exercise induced Asthma? Write in detail about its management. [CO-5] [L-6] **20**

Q.6 What are the challenges faced by a disabled athlete? Add a note on condition specific problems in spinal cord injured athletes and its management.[CO-1] [L-2] **20**

Q.7 Write in detail the physiotherapy management for 26 years old foot-ball player who underwent right sided ACL reconstruction surgery. [CO-3] [L-4] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Eighth Semester
PHYSIOTHERAPY IN MEDICO SURGICAL CONDITIONS
(BPT-DS-802)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) Define alopecia and its types.
- b) What is a keloid?
- c) Write a short note on 'classification of vitiligo'.
- d) Explain the pathophysiology of otitis media.
- e) Discuss the importance of prenatal exercises.
- f) Enumerate type of incontinence.
- g) Classify leprosy.
- h) Diagrammatic representation of Wallace rule of 9.
- i) What are the contents of right hypochondriac region?
- j) Define 'endometriosis'.

2 × 10

PART-A

Q.2 Explain the following:

- a) Describe types of oedema.
- b) Define 'AIDS'. What are its symptoms?
- c) Explain any two post operative complications of abdominal surgeries.
- d) Explain briefly pathophysiology in vestibular dysfunction. [CO-6] [L-3] **5 × 4**

Q.3 Plan out a prenatal, exercise protocol for a 39-year-old female emphasizing on the complications that might occur during pregnancy and precautions to be considered for the fetus and mother. [CO-6] [L-6] **20**

Q.4 A 58 yrs female patient has undergone breast radical mastectomy. Discuss the principles of physiotherapy management and exercises for the same. [CO4][L6] **20**

PART-B

Q.5 a) Write in detail about American college of Obstetricians and Gynecologists/ACOG guidelines for exercise prescription in pregnancy. [CO-5] [L-1] **10**

b) Explain the principles of post-operative physiotherapy management for a female patient of 40 yrs old undergone surgery for incisional hernia. [CO-3] [L-1] **10**

Q.6 Explain in brief the screening and assessment of occupational diseases. Enumerate occupational diseases. Also throw light on the principles physiotherapy management. [CO-6] [L2] **20**

Q.7 A 65 year old male was brought to the burns unit of the hospital with full thickness burns to the posterior chest and both upper limbs and suspected inhalational burns. Estimate the burnt area and prognosis. Write about the medical, surgical and physiotherapeutic management. [CO6] [L6] **20**

End Semester Examination, May 2023
Bachelor of Physiotherapy – Eighth Semester
GERIATRIC CARE (BPT-DS-803)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: *Attempt **THREE** questions in all; **Q.1** is compulsory. Attempt any **ONE** questions from **PART-A** and **ONE** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Define the following:
- a) Classify elderly.
 - b) Enumerate theories of aging.
 - c) What is cognitive impairment?
 - d) Define osteoporosis and classification of osteoporosis.
 - e) Classification for fall.

2×5

PART-A

- Q.2 Explain normal aging, write in detail about the anatomical, physiological and cognitive changes related to aging. [CO-1][L-1] **20**
- Q.3 Explain musculoskeletal changes during aging write principles of management to prevent musculoskeletal injuries. [CO-5][L-4] **20**

PART-B

- Q.4 Explain exercises for cardiovascular pulmonary de-conditioning in geriatric patient. [CO-5][L-3] **20**
- Q.5 Describe falls assessment in elderly and various scales and questionnaires used to quantify risk of fall in elderly. [CO-3][L-2] **20**

End Semester Examination, May 2023

Bachelor of Physiotherapy – Eighth Semester

DISRUPTIVE TECHNOLOGY (BPT-DS-804)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) What is pre-appointment planning? [CO-1] [L-2]
- b) Write about key performance indicators (KPIs). [CO-2] [L-5]
- c) Advantages of AI in rehabilitation. [CO-3] [L-3]
- d) Define 'digitally transformed healthcare'. [CO-2] [L-1]
- e) Formulate a hierarchy of evaluation of diagnostic technologies. [CO-3][L-2] **2×5**

PART-A

Q.2 Enumerate the uses of disruptive technology. [CO-5,6] [L-3,2] **10**

Q.3 Write a note on role of artificial intelligence in rehabilitation. [CO-1,3] [L-3,4] **10**

Q.4 Explain how m-health apps has brought a revolution in healthcare?
[CO-5,6] [L-3,2] **10**

PART-B

Q.5 Enumerate examples of Virtual augmented reality and their role in rehabilitation.
[CO-1,2] [L-3] **10**

Q.6 Explain the use of monitoring, performance and guidance to patients with help of digital technology in health care.
[CO-3,4] [L-1,2] **10**

Q.7 Classify different methods of patient engagement platform in healthcare practice.
[CO-3,4] [L-1,2] **10**

End Semester Examination, May 2023

Bachelor of Physiotherapy – First Year

PROFESSIONAL COMMUNICATION - I

(CDC-BPT-111)

Time: 2 hrs.

Max Marks: 50

No. of pages: 4

Note: *All questions are compulsory. Each question has **FOUR** options with **ONE** correct answer. Select the correct answer. All questions are of **ONE** mark each. There is no **NEGATIVE** marking. Mention the correct option for each question in the blank answer key given herein below. Calculator is not permitted.*

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
41.	42.	43.	44.	45.	46.	47.	48.	49.	50.

Directions for Q.1 to Q.10: Choose the correct option:

[CO-1] [L2]

- Q.1 In the ABC components of attitude, A stands for:
A] Affiliation B] Attitude C] Affection D] Affective
- Q.2 Which is out of the following factor not within the individual in development?
A] Physical Growth B] Emotional C] Individual D] Social
- Q.3 Which out of following affects our thoughts?
A] Attitude B] Behaviour C] Social D] None of these
- Q.4 By which factor an attitudinal change occurs:
A] Self-perception B] Self-evaluation C] Improvisation D] All the above
- Q.5 Courtesy would mean:
A] Showing good behavior B] Self Praise
C] procrastination D] None of these
- Q.6 Which of this is not etiquette?
A] Code of conduct B] Set of societal rules
C] Ethics of life D] None of these
- Q.7 Basic courtesy in the college campus does not include:
A] Engaged with phone B] Dress appropriately
C] Greet others D] All of these
- Q.8 "Every individual will have an intention to react in a certain way toward something" is under which one of the following component of attitude.
A] Behavioral B] Cognitive
C] Affective D] Positive
- Q.9 Inclusion of people with special needs:
A] Is detrimental to people without disabilities
B] Will increase the burden in colleges and workplace
C] Requires a change in attitude, content and approach to teaching.
D] Is a unrealistic approach
- Q.10 Gesture, posture eye contact are considered to be:
A] not important B] Social Skills C] body language D] soft skills

Directions for Q.11 to Q.24: Fill in the blanks with appropriate answers: [CO-2][L-2]

- Q.11 LGBTQI stands for _____.
A] Lesbian Gay Bi- Sexual Transgender Queer Inclusive
B] Lesbian Gather Bi-sexual Transgender Queer Inclusive
C] Layman Group Bi-stander Transgender Quite inclusive
D] None of these

- Q.12 POSH stands for _____.
- A] Prevention of Simple Harassment B] Prevention of Sexual Harassment
C] Point of Specific Harassment D] None of these
- Q.13 The statement "I don't feel comfortable in crowd" is an example of _____ component of attitude.
- A] Behavioral B] Cognitive C] Affective D] Positive
- Q.14 _____ is the only component of attitude which is visible and can be observed directly.
- A] Behavioral B] Cognitive C] Affective D] Positive
- Q.15 What is cultural competence?
- A] The ability to understand and effectively interact with people from different cultures
B] The belief that one's own culture is superior to others
C] The avoidance of cultural diversity in social settings
D] The enforcement of strict cultural norms and traditions
- Q.16 Situation: Sarah is a new employee at a company. She notices that her colleague, John, always has a negative attitude towards their supervisor and frequently complains about work. Sarah decides to:
- A] Ignore John's negativity and focus on her own work.
B] Join John in complaining to build rapport with him.
C] Address John's behavior by encouraging a more positive attitude.
D] Report John's behavior to the supervisor.
- Q.17 _____ are our body parts especially arms, legs, hands and head convey meaning.
- A] Gestures B] Proxemics C] Time language D] Paralanguage
- Q.18 When giving a presentation in front of an audience you should do all of the following except for:
- A] Speak loud and clear B] Dress professionally
C] Provides hand-out if needed D] Look at your screen and not the audience
- Q.19 Components of Attitude is largely segregated into _____ parts.
- A] 7 B] 4 C] 3 D] 6
- Q.20 Education is a great leveler and is the best tool for achieving economic and social mobility, inclusion, and _____.
- A] disparity B] discrimination C] inequality D] equality
- Q.21 _____ are our body parts especially arms, legs, hands and head convey meaning.
- A] Gestures B] Proxemics C] Time language D] Paralanguage
- Q.22 The two broad areas of communication are:
- A] Oral and written communication
B] Verbal and non-verbal communication
C] Oral and non-verbal communication
D] Verbal and written communication
- Q.23 Two key elements of inclusive practice are to encourage a sense of:
- A] Partnership and consolidation.
B] Openness and freedom.
C] Similarity and attraction.
D] Belongingness and uniqueness
- Q.24 Inclusion of people with special needs _____.
- A] Is detrimental to people without disabilities
B] Will increase the burden in colleges and workplace
C] Requires a change in attitude, content and approach to teaching.
D] Is a unrealistic approach

Directions for Q.25 to Q.50: Choose the correct option:

[CO-3][L-2]

- Q.25 Most of us use _____ and _____ in addition to words, when we speak.
A] Words and gestures B] Gestures and body language
C] Body language and posture D] Posture and eye gazing
- Q.26 Which of the following is incorrect way of introduction?
A] I am B] My name is
C] Myself..... D] None of these
- Q.27 When putting a caller on hold, what do you need to say or ask?
A] Ask if it is ok to put the caller on hold.
B] "Would you like to be put on hold?"
C] "I apologize for the inconvenience."
D] Thank you for holding
- Q.28 Why are telephone greetings so important?
A] It is the first impression. B] It shows that you are happy.
C] It shows that you are polite D] It shows you know your work
- Q.29 Besides having a paper and pencil ready, why would you ask the caller for their phone number?
A] In case the call gets disconnected.
B] To show the caller, you are polite and considerate.
C] In case the caller is rude. This way, you can call him back.
D] None of these
- Q.30 Greetings in business are usually formal, but greetings among family and friends are much more.
A] impolite B] polite C] casual D] None of these
- Q.31 If you meet someone at night, you can greet them by saying
A] Good night B] Good evening C] Good sleep D] All of these
- Q.32 Which can you say after being introduced to someone for the first time?
A] Nice to meet you B] Nice to greet you
C] Nice to see you D] None of these
- Q.33 Which one is appropriate formal request. _____. I speak with Mr. Bhatia, Please.
A] May B] Can C] Would D] Would you mind
- Q.34 You were given a task to complete within a week. Suddenly your boss called and informed that he needs the work done within 2 days. You will:
A] Not do within two days and complete the task in a week's time.
B] Do within two days but ask for help from others
C] To complete the work as fast even if the quality is compromised
D] To take sick leave and evade the situation
- Q.35 You and your roommate are from different cultural backgrounds. Your roommate does not like the way you cook food and asks you to prepare in a different method. You will:
A] Ignore her and keep preparing in your own method
B] Adjust the cooking style to her choice
C] Prepare food by combining the two styles
D] Simply look for another roommate
- Q.36 You only know Hindi. Next week you have been transferred to Tamilnadu and you will:
A] Go and start learning their language
B] Leave the job as you can't learn Tamil
C] Try and understand with the help of your colleagues
D] Start learning Tamil before the start
- Q.37 What do you do with empty plastic bottles?
A] Throw it in the dustbin B] Reuse it as a pot for plants
C] Send it for recycling D] None of the above

- Q.38 You have recently incurred a huge loss in the investment market. How will you manage your lifestyle?
- A] Invest again and get better returns
 - B] Spend less and save more
 - C] Take a fresh loan to meet your lifestyle
 - D] Ask a friend to lend you money for sometime
- Q.39 Ram and Jyoti's father bought toys for them. They gifted the boy an airplane. Which feature of social culture is highlighted in the statement.
- A] Exclusion (Marginalization)
 - B] Equality
 - B] Feminism
 - D] Stereotype
- Q.40 Listening and hearing refer to:
- A] Different things
 - B] A specific act versus a general act
 - C] Mental and physical acts, respectively
 - D] The same thing
- Q.41 What does the concept of diversity in the workplace refer to?
- A] Cultural Diversity.
 - B] Racial Diversity.
 - C] Gender Diversity.
 - D] All of these
- Q.42 By accepting responsibility for your actions you are demonstrating
- A] Weakness
 - B] accountability
 - C] creativity
 - D] Nothing
- Q.43 Which greeting word is inappropriate in formal introduction?
- A] Hello
 - B] Good Morning
 - C] Hey, What's up?
 - D] None of the above
- Q.44 At the beginning of the presentation, you should give:
- A] Your introduction
 - B] Summary of a topic
 - C] Ask questions
 - D] Further information
- Q.45 A presentation is a form of oral communication in which person shares factual information with an audience that is:
- A] large
 - B] small
 - C] specific
 - D] mixed
- Q.46 What does the "Q" in LGBTQ+ stand for?
- A] Queer
 - B] Questioning
 - C] Quizzical
 - D] Queasy
- Q.47 Situation: You are working in a multicultural team, and a colleague from a different cultural background expresses an opinion that conflicts with your own. What would be the best approach to handle this situation?
- A] Dismiss your colleague's opinion and assert your own viewpoint.
 - B] Engage in a respectful discussion to understand your colleague's perspective and find common ground.
 - C] Ignore the conflict and avoid any further communication with your colleague.
 - D] Report your colleague to the supervisor for expressing a conflicting opinion.
- Q.48 Situation: You are attending a business meeting with international clients. One of the clients engages in a cultural practice that you find disrespectful. How should you handle this situation?
- A] Express your disapproval directly to the client, emphasizing your cultural perspective.
 - B] Ignore the client's behaviour and continue with the meeting.
 - C] Use nonverbal cues to show your discomfort without addressing the issue directly.
 - D] Seek understanding by respectfully asking questions about the cultural practice
- Q.49 Politeness is defined as:
- A] Acting in a formal and distant manner
 - B] Using excessive flattery to manipulate others
 - C] Demonstrating respect for others
 - D] Ignoring social norms and conventions
- Q.50 Which of the following is an example of courteous behaviour?
- A] Ignoring someone's greetings and not responding
 - B] Holding the door open for someone behind
 - C] Interrupting others while they are speaking
 - D] Speaking loudly to dominate conversation

End Semester Examination, May 2023
 Bachelor of Physiotherapy – Second Year
PROFESSIONAL COMPETENCY ENHANCEMENT-I
(CDC-BPT-212)

Time: 2 hrs.

