

End Semester Examination, May 2015
M. Sc. (N & D) - Second Semester
STATISTICS AND RESEARCH METHODOLOGY (MND-205)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 Of the 1000 workers in a factory exposed to an epidemic, 700 in all were attacked, 400 had been inoculated and of these, 200 were attacked. On the basis of this information, can it be said that inoculation and attack are independent. **10**

Q.2 Describe in detail, the layout of a research report, covering all relevant points. **10**

Q.3 Consider the following distribution:

X	0-10	10-20	20-30	30-40
f	12	18	20	25

Compute mean, median and mode. **10**

Q.4 Examine the merits and limitations of the questionnaire method in collecting data. Also enlist the main aspects of questionnaire. **10**

PART-B

Q.5 The following data give the number of passengers travelling by Boeing 747 from one city to another city in one week:
320, 290, 265, 300, 270, 200, 315
Calculate mean and standard deviation. **5**

Q.6 Write short notes on:
a) Consistency and inconsistency of data.
b) Coefficient of association. **2½x2**

Q.7 Explain any four sampling methods. **5**

Q.8 Define: mean, median, mode, random experiments and events. **5**

Q.9 What is the necessity of defining a research problem? Explain. **5**

Q.10 What is Chi-square test? Explain its significance in statistical analysis. **5**

Q.11 Write a short note on analysis of variance. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - Second Semester SPORTS NUTRITION (MND-204)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write in detail about the role of minerals in exercise performance. **10**
- Q.2 Discuss the management of disordered eating behavior in athletes. **10**
- Q.3 Explain in detail the general considerations for a physically active individual. **10**
- Q.4 Write a detailed note on recommended ORS. **10**

PART-B

Write short notes on:

- Q.5 Exercise and food intake. **5**
- Q.6 Pre-competition meal. **5**
- Q.7 Composition of human body. **5**
- Q.8 Physical activity as an important factor in weight control. **5**
- Q.9 Anorexia nervosa. **5**
- Q.10 Sports drinks. **5**
- Q.11 Respiratory quotient for carbohydrate. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - Second Semester

CLINICAL NUTRITION (MND-203)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define:
a) Glycemic index.
b) Uremia.
c) Hepatic coma.
d) Prudent diet.
e) Impaired glucose tolerance. **2x5**
- Q.2 Explain the metabolic and anatomical changes in diabetes mellitus. **10**
- Q.3 Enumerate the points of MNT for **(ANY TWO)**:
a) Chronic pancreatitis.
b) Myocardial infarction.
c) Ulcerative colitis. **5x2**
- Q.4 Discuss the metabolic changes occurring during infection and fever. **10**

PART-B

- Q.5 Describe the nutrition care process in detail. **5**
- Q.6 Discuss the enteral mode of feeding with related complications. **5**
- Q.7 Write a short note on allergies. **5**
- Q.8 Explain the dietary management of acute renal failure. **5**
- Q.9 Describe the role of fibre in the dietary management of diarrhoea and constipation. **5**
- Q.10 Write a short note on sodium restricted diets. **5**
- Q.11 Explain the nutritional management of:
a) Malabsorption syndrome.
b) Gout. **2½x2**

End Semester Examination, May 2015
M. Sc. (N & D) - Second Semester
INSTRUMENTATION FOR FOOD ANALYSIS (MND-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you understand by photometry? Discuss the principle and working of colorimetry. **10**
- Q.2 Discuss nuclear magnetic resonance and its applications. **10**
- Q.3 What do you understand by RIA? Discuss its working in detail. **10**
- Q.4 Define electrophoresis. Explain the principle of gel electrophoresis. **10**

PART-B

- Q.5 Differentiate between GLC and HPLC. **5**
- Q.6 Briefly explain the principle of working of pH meter. **5**
- Q.7 Explain the theory of weak acid dissociation. **5**
- Q.8 Differentiate between:
a) Acids and Bases.
b) Bomb colorimetry and coffee cup colorimetry. **2½x2**
- Q.9 Write short notes on:
a) Radioactive isotopes.
b) BMR. **2½x2**
- Q.10 What are the various applications of ELISA technique? **5**
- Q.11 Briefly explain the principle of atomic absorptionmetry. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - Second Semester