Max Marks: 50

No. of pages: 4

Note: All questions are compulsory. Each question has **FOUR** options with **ONE** correct answer. Select the correct answer. All questions are of **ONE** mark each. There is no **NEGATIVE** marking. Mention the correct option for each question in the blank answer key given herein below. Calculator is not permitted.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
41.	42.	43.	44.	45.	46.	47.	48.	49.	50.

Direction: Choose the correct answer from the options given below:

- Q.1 Conflict management techniques can:
 A] Only resolve conflict B] only stimulate conflict
 C] Both resolve and stimulate D] none of these
- Q.2 When a group disagrees, it is usually over how the work should get done. What type of conflict it is? [CO1][L1]
 A] Relationship B] Task
 C] Traditional D] Process
- Q.3 Which of the following methods is use to solve intergroup conflicts indirectly? [CO1][L1]
 A] Avoidance B] Encouragement
 C] Bargaining D] All of these
- Q.4 Which is NOT a trait of an adaptable employee?
 A] Works well with a team B] Can adapt to changing work conditions
 C] Flexible D] Does not like change
- Q.5 Which of the following is a strategy that can be used to maintain adaptability in the workplace? [CO1][L1]
 A] Stay calm. B] Develop a solution.
 C] Keep an open mind. D] All of these
- Q.6 For every problem a manager has, there should be a _____.
 A] Solution B] Reason
 C] Question D] penalty
- Q.7 What is the best definition of cultural adaptability?
 A] The ability to learn new skills
 B] The ability to communicate and work within various cultures successfully
 C] The willingness to work with people from any culture
 D] The willingness to learn about other cultures
- Q.8 What is a situation that calls for using your active listening skills?
 A] Riding a car
 B] When a teacher explains the homework assignment
 C] Listening to songs
 D] Watching movie

- Q.9 Which one is NOT part of active listening?
 A] Look at the person B] Encourage the person to talk
 C] Give advice D] Use empathy
- Q.10 Which is NOT a good reason to use active listening?
 A] To be a good friend
 B] To have time to think of what you want to say
 C] To make sure you understand what to do
 D] To get more information
- Q.11 What is an important use of body language and active listening?
 A] To show you are listening B] To encourage the person to talk
 C] To see how the speaker is feeling D] All of these
- Q.12 What is the first step to active listening?
 A] Grunt and nod B] ask questions
 C] Look at the speaker D] give feedback
- Q.13 Which of the following is a verbal cue you can use to show you're actively listening?
 A] Sayaying, "Ooh ooh" B] asking a follow-up question
 C] humming a song D] interruption
- Q.14 5 key problem solving skills include identify, _____, explore, action and look back.
 [CO-3] [L-2]
 A] Refine B] Label
 C] Assign D] Define
- Q.15 In simple words _____ can be described as a serious disagreement or argument.
 [CO-1] [L-2]
 A] Conflict B] Discussion
 C] Truce D] Harmony
- Q.16 Conflict affects your _____, impacts team environment, hampers growth.
 A] Disregard B] Direction
 C] Performance D] Failure
- Q.17 _____ divides the task and multiplies the success.
 A] Union B] Help
 C] Symbiosis D] Team work
- Q.18 Being emotionally sound helps you to be better _____.
 A] Self-aware B] Ignorant
 C] Oblivious D] Un-informed
- Q.19 Mental wellbeing includes our emotional, psychological and _____ wellbeing.
 A] Social B] Intellectual
 C] Spiritual D] Physical
- Q.20 _____ is an emotional state characterized by feeling of joy, satisfaction, contentment, and fulfillment.
 [CO-4] [L-2]
 A] Sorrow B] Happiness
 C] Upset D] Misery
- Q.21 Effective leaders lead with _____, confidence, and compassion.
 A] Lies B] Fraud
 C] Honesty D] Deceit
- Q.22 _____ are individual beliefs that motivate people to act one way or another.
 A] Morals B] Standards
 C] Ideals D] Values
- Q.23 Integrity can be defined as having the inner strength to be _____ and trustworthy, acting justly and honorably and being consistent in words and actions.
 [CO-4] [L-2]
 A] Truthful B] Deceitful
 C] False D] Lying

- Q.24 Emotional Intelligence is defined as the ability to perceive, use, _____ manage and handle emotions. [CO-4] [L-2]
 A] Ignorant B] Understand
 C] Overlook D] Disregard
- Q.25 Personal effectiveness can be defined as getting the _____ out of yourself. [CO-4] [L-2]
 A] Worst B] Least
 C] Best D] Poor
- Q.26 The 5 C formula for Personal Effectiveness includes _____ commitment, control, competence, and creativity. [CO-4] [L-2]
 A] Compactness B] Concrete
 C] Compare D] Consistency
- Q.27 Self Esteem is how we _____ and perceive ourselves. [CO -4] [L-2]
 A] Value B] Morals
 C] Habits D] Duty
- Q.28 Maslow's Hierarchy of needs include physiological needs, safety needs, love and belonging, _____ and self-actualization. [CO-4] [L-2]
 A] Ridicule B] Esteem
 C] Scorn D] Abuse
- Q.29 It is not your job to _____ me, it's mine.
 A] Hate B] Approve
 C] Love D] Mock
- Q.30 An assertive person respectfully and clearly _____ their needs, wants, position and boundaries to others. [CO-4] [L-2]
 A] Secret B] Withheld
 C] Hide D] Communicates
- Q.31 Critical Thinking enhances your _____ solving skills. [CO-4] [L-2]
 A] Problem B] Investigate
 C] Rational D] Testing
- Q.32 The process of finding solutions to difficult or complex issues is called _____. [CO-4] [L-2]
 A] Investigative B] Problem solving
 C] Logical D] Searching
- Q.33 Which one is a good communication?
 A] Message is clear and direct B] Message is ambiguous
 C] Sender attacks receiver D] Receiver doesn't listen
- Q.34 The resume of a fresher is normally of how many pages?
 A] One page B] Two pages
 C] Three pages D] Four pages
- Q.35 Which of the following is considered unprofessional? [CO2][L1]
 A] Use basic fonts B] Mentioning academic details
 C] Colored font D] All of the above
- Q.36 Which should not be mentioned in the resume?
 A] Address B] Academic details
 C] Religion D] Experience
- Q.37 Which of the following shows a positive facial expression?
 A] Frowning while concentrating B] Maintaining eye contact
 C] Smiling continuously D] Rolling up your eyes
- Q.38 Using abbreviations in communication leads to which type of communication barrier
 A] Language B] Physical
 C] Cultural D] Organizational

- Q.39 Nonverbal communication is mostly _____.
 A] Mechanical B] Organic
 C] Unstructured D] Structured
- Q.40 Chromatics is the technical name for what and how body movements communicate. We can either be monochromatic or polychromatic. [CO3][L1]
 A] True B] False C] can't say D] none of these
- Q.41 _____ refers to how space and distance communicate.
 A] Kinesics B] Proxemics
 C] Paralanguage D] Chronemics
- Q.42 According to the text, the use of your body to communicate non-verbally is referred to as... [CO3][L1]
 A] Vocalics. B] Proxemics
 C] Kinesics D] Chronemics
- Q.43 Monotone speakers tend to bore listeners. They are said to have little or no
 A] Intonation B] Pitch.
 C] Personal space D] face expressions.
- Q.44 Failing to manage your time can lead to some consequences, like.....
 A] Less stress B] Greater productivity and efficiency
 C] Missed deadlines D] A better professional reputation
- Q.45 What is one common time management mistake? [CO4][L1]
 A] Procrastination B] Manage Distractions
 C] Taking Breaks D] Scheduling Tasks
- Q.46 Time management is important to.....
 A] Students only B] Employees only
 C] Everyone D] No one
- Q.47 Your resume is a tool with one specific purpose:
 A] To get a job B] To win an interview
 C] To discuss salary D] To know about work
- Q.48 Identify your most important _____ such as sociable, hardworking, empathetic..... [CO3][L1]
 A] Friends B] Stories
 C] Qualities D] Achievements
- Q.49 Be _____.: there is no use in being someone other than yourself. Your brand must reflect who you are as a person.
 A] Funny B] Talkative
 C] Authentic D] Arrogant
- Q.50 Keep a clean, simple, and _____ online presence. You never know who is watching. [CO2][L1]
 A] Annoying B] Professional
 C] Critical D] Humorous

End Semester Examination, May 2023
Master of Physiotherapy – First Year
PROFESSIONAL COMPETENCY ENHANCEMENT – I
(CDC-MPT-511)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **4**

Note: *All questions are compulsory. Each question has **FOUR** options with **ONE** correct answer. Select the correct answer. All questions are of **ONE** mark each. There is no **NEGATIVE** marking. Mention the correct option for each question in the blank answer key given herein below. Calculator is not permitted.*

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Choose the correct option in the following (Directions for Q.1 to Q.20)[CO2] [L2]

- Q.1 In a group discussion, one must communicate with:
 A] Hostility B] Ignorance
 C] Knowledge D] Arrogance
- Q.2 Which of these must be avoided in a group discussion?
 A] Speaking Facts B] Asking questions
 C] Speaking with clarity D] Deviating from the topic
- Q.3 In a group discussion a person who begins the discussion is called:
 A] Initiator B] Starter
 C] Beginner D] Moderator
- Q.4 Which of the following is more interactive and solution oriented?
 A] Seminar B] Chalk board instruction
 C] Lecture D] Group Discussion
- Q.5 The best way to apply for a job is to submit a resume that is:
 A] Suitable for any job B] Self-recommending
 C] Specifically written for a particular job D] Personal information only
- Q.6 The application letter and the resume perform:
 A] Two different tasks B] Overlapping tasks
 C] The same task D] Two opposite tasks
- Q.7 The résumé of a fresh graduate is generally.
 A] One page long B] Two pages long
 C] Half a page D] Three pages long
- Q.8 The cover letter is:
 A] A Forward
 B] A summary of your qualifications and experience
 C] A description of your core strengths and suitability for the job
 D] All of these
- Q.9 In an interview when you do not know an answer, you should:
 A] Keep guessing
 B] Bluff
 C] Admit that you do not know the answer
 D] Remain quiet

- Q.10 A summary placed at the beginning of the resume acts as a:
 A] Synopsis B] Career objective
 C] Preface D] Letter of recommendation
- Q.11 Which of the following methods is the best to know more about the person and his/her fitment for a role?
 A] Observation B] Interview
 C] Case Study D] Survey Method
- Q.12 What is the rule to decide the colour of the belt (for men)?
 A] Always wear black
 C] The belt should match the colour of trousers
 B] The belt should match the colour of the shoe
 D] The belt should match the colour of the tie
- Q.13 Qualities defining a Leader.
 A] Self-Awareness B] Integrity C] Ability to Delegate D] All of above
- Q.14 John Adair's action centered leadership theory includes.
 A] Build the team B] Strive for excellence
 C] Aspire to achieve D] None of these
- Q.15 Example of values is:
 A] employability B] Loyalty
 C] Experience D] None of these
- Q.16 Ethics include:
 A] Keeps Promises B] Tell the truth
 C] Help someone in need D] All of these
- Q.17 Ethical leadership behaviours include:
 A] Two way communication B] Biased decision making
 C] Not Accepting mistake D] None of these
- Q.18 Integrity includes:
 A] Selflessness B] Responsiveness
 C] Approachable D] Empathetic
- Q.19 At the time of interview, jewelry should be kept to a minimum.
 A] True B] False C] Can't say D] None of these
- Q.20 We should be aware of all the following grooming tips, except for:
 A] Face should be clean or well-maintained.
 B] Brush your teeth and have fresh breath
 C] Firm handshake as the best gesture for good impression
 D] Hands and nails should be well maintained.

Choose the correct option in the following (Directions for Q.21 to Q.50)[CO3][L2]

- Q.21 What should not be included in your self- introduction?
 A] Very personal Information B] Your weakness
 C] Your failures D] All of the above
- Q.22 How to start a self introduction?
 A] by giving your name B] by giving your family details
 C] by giving the details of job role D] None of these
- Q.23 Shoes for both men and women should be:
 A] Steel-toed for protection B] Open-toed for comfort
 C] Brightly colour D] Clean and polished

- Q.24 Time management refers to a range of skills, tools, and techniques used to manage time when accomplishing specific tasks, projects, and goals.
 A] True B] False C] Can't Say D] None of these
- Q.25 Which word means- "the time by which something must be completed"?
 A] Chore B] Consequence C] Goal D] Deadline
- Q.26 Using a planner or making a "to-do" list every day.
 A] Is a waste of paper B] Helps keep things "in sight, in mind"
 C] Takes too long to fill out D] None of the above
- Q.27 To spend your time productively, you need to have set some:
 A] Possibilities B] Ideas C] Boundaries D] Goals
- Q.28 Efficient time management includes:
 A] Doing the best tasks first, and the worst tasks last
 B] Having a very structured schedule room to be flexible
 C] Being flexible
 D] Doing the worst tasks first
- Q.29 For a student, time management in college would mean:
 A] You have to learn to manage your extra time more efficiently.
 B] You have limited time in hand
 C] You have too many activities at a time in hand
 D] All of the above are true.
- Q.30 Using spare time wisely includes.
 A] Limiting the time you spend on the internet
 B] Gossiping
 C] Using a cell phone, etc.
 D] None of these
- Q.31 What is NOT included in the body language?
 A] Body movements B] Listening C] Gestures D] Facial expressions
- Q.32 Body language can communicate.
 A] Feelings B] Intention C] Emotions D] All of these
- Q.33 A head positioned forward facing someone indicates
 A] Interest B] Superiority C] Disrespect D] Disinterest
- Q.34 What should not be done at the time of interview?
 A] Reaching late B] Misquoting facts
 C] Going unprepared D] All of the above
- Q.35 What should you do while preparing for an interview?
 A] Research the company
 B] Learn the company's vision and mission
 C] Practice top interview questions and answers
 D] All of the above
- Q.36 Who should be greeted in a friendly and respectful manner?
 A] The receptionist B] The secretary
 C] The Interviewer D] All of the above
- Q.37 When answering interview questions, it is important to:
 A] Be specific B] Be general
 C] Stretch the facts to look good D] Misquoting facts

- Q.38 In every answer you give, the employer is looking for:
- A] How you will save them time
 - B] How you will solve their problem(s)
 - C] How you will save them money
 - D] All of the above
- Q.39 Which of the following is not a step in the preparation of an interview?
- A] Analyzing Yourself
 - B] Identifying your skills
 - C] Being negative
 - D] Revising your subject
- Q.40 At the start of an interview, you should:
- A] Try to find common interests.
 - B] Look around the office for things.
 - C] Greet the interviewer with a smile.
 - D] All of the above
- Q.41 While attending the online interview you should not.
- A] Dress casually
 - B] Keep your camera on
 - C] Keep the microphone off
 - D] Should be sitting at a well-lit place and attend
- Q.42 Interviews are conversations with:
- A] Fun
 - B] Purpose
 - C] Friendliness
 - D] Informality
- Q.43 Which of these is not a type of interview?
- A] Screening interview
 - B] Stress interview
 - C] Music interview
 - D] Lunch interview
- Q.44 The best way to dress to impress for the interview is to:
- A] Wear jeans and T-shirt
 - B] Wear a jogging suit wear
 - C] A business suit
 - D] It doesn't matter what you wear
- Q.45 Gesture, posture, eye contact are examples of communication that is:
- A] Verbal
 - B] Non- verbal
 - C] Aggressive
 - D] Polite
- Q.46 "You should be authentic in an interview" means to be:
- A] False
 - B] Pretending
 - C] surprising
 - D] Realistic
- Q.47 Before your interview in a company you should:
- A] Sit Idle
 - B] Get worked up
 - C] Research
 - D] None of the above
- Q.48 Should you answer interview questions in complete sentences or give one word answer?
- A] Complete sentences
 - B] One word answers
 - C] Both
 - D] None of these
- Q.49 Which of the following is not the part of a resume?
- A] Religious affiliation
 - B] Employment History
 - C] Contact Information
 - D] Education
- Q.50 Which of the following is the safest email address style to use on your resume?
- A] lovin_ladies 123@emailprovider.com
 - B] j_smith@emailprovider.com
 - C] party all the time@emailprovider.com
 - D] None of these

End Semester Examination, May 2023

B. Sc. (Nutrition and Dietetics)/B. Sc. (Food Science Tech.) – Second Semester PROFESSIONAL COMMUNICATION – II (CDC-ND-112)

Time: 2 hrs.

Max Marks: 50

No. of pages: 5

Note: *All questions are compulsory. Each question has **FOUR** options with **ONE** correct answer. Select the correct answer. All questions are of **ONE** mark each. There is no **NEGATIVE** marking. Mention the correct option for each question in the blank answer key given herein below. Calculator is not permitted.*

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
41.	42.	43.	44.	45.	46.	47.	48.	49.	50.

Q.1 What is the main purpose of the narrative paragraph? [CO-1] [L-2]

- a) Inspire the reader to feel a certain way towards an event, character, place, etc.
- b) Explain a concept in full depth.
- c) Make the reader experience whatever is narrated.
- d) The purpose is to tell stories

Q.2 What is a descriptive paragraph? [CO-1] [L-2]

- a) Text describing a person, animal, place, or thing, along with idea and theme.
- b) Tell a story to the reader.
- c) Give your opinion to the reader.
- d) Explaining a concept or idea.

Q.3 The main point of this passage is that... [CO-1] [L-3]

Carbon tetrachloride is a colourless and inflammable liquid that can be produced by combining carbon disulfide and chlorine. This compound is widely used in industry today because of its effectiveness as a solvent as well as its use in the production of propellants. Despite its widespread use in industry, carbon tetrachloride has been banned for home use. In the past, carbon tetrachloride was a common ingredient in cleaning compounds that were used throughout the home, but it was found to be dangerous: when heated, it changes into a poisonous gas that can cause severe illness and even death if it is inhaled. Because of this dangerous characteristic, the United States revoked permission for the home use of carbon tetrachloride in 1970. The United States has taken similar action with various other chemical compounds.

- a) Carbon tetrachloride can be very dangerous when it is heated.
- b) The government banned carbon tetrachloride in 1970
- c) Although carbon tetrachloride can legally be used in industry, it is not allowed in-home products.
- d) Carbon tetrachloride used to be a regular part of cleaning compounds

Question 4 and 5: Read the following sentences and try to choose the best definition for the italicized word by searching for context clues in the sentence.

Q.4 Excited about winning the award, Marcia walked up to the podium and delivered an animated acceptance speech. [CO-1] [L-3]

- a) abbreviated
- b) courteous
- c) reserved
- d) lively

- Q.5 The doctor got to the crux of the issue. [CO-1] [L-3]
 a) outline b) opposite
 c) crucial point d) unhealthy
- Q.6 If you wanted to find out why sales are down at your company, what type of report would you write. [CO-1] [L-2]
 a) a crime report b) a problem-solving report
 c) an evaluation study d) a proposal
- Q.7 Who writes reports? [CO-1] [L-2]
 a) Business managers b) Company owners
 c) Department supervisors d) All of the above
- Q.8 What does orderly means in report writing? [CO-1] [L-2]
 a) persuasive b) carefully prepared
 c) fact-based d) objective
- Q.9 Which of the following should your notes include? [CO-1] [L-2]
 a) key words and phrases b) complete sentences
 c) full paragraphs d) exact punctuation
- Q.10 What is summarizing in note taking? [CO-1] [L-2]
 a) Restating in your own words only the key ideas of the original piece in a condensed form
 b) Copying the ideas word for word and using quotation marks
 c) Restating the content in your own words by replacing some of the words to avoid plagiarizing but maintaining most of the same meaning
 d) Writing the first and last sentence of every paragraph
- Q.11 Please select the correct statement [CO-3] [L-2]
 a) He passed out of college in 1997
 b) He passed out college in 1997
 c) He passed college in 1997
 d) He graduated college in 1997
- Q.12 Select the correct statement. [CO-3] [L-2]
 a) I have one query to ask you b) I have a query
 c) I have a one query d) I have the query
- Q.13 Choose the answers for First conditional: If he (run) he (get) there in time. [CO-3] [L-2]
 a) will run; get b) runs; will get
 c) run; will get d) will run; will get
- Q.14 Choose the correct verb: if it (stop) snowing, we can go skiing. [CO-3] [L-2]
 a) stops b) will stop
 c) will stops d) stop
- Q.15 Choose the correct verb: If they had not _____ the car, I would have driven you. [CO-3] [L-2]
 a) take b) taken
 c) would take d) took
- Q.16 Choose the correct verb: Angel will move this table to another place if you _____ her house tomorrow. [CO-3] [L-2]
 a) Comes to b) Come to
 c) Came to d) Came
- Q.17 Choose the correct verb: My mother would not go to my uncle's house if my uncle _____ my mother's call. [CO-3] [L-2]
 a) Had received b) Received
 c) Receives d) Receive
- Q.18 Choose the correct preposition: He has been absent ____ Monday. [CO-3] [L-2]
 a) For b) Since
 c) From d) All of the above

- Q.19 Choose the correct preposition: They are called ____ different names. [CO-3] [L-2]
 a) With b) By
 c) For d) From
- Q.20 Choose the correct preposition: The new term begins ____ June 1st. [CO-3] [L-2]
 a) On b) In
 c) At d) From
- Q.21 Choose the correct preposition: He poured the tea ____ the mug. [CO-3] [L-2]
 a) In b) Into
 c) On d) Onto
- Q.22 Choose the correct preposition: He said he was very pleased ____ my work. [CO-3] [L-2]
 a) With b) In
 c) At d) From
- Q.23 Choose the correct preposition: "I really care ____ what happens to him." [CO-3] [L-2]
 a) of b) about
 c) at d) to
- Q.24 Choose the correct preposition: "I heard that he died ____ a heart attack." [CO-3] [L-2]
 a) to b) of
 c) for d) about
- Q.25 Choose the type of conditional: "He would have gone with you if you had asked him." Which conditional is this? [CO-3] [L-2]
 a) Zero b) first
 c) second d) third
- Q.26 This is the first thing people judge. [CO-2] [L-1]
 a) chronemics b) proxemics
 c) pitch d) physical appearance
- Q.27 Justin speaks so fast his brothers cannot understand him. He needs to adjust his ... [CO-2] [L-1]
 a) voice quality b) haptics
 c) rate of speech d) intonation
- Q.28 The five types of nonverbal communication are... [CO-2] [L-1]
 a) gestures, posture, standing, adaptors, and eye contact.
 b) kinesics, paralanguage, proxemics, chronemics, and voice.
 c) space, rate of speech, voice, and appearance, eye contact.
 d) body, voice, space, time, and appearance.
- Q.29 _____ refers to how space and distance communicate. [CO-2] [L-1]
 a) Kinesics b) Proxemics
 c) Paralanguage d) Chronemics
- Q.30 According to the text, the use of your body to communicate non-verbally is referred to as... [CO-2] [L-1]
 a) vocalic b) proxemics
 c) kinesics d) chronemics
- Q.31 Which distance are you using if you are talking to someone across the street? [CO-2] [L-1]
 a) intimate b) personal
 d) social d) public
- Q.32 _____ is the term used to describe the study of how humans use and structure time. [CO-2] [L-1]
 a) proxemics b) paralanguage
 c) haptics d) chronemics
- Q.33 Meeting deadlines is very important to us in job. Sentence defines which term: [CO-2] [L-1]
 a) Chronemic b) Working culture
 c) Kinesics d) Proxemics

- Q.34 Why must a public speaker be audience-centered? [CO-2] [L-1]
 a) So that people like you better.
 b) So that you can seem tough in front of your audience.
 c) So that you can keep your audience interested.
 d) So that you can help other people out.
- Q.35 How can you get information about an audience? [CO-2] [L-1]
 a) Talking and observing them.
 b) There isn't a way to get information about an audience you just have to guess.
 c) Look at their reactions at specific topics
 d) Asking someone they know
- Q.36 What can you use to adapt your speech to your audience BEFORE the speech? [CO-2] [L-1]
 a) Keep your audience in mind. b) Nothing.
 c) Talking to your audience. d) Putting questions in speech.
- Q.37 In presentation, what is ABCD? [CO-2] [L-1]
 a) Any Body Can Direct
 b) Audience, Balance, Counting, Direction
 c) Assessment before count directions
 d) Attention, Benefits, Credibility, Direction

Directions of questions from Q.38 to Q.40 questions: Read the passage and find correct answers:

Much of the blood on the street flows essentially from uncivil behaviour of drivers who refuse to respect the legal and moral rights of others. So, the massacre on the road may be regarded as a social problem. Safety standards for vehicle have been raised both at the point of manufacture and through periodic road-worthiness inspections. In addition, speed limits have been lowered. Due to these measures, the accident rate has decreased. But the accident experts still worry because there has been little or no improvement in the way drivers behave.

- Q.38 According to the passage, traffic accidents may be regarded as a social problem since [CO-1] [L-1]
 a) the motor vehicle is a very dangerous invention
 b) the accidents have more to do with hazardous conditions than hazardous drivers
 c) most of the accidents are caused by drivers who don't pay attention to the traffic rules
 d) the irresponsibility that accounts for much of the problem is not confined to drivers
- Q.39 According to the passage, the number of accidents has fallen because ----.[CO-1] [L-1]
 a) significant advances have been made towards safer driving
 b) many people now know that driving is a skilled task requiring constant care and concentration
 c) drivers are warned to take extra care on the roads
 d) drivers have finally learned how to behave
- Q.40 It is pointed out in the passage that those who violate traffic regulations ----. [CO-1] [L-1]
 a) are the most inexperienced drivers that we have on the roads
 b) always blame the road conditions
 c) don't have prior traffic violations or crashes on their records
 d) are the biggest threat to those with whom they share the road

Directions of questions from Q.41 to Q.43 questions: Read the passage and find correct answers:

First language, also known as mother tongue, is generally the language a person learns first. However, one can have two or more native languages thus being a native bilingual or indeed multilingual. The order in which these languages are learned is not necessarily the order of

proficiency. Lacking in first language skills often make learning other languages difficult. Often a child learns the basics of his or her first language or languages from his or her family. The term mother tongue, however, should not be interpreted to mean that it is the language of one's mother. For instance, in some paternal societies, the wife moves in with the husband and thus may have a different first language or dialect than the local language of the husband. Yet their children usually only speak their local language.

- Q.41 According to the passage, first language skills ----. [CO-1] [L-1]
a) take a very long time to develop
b) play an important role in learning a new language
c) are not transferable to the second language
d) can also have negative effects in foreign language acquisition
- Q.42 We understand from the passage that ----. [CO-1] [L-1]
a) most bilinguals don't have a dominant language
b) the acquisition of a first language is the most complex skill anyone ever learns
c) most children have learning difficulties in acquiring their first language
d) one's mother tongue might not be the language of the parents
- Q.43 One can infer from the reading that ----. [CO-1] [L-1]
a) one cannot be a native speaker of more than two languages
b) very few children throughout the world learn to speak two languages
c) it is possible for a bilingual to become more competent in his second language
d) bilinguals use their two languages for different purposes and functions
- Q.44 When giving a presentation in front of an audience you should do all of the following except for: [CO-2] [L-1]
a) Speak loud and clear
b) Provide handouts if needed
c) Dress professionally
d) Look at your screen and not the audience
- Q.45 Why should you keep text to a minimum on slides? [CO-2] [L-1]
a) So the focus is on you as the speaker
b) To help make your presentation longer
c) So the pictures are easier to see
d) To make sure the audience can read everything you have to tell them
- Q.46 Your presentation should consist of title slide, _____, body, and _____. [CO-2][L-1]
a) objects and summary
b) opinions and paragraphs
c) objectives and summary
d) options and pages
- Q.47 Choose the correct Preposition: This is a letter _____ Uncle Tom. [CO-3] [L-2]
a) from
b) in
c) by
d) at
- Q.48 Choose the correct Preposition: I've got a problem _____ my homework. Can you help me please? [CO-3] [L-2]
a) at
b) of
c) with
d) in
- Q.49 Complete the sentence with correct answer: If he comes, _____. [CO-3] [L-2]
a) we will go to lunch
b) we would go to lunch
c) we went to lunch
d) we would have gone to lunch
- Q.50 Complete the sentence with correct answer: I would buy a new house _____. [CO-3] [L-2]
a) if I have a lot of money
b) if I win the lottery.
c) if I inherited a million dollars.
d) if I had won a million dollars.

End Semester Examination, May 2023
B. Sc. (Nutrition and Dietetics) – Fourth Semester
PLACEMENT PREPARATORY PROGRAM (CDC-ND-212)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **5**

Note: *All questions are compulsory. Each question has **FOUR** options with **ONE** correct answer. Select the correct answer. All questions are of **ONE** mark each. There is no **NEGATIVE** marking. Mention the correct option for each question in the blank answer key given herein below. Calculator is not permitted.*

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
41.	42.	43.	44.	45.	46.	47.	48.	49.	50.

- Q.1 In communication, the words that we speak matter to the tune of: [CO-1] [L-1]
a) 7% b) 38%
c) 55% d) All are equally important
- Q.2 The component of non-verbal communication which talks about touch is: [CO-1] [L-2]
a) Haptics b) Vocalics c) Kinesics d) Objectics
- Q.3 The distances people use to separate themselves from others are divided into _____ zones.
a) 1 b) 2 c) 3 d) 4
- Q.4 What is an example of good non- verbal communication? [CO-1] [L-3]
a) Keeping an open palms gesture
b) Pointing fingers
c) Listening while scrolling the phone to show that you are attentive
d) All of the above
- Q.5 In Proxemics, the intimate distance is the distance _____. [CO-1] [L-2]
a) Within 18 inches b) Between 18 inches – 4 feet
c) Between 4 feet – 12 feet d) Beyond 12 feet
- Q.6 Modern day letter writing format is: [CO-1] [L-1]
a) Full- Blocked Format b) B] Blocked format
c) Indented Format d) All of the above
- Q.7 You are writing an email to your client Su lee. Which of the following is the most appropriate salutation? [CO-1] [L-3]
a) Hi Su Lee b) Respected Su lee
c) Dear Ms. Lee d) Dear Su
- Q.8 Your appearance shows your level of: [CO-1] [L-2]
a) Sophistication b) Professionalism c) Credibility d) All of the above
- Q.9 The features of a good resume: [CO-1] [L-2]
a) As lengthy as you want it to be
b) A carefully crafted one page document
c) A colorful and visually attractive document
d) None of the above

- Q.10 Grooming for an interview would include: [CO-1] [L-2]
a) Wearing neatly ironed formals b) Not folding the arms of the shirt
c) Taking care of your body odor d) All of the above
- Q.11 In a resume, the educational credentials and the work experience should be mentioned in: [CO-1] [L-2]
a) Chronological order b) Reverse chronological order
c) Any which way d) None of the above
- Q.12 Self Introduction question should be answered with: [CO-1] [L-2]
a) Telling about your strengths only
b) Talking about your areas of improvement
c) Talking briefly about your family, education, co-curricular activities, and work experience
d) None of the above.
- Q.13 The process of communication through sending and receiving wordless messages is called: [CO-1] [L-2]
a) Communication b) Non-verbal communication
c) Interview process d) None of the above
- Q.14 What should be the duration of self- introduction? [CO-1] [L-3]
a) About 1 minute b) Less than 30 seconds
c) Continue till you are asked to stop d) None of the above
- Q.15 What is a cover letter? [CO-1], [L-2]
a) A document that we can avoid sending if our resume is strong enough
b) A one page formal document sent along with the resume.
c) A document that is to be submitted during the interview
d) None of the above.
- Q.16 Writing the subject in a formal cover/business letter helps the receiver in: [CO-1][L-2]
a) Sorting the mails b) Knowing the writer's purpose
c) It does not serve any purpose d) A & B above
- Q.17 Research about the prospective employer includes searching for: [CO-1] [L-3]
a) Company reputation b) Work culture
c) Scope of self-development d) All of the above
- Q.18 To prepare for the self introduction question, one should: [CO-1] [L-2]
a) Prepare one's script b) Memorize what one has prepared
c) Practice, practice and practice d) All of the above
- Q.19 The communication displayed by attitude towards time is called: [CO-1] [L-2]
a) Haptics b) Proxemics c) Chronemics d) None of the above
- Q.20 Eye contact facts: [CO-1] [L-2]
a) Making eye contact gives you confidence
b) It inspires others to listen to you
c) It denotes an open communication
d) All of the above

- Q.21 The perfect body language during an interview will include: [CO-1] [L-2]
 a) Making eye- contact with all audience
 b) To keep the hands in the pockets
 c) To talk to only a group of audience
 d) Body language does not matter at all
- Q.22 When is a cover letter submitted? [CO-1] [L-3]
 a) While applying for a job b) During the interview
 c) After the interview d) None of the above
- Q.23 Which of the following statements is true with respect to self introduction?[CO-1][L-2]
 a) A good self introduction lays a strong foundation for the rest of the interview
 b) It helps you to reflect confidence when the ice between you and the interviewer is being broken.
 c) You have about 60 seconds for self introduction.
 d) All of the above.
- Q.24 A well-crafted and well-practiced Self Introduction helps you to: [CO-1] [L-2]
 a) Present your first answer with poise and confidence.
 b) Do away with fillers like umm, well, I guess etc.
 c) Set a strong foundation for the rest of the interview.
 d) All of the above
- Q.25 What questions should be asked to the interviewer? [CO-1] [L-2]
 a) What will be my salary b) My work timings
 c) When will I get the promotion? D) My future prospects.
- Q.26 What does an interview depend on? [CO-1] [L-3]
 a) Interviewer b) Interviewee
 c) Educational Qualifications d) All of them
- Q.27 When should you arrive for your interview? [CO-1] [L-2]
 a) At the time it is scheduled
 b) 15-20 minutes before the scheduled time
 c) 15-20 minutes after the scheduled time
 d) Go after 30 minutes
- Q.28 In an interview, the interviewers can judge the personality of the candidate through: [CO-1] [L-3]
 a) The candidate's grooming b) The candidate's answers
 c) Body Language d) All of the above
- Q.29 Which of the following statements is true with respect to cover letters? [CO-1] [L-2]
 a) A cover letter is a one page formal document sent with a resume
 b) It is meant to introduce yourself to the hiring manager
 c) To tell the employer as to why you are fit for the job
 d) All of the above.
- Q.30 Which type of interview can be conducted for a candidate living far away? [CO-1][L-3]
 a) Lunch Interview b) Stress Interview
 c) Telephonic Interview d) Behavioural Interview

- Q.31 A well-crafted and well-practiced Self Introduction helps you to: [CO-1] [L-2]
 a) Present your first answer with poise and confidence.
 b) Do away with fillers like umm, well, I guess etc.
 c) Set a strong foundation for the rest of the interview.
 d) All of the above
- Q.32 The most important element of emotional intelligence is: [CO-1] [L-2]
 a) Self Awareness b) Self Regulation c) Empathy d) Social Skills
- Q.33 Which of the following statements is true with respect to self introduction?[CO-1][L-2]
 a) A good self introduction lays a strong foundation for the rest of the interview
 b) It helps you to reflect confidence when the ice between you and the interviewer is being broken.
 c) You have about 60 seconds for self introduction.
 d) All of the above.
- Q.34 The SWOT analysis of a person talks about: [CO-1] [L-2]
 a) Smartness, Weaknesses, Opportunities and Threats
 b) Strengths, Words, Orderliness, and Time management
 c) Strengths, weaknesses, Opportunities and Threats
 d) Strong points, welfare, Opportunities and Time management
- Q.35 _____ is an important part of the communication cycle. [CO-1] [L-2]
 a) Feedback b) Review c) Addressing d) None of the above
- Q.36 Communication is a part of _____ skills. [CO-1] [L-2]
 a) Soft b) Hard c) Rough d) Short
- Q.37 Our dress code is an example of _____ communication. [CO-1] [L-3]
 a) Verbal b) Written c) Non Verbal d) Spoken
- Q.38 How can you identify your strengths? [CO-1] [L-2]
 a) Take time off to think about what you do well
 b) Think of anything that you are always good at
 c) Think about what others appreciate about you
 d) All of the above
- Q.39 _____, often known as "area of improvement", refers to the things we don't do well or aren't very good at. [CO-1] [L-2]
 a) Weakness b) Strength c) Interest d) Abilities
- Q.40 _____ means that you do not look for instant gratification and are able to do work without the expectation of any rewards. [CO-1] [L-2]
 a) Self-control b) Self-motivation c) Self-awareness d) None of the above
- Q.41 _____ is how one perceives themselves positively/ negatively. [CO-1] [L-2]
 a) Self image b) Self control c) Self esteem d) Self talk
- Q.42 The perfect body language during any formal situation will include: [CO-1] [L-2]
 a) Making eye- contact with the entire audience
 b) To keep the hands in the pockets
 c) To talk to only a group of audience
 d) Body language does not matter at all

- Q.43 Emotions fall into the following categories. [CO-1] [L-2]
a) Thoughts b) Behavior c) Physical symptoms d) All of the above
- Q.44 In email writing, which of the following points need NOT be kept in mind? [CO-1][L-3]
a) We should use ALL CAPS to emphasize our point
b) Use attachments only when necessary
c) It is the writer's job to write a good email well.
d) Bcc option should not be used
- Q.45 What is a cover letter? [CO-1] [L-2]
a) A document that we can avoid sending if our resume is strong enough
b) A one page formal document sent along with the resume.
c) A document that is to be submitted during the interview
d) None of the above.
- Q.46 Writing the subject in a formal cover/business letter helps the receiver in: [CO-1] [L-2]
a) Sorting the mails b) Knowing the writer's purpose
c) It does not serve any purpose d) A & B above
- Q.47 The points on which we should research about the prospective employer are: [CO-1] [L-3]
a) Company reputation b) Work culture
c) Scope of self-development d) All of the above
- Q.48 The best way of preparing for the "Tell me about yourself" question is: [CO-1] [L-2]
a) Preparing your script
b) Memorizing what you have prepared
c) Practice, practice and practice some more
d) All of the above
- Q.49 The dress code for making a perfectly groomed look for an interview will include: [CO-1] [L-3]
a) Take care of the body odor
b) Display of tattoos to look ultra-modern
c) The arms of the shirt should be folded if the weather is hot
d) None of the above
- Q.50 Which of the following statements is not true with respect to eye contact? [CO1][L-2]
a) Making eye contact gives you confidence
b) It inspires others to listen to you
c) It denotes an open communication
d) It symbolizes that you are not sleeping.

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
PROFESSIONAL COMPETENCY ENHANCEMENT-I (CDC-ND-512)

Time: 2 hrs.

Max Marks: 50

No. of pages: 4

Note: *All questions are compulsory. Each question has **FOUR** options with **ONE** correct answer. Select the correct answer. All questions are of **ONE** mark each. There is no **NEGATIVE** marking. Mention the correct option for each question in the blank answer key given herein below. Calculator is not permitted.*

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
41.	42.	43.	44.	45.	46.	47.	48.	49.	50.

- Q.1 The rate of interest for the first 2 years is 3% per annum, for the next 3 years is 8% per annum, and for the period beyond 5 years is 10% per annum. If the man withdraws total amount of Rs. 5320 after 6 years, find the sum he deposited at SI?
a) 3800 b) 4320
c) 2380 d) 3380
- Q.2 Andy lends a sum of money at R% simple interest for R years such that sum received by him is 9/16 times more of what he lends. Find the value of R.
a) 5.5% b) 6.5%
c) 7% d) 7.5%
- Q.3 A man lent Rs. 4500 at 30% compound interest per annum for 3 years. What is the difference between the interest earned by the man in the 2nd year only and the interest earned by the man in the 3rd year?
a) 545.5 b) 502
c) 526.5 d) 532
- Q.4 A man saves Rs.20,000 at the beginning of each year and puts the money in a bank that pays 10% interest per year, interest being compounded annually. What would be the total savings of the man at the end of 6 years?
a) 196840 b) 169840
c) 189480 d) 199480
- Q.5 A person buys a pen from a wholesaler at Rs. 10 for 20 pens. He sells those pens at Rs. 10 for 15 pens. Find his profit or loss percent.
a) 33.3% b) 16%
c) 20% d) 11.11%
- Q.6 Arun sells an object to Benny at a profit of 15%, Benny sells that object to Chandan for ₹1012 and makes a profit of 10%. At what cost did Arun purchase the object?
a) 200 b) 800
c) 700 d) 500
- Q.7 A shopkeeper takes 10% profit on his goods. He lost 20% of his goods during a theft. What is his loss per cent?
a) 12% b) 4%
c) 37% d) 5%
- Q.8 By selling 100 notebooks, a shopkeeper gains the selling price of 20 notebooks. What is his gain percentage?
a) 18% b) 19%
c) 25% d) 20%

- Q.9 Convert 0.175 into percentage.
a) 17.50% b) 1.75%
c) 175% d) 1750%
- Q.10 An item is bought for Rs 42 and sold it for Rs. 52.50. Calculate the percentage increase.
a) 20% b) 80%
c) 22% d) 25%
- Q.11 Two numbers are respectively 40% and 30% more than a third number. The second number expressed in terms of percentage of the first is? (approx)
a) 95% b) 93%
c) 90% d) None
- Q.12 The price of cooking oil has increased by 25%. The percentage of reduction that a family should effect in the use of cooking oil so as not to increase the expenditure on this account is?
a) 25% b) 20%
c) 23% d) None of these.
- Q.13 A shopkeeper marks the price of his goods at 25% higher than the original price. After that, he allows a discount of 12%. What profit or loss does he get?
a) 10% profit b) 15% profit
c) 10% loss d) 15% loss
- Q.14 The radius of a sphere is increased by 10%. The surface area increases by?
a) 31% b) 21%
c) 41% d) None
- Q.15 The value of a machine depreciates at the rate of 10% every year. It was purchased 3 years ago. If its present value is Rs 8,748, its purchase price was?
a) 16,000 b) 18,000
c) 12,000 d) None
- Q.16 The average weight of 8 persons increases by 2.5 kg when a new person comes in place of one of them weighing 65 kg. What might be the weight of the new person?
a) 70 kg b) 75 kg
c) 80 kg d) 85 kg
- Q.17 A pupil's marks were wrongly entered as 83 instead of 63. Due to that the average marks for the class got increased by half. The number of pupils in the class is :
a) 45 b) 40
c) 39 d) 37
- Q.18 The average of five consecutive odd numbers is 61. What is the difference between the highest and lowest numbers :
a) 4 b) 8
c) 12 d) 16
- Q.19 If 'A' completes a piece of work in 3 days, which 'B' completes it in 5 days and 'C' takes 10 days to complete the same work. How long will they take to complete the work , if they work together?
a) 1.5 days b) 4.5 days
c) 7 days d) 9.8 days
- Q.20 A & B can make paintings in 6 days, B & C can can make those paintings in 10 days. If A, B & C together can finish the work in 4 days, then A & C together will do it in _____ days
a) 4 (2/7) days b) 1/8 days
c) 2(2/5) days d) 6 (3/8) days
- Q.21 The sum of the digits of a 2-digit number is 11. If we add 45 to the number, the new number obtained is a number formed by interchange of the digits. What is the number?
a) 38 b) 58
c) 48 d) 83

- Q.22 The unit digit in $43 * 69 * 551 * 9242$ is?
 a) 6 b) 2
 c) 4 d) 8
- Q.23 Find the total number of factors of 15120.
 a) 30 b) 50
 c) 80 d) 70
- Q.24 Which of the following cannot be the number of zeroes at the end of any factorial?
 a) 7 b) 6
 c) 5 d) 3
- Q.25 N is the largest 3-digit number, which when divided by 3, 4 and 6 leaves the remainder 1, 2 and 4 respectively. What is the remainder when N is divided by 7?
 a) 15 b) 14
 c) 13 d) 20
- [CO-2][L-2]
- Q.26 B is father of Q. B has only two children. Q is the brother of R. R is the daughter of P. A is the granddaughter of P. S is the father of A. How is S related to Q?
 a) Son b) Son in law
 c) Brother d) Brother in law
- Q.27 Deepa moved a distance of 75 metres towards the north. She then turned to the left and walking for about 25 metres, turned left again and walked 80 metres. Finally, she turned to the right at an angle of 45° . In which direction was she moving finally?
 a) North east b) North west
 c) South d) South east
- Q.28 In a class of 35 students, Ziya is placed 7th from the bottom where as Sofia is placed 9th from the top. Shahruk is placed in between the two. What is Ziya's position from Shahruk?
 a) 10 b) 15
 c) 19 d) 21
- Q.29 During assembly the students are standing in a line. Salman Khan is 21st in order from both the ends. How many boys are there in the class?
 a) 31 b) 41
 c) 40 d) 30
- Q.30 In a queue, A is eighteenth from the front while B is sixteenth from the back. If C is twenty-fifth from the front and is exactly in the middle of A and B, then how many persons are there in the queue?
 a) 45 b) 46
 c) 47 d) 48
- Q.31 A _____ speaker looks into the eyes of the audience. [CO-1] [L-2]
 a) confident b) impatient
 c) rude d) impolite
- Q.32 The tone of the speaker should be _____. [CO-1] [L-2]
 a) loud b) clear
 c) low d) soft
- Q.33 When finding an interview outfit, which type of dressing is ALWAYS the safest route? [CO-1] [L-2]
 a) Modern b) Semi formal
 c) conservative d) None of these
- Q.34 Cover letters starting with explaining how applicant _____ [CO-2] [L-2]
 a) found out about the job b) spend their free time
 c) began their education d) none of these
- Q.35 How should a cover letter be? [CO-2] [L-2]
 a) long and detailed b) friendly and funny
 c) clear and concise d) Doesn't matter

- Q.36 What is the perfect time to send the cover letter to the employer? [CO-2] [L-2]
 a) before resume b) after resume
 c) whenever d) Doesn't matter
- Q.37 A collection of students work meant for keeping record of their performance is known as – [CO-1] [L-2]
 a) Rubric b) File
 c) Data sheet d) Cover letter
- Q.38 The resume of a fresher is normally of how many pages. [CO-3] [L-2]
 a) One page b) Two pages
 c) Three pages d) Four pages
- Q.39 Which of the following is considered unprofessional? [CO-3] [L-2]
 a) Use basic fonts b) Mentioning academic details
 c) Colored font d) All of the above
- Q.40 Which should not be mentioned in the resume? [CO-3] [L-2]
 a) Address b) Academic details
 c) Religion d) Experience
- Q.41 Which of these is not considered in a telephonic conversation? [CO-3] [L-2]
 a) The tone of the speaker b) The volume of the speaker
 c) Body language d) The emotional content of the communication
- Q.42 Components which are required for video Interviews— [CO-1] [L-2]
 a) Computer b) Webcam
 c) Microphone d) All of them
- Q.43 Which of the following is not required for video interview- [CO-1] [L-2]
 a) web camera b) land line
 c) Personal computer d) Internet access
- Q.44 Video conferencing interviews: [CO-1] [L-2]
 a) are more expensive because of the equipment
 b) are not used often
 c) Cost efficient for when interviewee is out-of-town
 d) are used in 90 percent of first interviews
- Q.45 Which of these should be kept in mind while receiving a call? [CO-1] [L-2]
 a) Be rude, if the caller is rude
 b) If the information is not readily available, take his phone number and call back.
 c) A message can be noted in hints
 d) You can be rude to a person if it's a wrong connection.
- Q.46 While making a call, have all relevant information ready before hand. [CO-1] [L-2]
 a) True b) False
 c) None of these d) Can't say
- Q.47 A telephone interview is meant for gossiping. [CO-1] [L-2]
 a) True b) False
 c) None of these d) Can't say
- Q.48 While drafting your resume, what should you keep in mind? [CO-2] [L-3]
 a) Crisp and concise resume
 b) Different font sizes
 c) A good qualification from a good institute is the only thing that a recruiter looks for
 d) Mentioning your strengths and weaknesses
- Q.49 How should you answer the question, "Tell me about yourself" [CO-3] [L-3]
 a) talk of your school years b) talk about your family history
 c) talk about your hobbies d) talk of your educational and work history
- Q.50 What is an ideal answer to the question, "What do you think of your former boss?" [CO-3] [L-3]
 a) Talk about all the troubles at work
 b) Be as positive as you can
 c) Freely discuss all the negatives
 d) Tell them you hope they will be a better boss

End Semester Examination, May 2023
M.Sc. (Nutrition and Dietetics) – Fourth Semester
NUTRITION IN EMERGENCY (MNDC-DS-401)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Explain the diet management during famine and earthquake. [CO3] [L3] **20**

PART-A

Q.2 What factors give rise to emergency situation? Discuss any one case study illustrations using from Indian subcontinent. [CO1] [L1] **20**

Q.3 What are the measures to be taken to treat PEM in emergency situation? Discuss the causes of malnutrition in emergency situation. [CO2] [L2] **20**

Q.4 What are the measures taken to overcome micronutrient deficiencies? Explain citing examples. [CO3] [L2] **20**

PART-B

Q.5 Explain the anthropometric assessment conducted during the emergency situation. Discuss the measures taken to tackle seriously abnormal nutrition status. [CO4] [L4] **20**

Q.6 Write short notes on:

a) Organization of nutrition surveillance.

b) Control of communicable diseases during emergencies. [CO2] [L3] **10×2**

Q.7 Explain special foods / rations used for nutritional relief with suitable examples. Highlight the local production of special foods. [CO4] [L4] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – First Semester
NUTRITIONAL BIOCHEMISTRY (MND-DS-101)

Time: 3 hrs.

Max Marks: 100

No. of pages: 1

Note: *Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from PART-A and TWO questions from PART-B. Marks are indicated against each question.*

- Q.1 Define the term: chemiosmosis in context to ATP production from food. How is it used to derive the production of ATP using energy obtained from proton gradient? Support your answer explaining its mechanism. Also tabulate the differences between substrate level and oxidative phosphorylation. [CO-1] [L-3] 20

PART-A

- Q.2 There are some of rate limiting steps in a biochemical pathway. Indicate the rate limiting steps in the pathway of glycolysis. Also give detailed regulation of glycolysis and gluconeogenesis by Fructose 2,6bisphosphate. [CO-4] [L-3] 20

- Q.3 What do you understand by redox potential in a biological system? Give suitable examples of important redox reactions occurring in a biological system explaining its significance in a biological system. Also discuss the importance of NAD- and riboflavin-linked dehydrogenases in metabolic pathways such as glycolysis, the citric acid cycle, and the respiratory chain. [CO-2] [L-3] 20

- Q.4 Explain what is reverse cholesterol transport in lipoprotein metabolism? Discuss the role of class B scavenger receptor B1 (SR-B1), ATP-binding cassette transporters A1 (ABCA1) and G1 (ABCG1) in HDL metabolism. Support your answer with the help of a diagram. [CO-3] [L-3] 20

PART-B

- Q.5 Both Carbohydrate metabolism and lipid metabolism are regulated by the action of a hormone released from β -cells of islets of Langerhans of pancreas. Name the hormone and explain how it helps in regulating the carbohydrate and lipid metabolism? [CO-2] [L-2] 20

- Q.6 What is denovo synthesis of purine nucleotide synthesis? Outline the key steps involving the synthesis of IMP during denovo synthesis of purine nucleotide biosynthesis. Also explain how the deficiency of HGPRT leads to an increased synthesis of purine nucleotides during Gout condition? [CO-2] [L-2] 20

- Q.7 Replication in prokaryotes involves the synthesis of both leading and lagging strand. Tabulate the differences between leading and lagging strand synthesis. With the help of diagram explain different enzymes involved in both types of strand synthesis in replication. [CO-4] [L-2] 20

End Semester Examination, May 2023

M. Sc. (Nutrition and Dietetics) – First Semester

HUMAN PHYSIOLOGY (MND-DS-102)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Explain the following (**any four**):

- a) Osmosis.
- b) ECG.
- c) Leukemia.
- d) Reflex Arc.
- e) GFR.
- f) Stroke volume.

[CO-2] [L-2] **5×4**

PART-A

Q.2 Discuss the various blood grouping systems. Explain ABO blood grouping system in detail. [CO-1] [L-3] **20**

Q.3 Draw the structure and explain the functioning of liver and pancreas in detail. [CO-2] [L-5] **20**

Q.4 Distinguish between:
a) CNS and PNS.
b) Sympathetic and parasympathetic nervous system [CO-1] [L-4] **10×2**

PART-B

Q.5 What do you understand by lung volume and capacity? Explain. [CO-4] [L-1] **20**

Q.6 What is cardiac output? Explain the various factors affecting BP. [CO-2] [L-3] **20**

Q.7 Draw a well labeled diagram of nephron and discuss the process of urine formation in detail. [CO-2] [L-5] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
STATISTICS METHODS FOR APPLIED SCIENCES (MND-DS-201)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **2**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Discuss the various steps of research process with a suitable example. **20**

PART-A

Q.2 Select an appropriate research design to assess the effect of diabetes on prevalence of cancer. Discuss the tools of research in detail. [CO1] [L-5] **20**

Q.3 Suppose a researcher wishes to estimate the prevalence of hypertension in the given population. The anticipated prevalence of high blood pressure was 47%. What should be the sample size for this investigation when simple random sampling is used at 95% level of confidence? Describe type of error in detail and how they facilitate in sample size calculation. [CO-2] [L-3] **20**

Q.4 Calculate mean and standard deviation of the following data:

Income group	Number of Workers
Below-350	8
350-370	6
370-390	39
390-410	53
410-430	60
430-450	40
450-470	22
470-490	15
490-510	15
510-530	9
530 & above	10

[CO-3] [L-3] **20**

PART-B

Q.5 The following table gives the distribution of age and those who are anemic females among the population. Find out the relation between age and Anemia.

AGE	ANEMIC
20	32
30	60
40	30
50	12
66	23
70	19

[CO-3] [L-3] **20**

- Q.6 A nutritionist was interested in whether different healthy eating lead to a more positive outlook on life. People were split into 4 groups and then taken given a plate of food. The four groups consumed: A plate of salad, salad with vinegar dressing, salad with white eggs, Salad with whole egg. After the program a blood sample was taken and serotonin levels measured (remember more serotonin means more happy! Find out which plate of healthy food make people happier than others at 95% confidence interval.

Salad with whole egg	Salad with white eggs	Salad with vinegar dressing	Salad
11	4	4	7
7	8	3	7
8	6	2	5
14	11	2	4
11	9	3	3
10	8	6	4
5	4	2	4

[CO-3] [L-4] **20**

- Q.7 Describe the steps to conduct t - test and frequency in SPSS.

[CO-4] [L-2] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
TECHNIQUES IN FOOD ANALYSIS (MND-DS-202)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Explain the importance of physio-chemical analysis in the field of food science. **20**

PART-A

Q.2 Write the principle and applications of spectrophotometer. [CO-1][L-2] **20**

Q.3 Write the principle and applications of colorimetry. [CO-3][L-4] **20**

Q.4 Write the principles and application of chromatography. [CO-2][L-5] **20**

PART-B

Q.5 Explain the working mechanism and applications of atomic absorption spectrophotometer. [CO-4][L-1] **20**

Q.6 Describe with the examples application of column chromatography. [CO-2][L-6] **20**

Q.7 Explain principles and application involved in food analysis liquid chromatographic techniques. [CO-3][L-5] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
INSTITUTIONAL FOOD SERVICE MANAGEMENT
(MND-DS-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 What are approaches to management with respect to food service organization, explain by taking a suitable example **20**

PART A

- Q.2 Define work simplification. Explain the steps involved in planning kitchen area. [CO-3][L-2] **20**

- Q.3 List and explain different styles of food service. Design any two types of menu cards. [CO-5] [L-1] **20**

- Q.4 Describe the difference between absenteeism and staff turnover. What are the important steps involved in training and orientation of the employee? [CO4][L-4] **20**

PART B

- Q.5 Explain the different types of storage area in detail. [L-2][CO-3] **20**

- Q.6 Discuss the importance of hygiene and sanitation in food service unit. What are the current initiatives taken by the government to ensure hygienic food available to the masses? [CO-5][L-3] **20**

- Q.7 Describe the different types of purchasing methods while buying food, equipments in any food service setup. [CO-1] [L-2] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
NUTRITION IN HEALTH AND DISEASE (MND-DS-204)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Explain the following (**any four**):
- a) Role of a dietician in a hospital.
 - b) Enteral feeding.
 - c) Hepatic encephalopathy.
 - d) Atherosclerosis.
 - e) Role of Leptin and Ghrelin.
 - f) VLDL.

5×4

PART-A

- Q.2 What is NCP? Discuss the process in detail. [CO-1] [L-2] **20**
- Q.3 What is parenteral mode of feeding? Also, discuss the various advantages and disadvantages of it. [CO-1] [L-1] **20**
- Q.4 What is pancreatitis? Discuss its dietary management. [CO-1] [L-2] **20**

PART-B

- Q.5 Discuss the MNT for hypertension. [CO-2] [L-2] **20**
- Q.6 How hormones affect obesity? Also, discuss the role of lifestyle management in controlling/ preventing obesity/overweight conditions. [CO-2] [L-2] **20**
- Q.7 Write a detailed note on 'metabolic disorders'. [CO-3] [L-2] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
NUTRACEUTICALS AND FUNCTIONAL FOODS (THEORY) (MND-DS-205)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Illustrate the role of nutraceuticals in reducing the risk of:

a) Diabetes.

b) Coronary heart disease.

[CO-4][L-2] **20**

PART-A

Q.2 Throw some light on role of nutraceuticals in traditional health sciences. [CO-4][L-3] **20**

Q.3 How are classified nutraceuticals on the basis of food sources? [CO-2][L-1] **20**

Q.4 Nutraceuticals and functional foods both have health promoting action but are different in terms of food sources. Justify your reason by giving five suitable examples.

[CO-1,2][L-5] **20**

PART-B

Q.5 Yogurt, a fermented milk is most research surpassed probiotic product. Associate the functional properties of yogurt with the health effects. [CO-3][L-5] **20**

Q.6 How five approaches of production of functional food can be utilized to convert a simple food into a functional one? Illustrate with suitable examples. [CO-2][L-1] **20**

Q.7 Categorize health claims and give their significance in the field of functional foods.

[CO-1,4][L-4] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
NUTRITION FOR ELDERLY (MND-DS-206)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 What do you mean by multifaceted aspects of aging and how you become competent to provide nutritional and health care of elderly? [CO-2][L-3] **20**

PART-A

- Q.2 What is Geriatric care? Explain the philosophy and scope of Geriatric care. [CO-1][L-1] **20**

- Q.3 Discuss the historical review of health care for the elderly. [CO-2][L-2] **20**

- Q.4 Define 'aging'. Describe the physiological, psychological and social processes of aging. [CO-3][L-3] **20**

PART-B

- Q.5 What factors influencing food intake of elderly discuss the points with suitable example? [CO-4][L-4] **20**

- Q.6 Describe the nutritional requirement and recommended dietary allowances for elderly. [CO-4][L-5] **20**

- Q.7 Discuss the name and functions of national and international agencies working for the welfare of the elderly. [CO-3][L-6] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Second Semester
SCIENTIFIC WRITING AND COMMUNICATION SKILLS (MND-DS-207)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Classify different types of abstracts with suitable examples. **20**

PART-A

Q.2 Drafting titles, sub titles, tables, and illustrations are very important aspects while writing research paper. Justify the statement. [CO-2][L-3] **20**

Q.3 Explain in detail the steps in identification of research problem. [CO-1][L-2] **20**

Q.4 Compare and contrast advantages and disadvantages of qualitative and quantitative research. [CO-3][L-3] **20**

PART-B

Q.5 Discuss in detail the structure of dissertation to be adopted in the field of nutrition and dietetics. [CO-4][L-2] **20**

Q.6 What is Hypothesis? Explain in detail different types of hypothesis. [CO-2][L-1] **20**

Q.7 Classify different types of Literature with suitable examples. [CO-2][L-3] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Third Semester
SPORTS SUPPLEMENTS AND DOPING (MND-DS-309)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Discuss the common reasons of supplement use by sports person [CO-1] [L-2] **20**

PART-A

Q.2 Classify supplements and discuss one examples from each category. [CO-1,2] [L-4] **20**

Q.3 What is the importance of proteins in the field of sports? Discuss in detail.
[CO-3] [L-1] **20**

Q.4 Analyze the importance of carbohydrate ingestion before, during and after exercise in the field of sports. [CO-3] [L-2] **20**

PART-B

Q.5 Doping is older than organized sports and was common dating back to the third century BC. Throw some light on the statement with suitable justifications. [CO-3,4] [L- 3] **20**

Q.6 Write short notes on:
a) Caffeine.
b) Sodium bicarbonate. [CO-3] [L-2] **10×2**

Q.7 What is blood doping? How it is affecting he health of sports person? [CO-2,4] [L-1] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Third Semester
NUTRITION FOR PARATHLETES (MND-DS-310)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Discuss the roles and responsibilities of IPC in detail. [CO-1][L-1] **20**

PART-A

Q.2 Write in detail about history of paralympic movement. [CO-4][L-3] **20**

Q.3 Discuss in detail about AHSN and women in sports committee. [CO-4][L-2] **20**

Q.4 What kind of nutritional care is required for paralympic diabetic athlete? [CO-2][L-3] **20**

PART-B

Q.5 Classify disability sports in various categories and give examples. [CO-4][L-4] **20**

Q.6 What are the methods of body composition assessment in parathletes? Discuss in detail. [CO-2][L-2] **20**

Q.7 Write short notes on the following:

a) Benefits of fitness program.

b) Disabled sports organizations.

[CO-3] [L-2] **10×2**

End Semester Examination, May 2023
M.Sc. (Nutrition and Dietetics) – Fourth Semester
FOOD PROCESSING AND MICROBIOLOGY (MNDF-DS-401)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Define 'food microbiology'. State the importance of food microbiology in a food industry. **20**

PART-A

- Q.2 Describe the following:
a) Microbial taxonomy.
b) The occurrence of spoilage in poultry and canned foods. [CO1, 2] [L3] **10×2**
- Q.3 a) List the common sources of contamination. [CO-3] [L-3] **10**
b) Demarcate the extrinsic and intrinsic factors affecting the growth of microorganisms. [CO3] [L3] **10**
- Q.4 What is the underlying principle of food preservation? How is low temperature preservation different from high temperature preservation? [CO2] [L2] **20**

PART-B

- Q.5 a) Differentiate between: 'food infection' and 'food intoxication'. [CO3] [L3] **10**
b) Mention some commonly occurring food borne illnesses along with their prevention strategies [CO3] [L3] **10**
- Q.6 'Industrial Microbiology has a widening future in the coming years'. Elaborate. [CO4] [L4] **20**
- Q.7 What is Mycotoxicosis? Enumerate some methods of control for pathogenic organisms which are responsible for infection. [CO3] [L3] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Third Semester
HEALTH PROMOTION AND NUTRITION COMMUNICATION
(MNDP-DS-302)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Apply ecological theory as an intervention to improve the behavior at inter and intra personal level. [CO-2][L-5] **20**

PART-A

- Q.2 Discuss the food based dietary guidelines of different countries, differentiate it critically. [CO-2] [L-2] **20**

- Q.3 Malnutrition still exists among children as obesity and anemia. Explain the steps of nutrition education program planning to deal with these public health crises. [CO-3] [L-3] **20**

- Q.4 Discuss the role of advocacy in formulation of nutrition policies. Explain the theories of advocacy using appropriate examples. [CO-4] [L-3] **20**

PART-B

- Q.5 Describe the role of various communication channels used in health promotion. Apply the concept of behavior change communication in improving the condition of malnutrition among children. [CO-4] [L-3] **20**

- Q.6 Discuss various public health approaches to health promotion. Explain the principles of ethics in nutrition and health promotion. [CO-3] [L-2] **20**

- Q.7 Evaluate the factors affecting food behavior and food choices. Does social marketing and health literacy play any role in making food choices? [CO-1] [L-3] **20**

End Semester Examination, May 2023
M. Sc. (Nutrition and Dietetics) – Third Semester
ASPECTS OF PUBLIC HEALTH NUTRITION (MNDP-DS-303)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 What are the basic elements of program planning in public health? Write a brief note on 'concept, principles and theories'. [CO-4] [L-6] **20**

PART-A

- Q.2 Discuss about program planning steps-survey of area, assessing community needs, defining the problem. [CO-1][L-3] **20**
- Q.3 Explain program evaluation and review technique (PERT). [CO-2][L-2] **20**
- Q.4 Elaborate the health planning and planning cycle, and its management. [CO-2][L-3] **20**

PART-B

- Q.5 Explain national rural health mission (NRHM). [CO-3][L-2] **20**
- Q.6 Discuss about cost benefit analysis (CBA) and cost effective analysis (CEA). [CO-3][L-5] **20**
- Q.7 What is national health policy and write in details about health related programs? [CO-4][L-6] **20**

End Semester Examination, May 2023
M.Sc. (Nutrition and Dietetics) – Fourth Semester
PUBLIC HEALTH AND MALNUTRITION (MNDP-DS-401)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

- Q.1 Define the principles of nutrition epidemiology and discuss about four nutritional problems and their implication and remedial measures. [CO-4] [L-4] **20**

PART-A

- Q.2 Draw the flow chart of epidemiology of study design and explain different method of conducting nutritional research. [CO-1] [L-3] **20**

- Q.3 Describe different type of malnutrition. Define 'nutritional transition status'. [CO-2] [L-2] **20**

- Q.4 What is SAM and explain community based management strategies? [CO-2] [L-3] **20**

PART-B

- Q.5 Explain different type of obesity. What are the factors leading to obesity? Explain the public health preventive strategies of obesity. [CO-3] [L-2] **20**

- Q.6 Explain intra-household distribution in connection with famine and income distribution which affect nutritional status of the women and girl child. [CO-3] [L-5] **20**

- Q.7 What are the policies and programmes which alleviate malnutrition in India? [CO4][L6] **20**

End Semester Examination, May 2023
M. Sc. – Third Semester
EXERCISE PHYSIOLOGY AND METABOLISM (MNDS-DS-301)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Explain the principles of physical training and its impact on performance level in sports. **20**

PART-A

- Q.2 Write in detail the concept of endurance, strength and speed in sports activity. [CO-1] [L-1] **20**

- Q.3 Enumerate the pulmonary responses and adaptation to exercise in detail. [CO2][L2] **20**

- Q.4 How environment stress can affect the exercise performance? Discuss. [CO-3] [L-4] **20**

PART-B

- Q.5 Discuss the relationship between physical activity, health and longevity. [CO-2] [L-4] **20**

- Q.6 Enumerate the concepts of periodization. Differentiate different training methods to improve the performance of a sports player. [CO-4] [L-4] **20**

- Q.7 Write a note on: Different methods to assess physical fitness and fatigue of a sports player. [CO-3] [L-2] **20**

End Semester Examination, May 2023
M.Sc. (Nutrition and Dietetics) - Fourth Semester
RECENT TRENDS IN SPORTS NUTRITION (MNDS-DS-401)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

- Q.1 What are the myths related to nutrition in the field of sports. Discuss with examples.
[CO 1] [L 1] **20**

PART-A

- Q.2 Discuss in detail about food guide pyramid designed for athletes. Also discuss it in detail.
[CO 1] [L 3] **20**

- Q.3 Illustrate with suitable examples about career opportunities in sports management companies for a sports nutrition graduate.
[CO 3] [L 3] **20**

- Q.4 Diagrammatically explain the of current and proposed Indian model of sports governance.
[CO 2] [L 4] **20**

PART-B

- Q.5 Write short notes on:
a) ICC
b) SAI
[CO 3] [L 2] **10×2**

- Q.6 Justify the role of sports in society by enumerating some examples of current scenario.
[CO 3] [L 5] **20**

- Q.7 Enumerate some important points to be considered while planning and developing a sports drink/supplement.
[CO 4] [L 2] **20**

End Semester Examination May 2023
M. Sc. (Nutrition and Dietetics) – Fourth Semester
NUTRITION AND HEALTH PROMOTION (MNDS-DS-402)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Discuss the individual and environmental factors which determines the food choices. [CO-1][L-1] **20**

PART-A

- Q.2 Explain Bangkok charter for health promotion in a globalized world. [CO-2][L-2] **20**

- Q.3 Discuss the concept of health and wellbeing. What are the indexes used to evaluate the human development examples? [CO-4][L-2] **20**

- Q.4 Illustrate how socio-cultural values of an individual are the determinant of health promotion? [CO-2][L-2] **20**

PART-B

- Q.5 Discuss in detail the oral health policy in India. [CO-1][L-5] **20**

- Q.6 Throw some light on Ottawa charter for health promotion in a globalized world. [CO-3][L-3] **20**

- Q.7 Describe the theories of health behavior. Comment on the ethics in nutrition and health communication. [CO-4][L-2] **20**

Annual Examination, June 2023
Master of Physiotherapy— First Year
REVIEW OF BASIC SCIENCES-I (ANATOMY AND PHYSIOLOGY)
(MPT 101)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Describe the various respiratory centres and discuss in detail about the neural regulation of respiration. [CO-1][L-2] **10**
- Q.2 What is arterial circle of Willis? Describe the arterial supply of superolateral surface of cerebral hemisphere. [CO-4][L-3] **10**
- Q.3 Write in detail about factors affecting stability and mobility of spine. [CO-3][L-4] **10**

PART-B

- Q.4 Enumerate the ligaments of shoulder joint. How is the static stability of the joint maintained? Discuss about mechanism of arm elevation with muscles involved. [CO-5][L-6] **15**
- Q.5 Describe the brachial plexus under the following headings: roots, trunks, divisions, and cords. What do you mean by Erb's point? Add a note on Klumpke's paralysis. [CO-2][L-5] **15**
- Q.6 What are the different types of muscle fibers? Write in detail about mechanism of skeletal muscles contraction with diagrams. [CO-5][L-3] **15**
- Q.7 What are the effects of exercise on various hormones in the body? Name the stress hormones and their impact on exercise. [CO-6][L-3] **15**
- Q.8 Write about physiological adaptations that occur following exercise training. [CO-4][L-1] **15**
- Q.9 Write in detail about cardiac cycle and add a note on maintenance of heart performance with different types of exercise. [CO-3][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy – First Year
REVIEW OF BASIC SCIENCES II (PATHOLOGY AND PHARMACOLOGY)
(MPT 102)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART A

- Q.1 Discuss granulomatous inflammation. Draw a diagram of granuloma. [CO5][L1] **10**
- Q.2 Discuss the features of rickets and osteomalacia. [CO5][L1] **10**
- Q.3 Write a note on osteoporosis and osteoarthritis. [CO5][L1] **10**

PART-B

- Q.4 Define 'inflammation'. Write the vascular and cellular events of inflammation. [CO2][L1] **15**
- Q.5 Define 'healing'. Write the differences between 'healing by primary' and 'secondary union'. Also, give the factors that affect healing. [CO4][L3] **15**
- Q.6 Discuss myocardial infarction in detail mentioning its definition, etiology, risk factors, types, sequential pathological changes and lab diagnosis. [CO5][L4] **15**
- Q.7 Define 'congenital heart diseases'. Classify them and discuss 'VSD and TOF'. [CO1][L2] **15**
- Q.8 Define 'metabolic bone diseases'. Discuss renal osteodystrophy and osteitis fibrosa cystica in detail. [CO3][L5] **15**
- Q.9 Write the uses and side effects of NSAID and muscle relaxants. Add a note on harmful effects of steroids. [CO6][L4] **15**

Annual Examination, June 2023
Master of Physiotherapy — First Year
APPLIED PHYSIOTHERAPY (MPT 103)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Define 'good posture'. Draw a well labelled diagram of the line of gravity (LOG) passing through the body in lateral view, anterior view and posterior view. [CO-1][L-2] **10**
- Q.2 What are the general relaxation methods? Explain any two-relaxation technique with example. [CO-3][L-3] **10**
- Q.3 Explain how Tai Chi can be used for balance and coordination. Justify your answer with recent researches. [CO-2][L-4] **10**

PART-B

- Q.4 Explain the details about the MFR and MET technique in patients to treat the upper trapezius tightness.
- Q.5 What do you mean by joint mobilization. Explain different schools of thoughts for joint mobilization. [CO-4][L-4] **15**
- Q.6 Plan exercise intervention program for balance and coordination in geriatric population. Justify your research with recent researches. [CO-5][L-6] **15**
- Q.7 Examine the kinetics and kinematics of hemiplegic gait with graphical representation. [CO-3][L-3] **15**
- Q.8 Discuss recent advances in field of LASER. Explain any one of the advance technologies in therapeutic LASER used in Physiotherapy. [CO-4][L-5] **15**
- Q.9 Differentiate between therapeutic Russian and diadynamic current stimulation. [CO-5][L-3] **15**

Annual Examination, June 2023
Master of Physiotherapy — First Year
APPLIED BIOMECHANICS AND ERGONOMICS (MPT 104)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.

PART A

- Q.1 a) Differentiate between 'slow oxidative and fast oxidative' muscle fibres. [CO-2] [L4]
b) Define physical ergonomics. [CO-6] [L1]
c) EMG changes during fatigue.
d) Effect of trapezius muscle weakness on shoulder biomechanics.
e) Phases of stair climbing gait. **2×5**
- Q.2 Explain the structure of synovial joint and mechanism of joint lubrication. [CO-1,2] [L1] **10**
- Q.3 Enumerate risk factors for injuries at workplace and discuss design of workplace for Person working in Kitchen. [CO-6] [L3] **10**

PART B

- Q.4 Discuss the role of Menisci in knee joint and add a note on pathomechanics of meniscal injuries. [CO-3] [L4] **15**
- Q.5 Write in detail about length tension relationship. Add a note on relation between torque production and angle of application. [CO-1] [L2] **15**
- Q.6 Recent advances in the measurement instruments in the field of Physiotherapy for assessing force generation, movement and power. [CO-4] [L2] **15**
- Q.7 Explain in detail about changes in mechanical properties of muscles due to ageing, exercise and immobilization. [CO-3] [L3] **15**
- Q.8 Write in details difference between 'normal and running gait' biomechanics. [CO-5] [L5] **15**
- Q.9 What is Rapid Entire Body Assessment (REBA) in ergonomics? Write in detail the components of the test and its interpretation. [CO2] [L4] **15**

Annual Examination, June 2023
Master of Physiotherapy – First Year
BIostatistics and Research Methodology (MPT 105)

Time: 3 hrs.

Max Marks: 80

No. of pages: 1

*Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART A

- Q.1 The following results were obtained when two sets of patients were subjected to two different strengthening treatments X and Y, to enhance their muscle strength. Treatment X was applied on 400 items and 80 were found to have gained in strength. Treatment Y was applied on 400 items and 20 were found to have gained in strength. Is treatment Y superior to treatment X?

For $v=1$, $\chi^2=3.84$

[CO5][L6] 10

- Q.2 What are the various measurement scales in data collection? Explain with examples:

[CO2][L3] 10

- Q.3 The grades of 36 students in an auditing test are:

Grades	30-40	40-50	50-60	60-70	70-80	80-90	90-100
No. of students	3	4	6	10	6	4	3

Find mean and median.

[CO4][L5] 10

PART B

- Q.4 Define 'hypothesis'. What are the different types of hypothesis? Also mention the types of errors associated with acceptance/rejection of hypothesis.

[CO5][L2] 15

- Q.5 Summarize the various ethical principles to be followed in clinical research. Describe informed consent in detail. Also explain such situations where informed consent cannot be obtained and suggest remedial measures for it.

[CO1][L5] 15

- Q.6 A panel of judges A and B graded seven debaters and independently awarded the following marks:

Marks by A:	40	34	28	30	44	38	31
Marks by B:	32	39	26	30	38	34	28

An eighth debater was awarded 36 marks by judge A while judge B was not present. If judge B were also present, how many marks would you expect him to award to eighth debater assuming that the same degree of relationship exists in their judgment.

[CO2][L6] 15

- Q.7 Compare and contrast between qualitative and quantitative study designs. Examine their advantages and disadvantages.

[CO4][L3] 15

- Q.8 Differentiate between validity and reliability. Mention any 5 threats to internal validity and the remedy for each one.

[CO2][L2] 15

- Q.9 What are various methods of data representation? Explain with examples.

[CO3][L2] 15

Annual Examination, June 2023
Master of Physiotherapy – First Year
PROFESSIONAL DEVELOPMENT AND ETHICS (MPT 106)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART A

- Q.1 What is time management? Explain the need and essential features of time management in detail. **10**
- Q.2 What is understood by Job satisfaction? Mention the factors affecting job satisfaction. **10**
- Q.3 Explain the process of decision making in detail. **10**

PART B

- Q.4 What is understood by Learning Theories in education pedagogy? Highlight important theories with examples. **15**
- Q.5 What is collective bargaining? Discuss the pros and cons of collective bargaining in detail. **15**
- Q.6 What is organization management? Explain the need and essential features of organization management in detail. **15**
- Q.7 Define 'consumer behavior'. Explain it in the light of medical services. **15**
- Q.8 What is Performance appraisal? Add a note on its benefits and types. **15**
- Q.9 Discuss the benefits of medical record keeping. How do you ensure the confidentiality in records? **15**

Annual Examination, June 2023
Master of Physiotherapy — Second Year
ASSESSMENT AND DIAGNOSIS OF NEUROLOGICAL CONDITIONS
(MPT 201)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Identify the importance of history taking in neurological examination. Explain Kuppuswamy scale. [CO-1][L-3] **10**
- Q.2 Explain Rancho Los Amigo and GCS scale. [CO-1][L-2] **10**
- Q.3 Illustrate different components and procedure of mental function examination. [CO-2][L-2] **10**

PART-B

- Q.4 Discuss the components of balance. Explain Berg balance scale and its' scoring. [CO-3][L-6] **15**
- Q.5 Examine cranial nerve V, VI and VIII and write their clinical implication. [CO-3][L-4] **15**
- Q.6 Explain the procedure of CSF examination. Discuss its' findings [CO-4][L-2] **15**
- Q.7 Illustrate the physiology behind nerve conduction studies. Explain CMAP and SNAP with the help of diagram. [CO-5][L-4] **15**
- Q.8 Assess case of Parkinson disease. How will you differentially diagnose it with other neurological diseases? [CO-6][L-5] **15**
- Q.9 Assess a case of stroke. How will you differentially diagnose it with other neurological diseases? [CO-6][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy — Second Year
**MEDICAL AND SURGICAL MANAGEMENT OF NEUROLOGICAL
DISORDERS (MPT 202)**

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Explain etiology, types and pathophysiology of head injury. [CO-1][L-2] **10**
- Q.2 Identify cause, symptoms, and clinical feature of multiple sclerosis. Mention different diagnostic tests and measures for the same. [CO-2][L-3] **10**
- Q.3 Classify Ataxia. Add a note on its management. [CO-1][L-2] **10**

PART-B

- Q.4 Analyze normal developmental milestone and neonatal reflex of a 2 year old child. [CO-3][L-4] **15**
- Q.5 Explain in detail /about reflex sympathetic dystrophy. [CO-1][L-2] **15**
- Q.6 Discuss the pathophysiology of vestibular system. [CO-4][L-5] **15**
- Q.7 Discuss different types of muscular dystrophy. [CO-5][L-6] **15**
- Q.8 Discuss Poliomyelitis in detail along with its' medical management. [CO-5][L-6] **15**
- Q.9 Identify cardinal signs of Parkinson disease and relate it with direct and indirect pathway. [CO-6][L-2] **15**

Annual Examination, June 2023
Master of Physiotherapy — Second Year
PHYSIOTHERAPY MANAGEMENT IN NEUROLOGICAL DISORDERS
(MPT 203)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Explain encephalitis in detail. Add a note on its physiotherapy management. [CO-1][L-3] **10**
- Q.2 Elaborate reflex sympathetic dystrophy irradiation neuropathy. [CO-1][L-2] **10**
- Q.3 Explain physiotherapy management for cerebellar ataxia. [CO-2][L-2] **10**

PART-B

- Q.4 Define 'head injury' and its types. Also discuss its management in detail. [CO-3][L-6] **15**
- Q.5 Discuss the Duchenne Muscular Dystrophy in detail along with its PT management. [CO-3][L-4] **15**
- Q.6 Explain the various treatment options available for spasticity reduction. [CO-4][L-2] **15**
- Q.7 Define growth and development and explain the factors affecting growth in detail. [CO-5][L-4] **15**
- Q.8 Explain 'Parkinson disease'. How will you differentially diagnose it with other neurological disease? Also discuss its PT management in detail. [CO-6][L-5] **15**
- Q.9 Write in detail about pre-operative and post-operative assessment and treatment following craniotomy. [CO-6][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy — Second Year
RECENT ADVANCES IN NEURO-PHYSIOTHERAPY (MPT 204)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Discuss the role of cognitive behavioral therapy (CBT) in neuro-rehabilitation. [CO-1][L-3] **10**
- Q.2 Explain different stress management strategies. [CO-1][L-2] **10**
- Q.3 Illustrate the techniques of trigger point release. [CO-2][L-2] **10**

PART-B

- Q.4 Discuss the role robotics in neuro rehabilitation. Justify your answer with recent researches. [CO-3][L-6] **15**
- Q.5 Analyze different virtual reality games used in neuro-rehabilitation. [CO-3][L-4] **15**
- Q.6 Illustrate various core stability exercises. Comment on the importance of core stability exercises. [CO-4][L-2] **15**
- Q.7 Classify Pilates. Discuss the role of Pilates for different sports. [CO-5][L-4] **15**
- Q.8 Evaluate butler concept and principles of neurodynamics. [CO-6][L-5] **15**
- Q.9 Examine a case of median nerve compression with neurodynamics concept. [CO-6][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy (Musculoskeletal) — Second Year
ASSESSMENT AND DIAGNOSIS OF MUSCULOSKELETAL CONDITIONS
(MPT 301)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

*Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Discuss the use of computed tomography scan and X ray imaging in the case of musculoskeletal disorder. Also classify the choice of treatment among them for any 5 diseases with justification [CO-3] [L-6] **10**
- Q.2 How do postural deformities contribute to the development of chronic pain, and what strategies can physiotherapists use to manage pain in patients with postural deformities? [CO-4] [L-1] **10**
- Q.3 What are the key principles of disability evaluation, and how can physiotherapists apply these principles in their practice? [CO-1] [L-3] **10**

PART-B

- Q.4 What are the common age-related changes in the musculoskeletal system, and how do these changes affect functional mobility in older adults? [CO-2] [L-1] **15**
- Q.5 A 75-year-old woman comes to you complaining mainly neck pain but also of stiffness. She exhibits a dowager's hump. There is no history of trauma. Describe your assessment and plan of treatment for the same. [CO-6] [L-6] **15**
- Q.6 What are the signs and symptoms of rotator cuff injury? Discuss the assessment plan emphasizing on the special tests. [CO-5] [L-2] **15**
- Q.7 A 32-year-old man comes to you complaining of back pain and stiffness, especially with activity. He has a desk job and has no history of unusual activity. Describe your assessment plan with justification for the need of imaging. [CO-1] [L-6] **15**
- Q.8 Tabulate the possible mechanism of injury to the knee joint and the probable structures involved. Also elaborate the findings you can note while observation of the knee joint. [CO-6] [L-2] **15**
- Q.9 How can gait analysis be used to inform treatment planning and monitor patient's progress over time? Discuss in relation to lurching gait. [CO-3] [L-1] **15**

Annual Examination, June 2023
Master of Physiotherapy Musculoskeletal – Second Year
**MEDICAL AND SURGICAL MANAGEMENT OF MUSCULOSKELETAL
CONDITIONS (MPT 302)**

Time: 3 hrs.

Max Marks: **80**

No. of Pages: **1**

Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.

PART-A

- Q.1 Discuss in detail the diagnostic criteria and role of surgery in a case of grade 2 adhesive capsulitis. [CO-3][L-2] **10**
- Q.2 A 65-year-old male was brought to the Burns unit of the hospital with full thickness burns on the posterior aspect of chest and both upper limbs with suspected inhalational burns. Discuss prognosis and the role of surgical management in burns. [CO-2,4][L-1] **10**
- Q.3 Differentiate between congenital and acquired deformities. Describe the signs, symptoms & physiotherapy management options for CDH. [CO6, 5] [L3] **10**

PART-B

- Q.4 What is bamboo spine? Provide a detailed assessment and management chart for the same. [CO-1,3][L-2] **15**
- Q.5 A 55 years old male has undergone fracture neck of femur and the MRI shows necrosed area on the head of femur. Discuss the surgical management for the same. [CO-2][L-5] **15**
- Q.6 What are some of the common health concerns that affect the elderly population? How do these conditions impact their overall quality of life? [CO3] [L3] **15**
- Q.7 Describe the different types of Osteomyelitis. How are these types of Osteomyelitis different in terms of presentation, treatment, and prognosis? [CO-4,6][L-2] **15**
- Q.8 What is the rehabilitation process for patients who have undergone an amputation? What therapies and interventions are used, and what are the goals of rehabilitation? [CO5] [L4] **15**
- Q.9 What is the assessment and treatment process for a patient with ACL injury grade 3? Discuss in details. [CO-4][L-1] **15**

Annual Examination, June 2023
Master of Physiotherapy Musculoskeletal – Second Year
**PHYSIOTHERAPY MANAGEMENT IN MUSCULOSKELETAL
CONDITIONS (MPT 303)**

Time: 3 hrs.

Max Marks: **80**

No. of Pages: **1**

Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.

PART-A

- Q.1 What are the cardinal signs of Hip osteoarthritis? Discuss in detail about the principles of physiotherapy management of post hip replacement [CO-3][L-2] **10**
- Q.2 Describe the Cyriax technique of friction massage. How is it performed, and what are the potential benefits? [CO-2,4][L-1] **10**
- Q.3 What are the various outcome measures assessed through EMG? [CO6, 5] [L3] **10**

PART-B

- Q.4 Describe the goal set pre and post-immobilization PT treatment of fracture in lower limb. Also describe the precautions to be taken for neck of femur fracture. [CO-1,3][L-2] **15**
- Q.5 Discuss the components for pre-prosthetic evaluation. Also describe the parts of above knee prosthesis. [CO-2][L-5] **15**
- Q.6 Describe principles and techniques of positional release therapy. Write its indications and contraindications. [CO3] [L3] **15**
- Q.7 What is the evidence base for the effectiveness Physiotherapy management for patient with low back pain due to PIVD at L5-S1 level and showing degenerative changes at lumbar area? [CO-4,6][L-2] **15**
- Q.8 Differentiate between OA and RA on basis of Physical assessment. Discuss in detail the physiotherapy management of OA grade II for a male patient of 70 yrs. [CO5][L4] **15**
- Q.9 Differentiate between congenital and acquired deformities. Describe the signs, symptoms and physiotherapy management options for CDH. [CO-4][L-6] **15**

Annual Examination, June 2023
Master of Physiotherapy (Musculoskeletal) - Second Year
RECENT ADVANCES IN MUSCULOSKELETAL PHYSIOTHERAPY
(MPT 304)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 Explain myofascial release technique for various type syndromes. [CO-2][L-2] **10**
- Q.2 Write in detail about principles and types of MET. [CO-4][L-3] **10**
- Q.3 Discuss contribution of various muscles to spinal stabilization. [CO-3][L-4] **10**

PART-B

- Q.4 Discuss the principles of positional release technique (PRT). Add a note on the recent literature for positional release technique. [CO3][L-2] **15**
- Q.5 Write the patterns of dysfunction in upper crossed syndrome. Explain the muscle energy technique to assess and treat the dysfunction. [CO6][L-5] **15**
- Q.6 Summarise the concept of cyriax principle of diagnosis and treatment. Write in detail about cyriax for ECRB tendinitis. [CO5][L-1] **15**
- Q.7 What are the principles of neural mobilization given by Butler? Write in detail the technique for C5-C6 radiculopathy patients. [CO3][L-4] **15**
- Q.8 Explain integrated neuromuscular inhibition technique. What are the beneficial effects of the same? [CO1][L-6] **15**
- Q.9 Explain the types of pilates training. Write in detail for table top positioning of knee drop exercises. [CO5][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy — Second Year
ASSESSMENT AND DIAGNOSIS OF SPORTS INJURIES
(MPT 501)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.

PART-A

Q.1 Write the short answer:
a) Over training.
b) Training in heart rate zone. [CO-2][L-1] **5 × 2**

Q.2 Describe biomechanical assessment of standing posture in frontal view using plum line method. Illustrate different angles of measurement. [CO-1][L-2] **10**

Q.3 Explain various gold standard investigation tools for soft tissue injuries. [CO-2][L-3] **10**

PART-B

Q.4 Discuss EMG instrumentation and the use of EMG in Physiotherapy assessment and treatment. [CO-4][L-5] **15**

Q.5 Describe clinical decision making in musculoskeletal injury. Write in details the difference in the clinical decision making for on-field and off-field injuries. [CO-3][L-2] **15**

Q.6 Explain the special test of SLAP lesion and Bankart's injury with its sensitivity and specificity. [CO-5][L-4] **15**

Q.7 Explain in detail about the differential diagnosis of Ankle pain based on special tests. [CO-6][L-2] **15**

Q.8 Write in detail about Biomechanical assessment of Running. [CO-3][L-2] **15**

Q.9 Discuss different special tests performed if a patient is describing pain in the elbow with gripping activities. [CO-6][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy (Sports) — Second Year
MEDICAL AND SURGICAL MANAGEMENT OF SPORTS INJURIES
(MPT 502)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.

PART-A

- Q.1 Explain the following:
a) Role of physiotherapists in injury prevention. [CO-1] [L-1]
b) Protective equipment used in cricket. [CO-3] [L-2] **5×2**
- Q.2 Describe the procedure for on field emergency assessment and cardiopulmonary resuscitation. [CO-2][L-2] **10**
- Q.3 Enumerate common overuse injuries seen in Tennis players and write the physiotherapy management for Tennis Elbow. [CO-5][L-3] **10**

PART-B

- Q.4 How do you manage an on field collapsed football player with loss of consciousness and subluxated shoulder joint? Explain its TOTAPS assessment as well. [CO-5][L-5] **15**
- Q.5 Explain jumper's knee and its physiotherapy management. [CO-4][L-2] **15**
- Q.6 Discuss in detail the management and training of athlete with spinal cord injury. [CO-3][L-4] **15**
- Q.7 Explain the differential diagnosis of SLAP injury in detail based on special tests. [CO-6][L-2] **15**
- Q.8 Define doping and write in detail about testing procedure followed by WADA. [CO-3][L-2] **15**
- Q.9 Explain in detail the patho-physiology of female athlete triad and add a note on its management. [CO-2][L-5] **15**

Annual Examination, June 2023
Master of Physiotherapy — Second Year
PHYSIOTHERAPY MANAGEMENT IN SPORTS INJURIES
(MPT 503)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

*Note: Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

- Q.1 a) Explain in detail about sports concussion assessment tools.
b) What is a triangular bandage, mention its uses and dimensions?
[CO-1][L-2] **5×2**
- Q.2 Explain in detail about the MFR and MET technique in patient with upper trapezius tightness.
[CO-3][L-3] **10**
- Q.3 What are the different measures evaluated during nerve conduction studies? Explain the difference between axonal degeneration and demyelination on the basis of these measures.
[CO-2][L-4] **10**

PART-B

- Q.4 Explain the Maitland Grades of Mobilization. Describe the procedure to improve Ankle Dorsiflexion and plantar flexion ROM.
[CO-3][L-5] **15**
- Q.5 What is the component required for the helmet of American football and cricketer players? Explain in detail.
[CO-4][L-4] **15**
- Q.6 Maslow's theory of self-actualization indicates human needs as motivators of behaviour. Discuss sport as an avenue to achieve these human needs. [CO-5][L-6] **15**
- Q.7 Explain methodologies and application of human motion analysis. [CO-3][L-3] **15**
- Q.8 Design a progressive exercise program for 12 weeks (3 different monthly phase) in an individual of 54 years of age with diabetes for 4 years and moderate HTN for 2 years.
[CO-4][L-5] **15**
- Q.9 Write the emergency care when a patient is injured on-field. [CO-5][L-3] **15**

Annual Examination, June 2023
Master of Physiotherapy (Sports) — Second Year
RECENT ADVANCES IN SPORTS PHYSIOTHERAPY (MPT 504)

Time: 3 hrs.

Max Marks: **80**

No. of pages: **1**

Note: *Attempt **SIX** questions in all; in which attempt any **TWO** questions from **PART-A** and **FOUR** questions from **PART-B**. Marks are indicated against each question.*

PART-A

Q.1 Answer the following:

- a) Types of athletic training.
- b) Segmental stabilization.

[CO-1][L-1] **5×2**

Q.2 Enumerate various training methods for athletes and discuss plyometric training in detail.

[CO-2][L-2] **10**

Q.3 Write in detail about the principles of taping. Add a note on K-taping for bicipital tendinitis.

[CO-3][L-3] **10**

PART-B

Q.4 What is the concept of neural mobilization? Write in detail about any 2 upper limb tension testing.

[CO-5][L-5] **15**

Q.5 Explain the concept and types of pilates. Add a note on pilates used for basket ball players.

[CO-4][L-2] **15**

Q.6 What is periodization? Discuss the principles and its importance in athletic training.

[CO-3][L-4] **15**

Q.7 Explain in detail training of athlete in heart rate zone, its effects and monitoring.

[CO-6][L-2] **15**

Q.8 Enumerate core muscles. Write in detail core muscle activation methods and add a note on its significance in athlete's performance.

[CO-3][L-2] **15**

Q.9 Discuss overtraining. Add a note on fatigue assessment and management.

[CO-2][L-5] **15**

End Semester Examination, May 2023
OPEN ELECTIVE – COMMON FOR ALL BRANCHES
WEIGHT MANAGEMENT (ND-OE-003)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Justify the statement "Lifestyle plays a significant role in weight management".

[CO-2] [L-5] **20**

PART-A

Q.2 Illustrate the methods through which obesity can be assessed.

[CO-1] [L-4] **20**

Q.3 What is fat cell theory? How does it play a role in weight management? [CO-2] [L-2] **20**

Q.4 What do you understand by the term underweight? Discuss the factors leading to underweight. [CO-3] [L-3] **20**

PART-B

Q.5 Describe in detail the nutritional management of obesity.

[CO-2] [L-2] **20**

Q.6 Explain in detail the nutritional management of underweight.

[CO-2] [L-2] **20**

Q.7 What is a Keto diet? Also, discuss the consequences of following such diets regularly.

[CO-4] [L-3] **20**

End Semester Examination, May 2023
OPEN ELECTIVE – COMMON FOR ALL BRANCHES
FOOD: HYGIENE AND SANITATION (ND-OE-004)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 What are the steps of maintaining hygiene and sanitation in a food service unit?
[CO-1] [L-3] **20**

PART-A

- Q.2 Elaborate on method of preservation in details. [CO-1] [L-2] **20**

- Q.3 Explain in details the factors affecting growth of microorganism. [CO-4] [L-4] **20**

- Q.4 What is spoilage list out 10 food products with reasons of spoilage? [CO-2] [L-4] **20**

PART-B

- Q.5 Explain the principles of HACCP applied in catering unit with suitable examples.
[CO-1] [L-3] **20**

- Q.6 Describe the types of cleaning agents used for maintaining appropriate sanitation in food premises. [CO-1] [L-2] **20**

- Q.7 Describe the importance of microorganism in food sanitation and what are the intrinsic factors which affect the growth of microorganisms. [CO-2] [L-2] **20**

End Semester Examination, May 2023
OPEN ELECTIVE – COMMON FOR ALL BRANCHES
ERGONOMICS AND HUMAN FACTORS (PT-OE-003)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following in brief:

- a) Write two intrinsic/Extrinsic factors related to workstation Ergonomics. [CO-1] [L-1]
- b) Write any two most common musculoskeletal injuries with their possible causes. [CO-1] [L-1]
- c) Define good posture with a well labelled diagram. [CO-1] [L-1]
- d) What is carpal tunnel syndrome? What would be the ergonomic advice to prevent CTS? [CO-1] [L-2]
- e) Define occupational hazards. Explain any one. [CO-1] [L-2] **2×5**

PART-A

Q.2 Write differences between 'perception and behaviour'. [CO5][L3] **10**

Q.3 What do you mean by leisure activity prevention? What are the modifications needed for this? [CO-6] [L-4] **10**

Q.4 Explain the human capabilities and limitations in terms of occupational ergonomics. [CO-4] [L-5] **10**

PART-B

Q.5 Explain the role of exercises on different physiological functions that would help in prevention of diseases, and promotes health and wellness. [CO-5] [L-5] **10**

Q.6 Write and explain psychological and genitive factors to be considered as an essential factor in ergonomics. [CO-4] [L-3] **10**

Q.7 Write a note on 'cognition' and explain the methods. [CO-2] [L-2] **10**