FOOD MICROBIOLOGY (MND-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss in detail the principles of HACCP. **10**
- Q.2 What do you understand by fermentation? Discuss any four fermented products. **10**
- Q.3 Write in details about normal growth curve of bacteria. **10**
- Q.4 Discuss about food borne disease caused by salmonella, shigella and escherichia. **10**

PART-B

- Q.5 Differentiate between eukaryotic and prokaryotic cells. **5**
- Q.6 Write short notes on **(ANY TWO)**:
- a) Radiation.
 - b) Freezing.
 - c) Drying. **5**
- Q.7 Write the properties of water affecting microbial population. **5**
- Q.8 Give the microbiology of:
- a) Meat.
 - b) Milk. **5**
- Q.9 Write a short note on single cell protein. **5**
- Q.10 Discuss any one method for measurement of microbial growth in brief. **5**
- Q.11 Give Whittaker's five kingdom classification. **5**

End Semester Examination, May 2015

M. Sc. (N & D) – First Semester

FOOD AND NUTRITION (MND-105)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define protein quality. Discuss factors affecting the protein quality in detail. **10**
- Q.2 Classify different methods of cooking and explain any four in detail. **10**
- Q.3 What is the principle involved in the preservation of jams and jellies? Give the method of making jam in detail. **10**
- Q.4 Discuss canning as a method of preservation of food in detail. **10**

PART-B

- Q.5 Write a short note on selection of a fish and also give composition of a fish. **5**
- Q.6 Explain various functions of food in brief. **5**
- Q.7 Define BMR and explain factors affecting BMR in brief. **5**
- Q.8 Write a short note on fortification and enrichment. **5**
- Q.9 What are flavour compounds present in fruits and vegetables? Discuss. **5**
- Q.10 Define:
a) Malnutrition
b) Health **5**
- Q.11 Explain nutritive value and culinary uses of pulses. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - First Semester

PEDAGOGY, ADMINISTRATION AND ETHICAL ISSUES IN NUTRITION AND DIETETICS (MND-104)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you mean by the term "Education"? How will you interpret education in its broader and narrower sense? **10**
- Q.2 Indicate the need and importance of curriculum. Point out factors affecting the curriculum development. **10**
- Q.3 Enumerate important methods of teaching. Give a detailed view of one method of your choice mentioning its merits and limitations. **10**
- Q.4 What are teaching aids? What factors to be kept in mind while preparing audio visual aids? Explain by giving suitable examples. **10**

PART-B

- Q.5 What are the salient features of idealism as a philosophy of education? **5**
- Q.6 Define educational psychology. What is the nature of educational psychology? **5**
- Q.7 Differentiate between educational and instructional objectives. **5**
- Q.8 Discuss the need and importance of a lesson planning. **5**
- Q.9 Write short notes on:
a) Evaluation devices.
b) Projected and non-projected audio-visual aids. **2½x2**
- Q.10 Explain Consumer Protection Act 1986 (CPA 1986) in detail. **5**
- Q.11 "Privatization of education is very important to meet the demand and challenges in the today's competitive world". Justify the statement. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – First Semester
NUTRITION FOR VULNERABLE AND SPECIAL GROUP (MND-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Give a broad classification of nutrients on the basis of their functions. Explain in detail about food groups and food pyramid in a meal planning. **10**
- Q.2 What do you mean by weaning? Which nutrients require special attention while planning weaning foods and why? **10**
- Q.3 What are the physiological functions which changes with age? How does these changes affects the nutritional intake of senior citizens? **10**
- Q.4 Discuss the factors which need attention to ensure successful lactation. Explain the nutritional needs during first six months of lactation. **10**

PART-B

- Q.5 Explain advantages of mother milk for an infant. **5**
- Q.6 How can we improve the nutritional status of an industrial workers? Explain. **5**
- Q.7 Discuss the complications and their nutritional management during pregnancy. **5**
- Q.8 Explain the recommended dietary reference allowances for man and woman. **5**
- Q.9 Discuss how parents can help their children to develop good food habits? **5**
- Q.10 Explain the general principles of deriving RDA. **5**
- Q.11 Explain the fundamental aspects of a meal planning. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – First Semester
ADVANCED HUMAN PHYSIOLOGY (MND-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the mechanism of urine formation. **10**
- Q.2 Briefly describe the role of pancreas, liver and gall bladder in the process of digestion. **10**
- Q.3 Describe the mechanism of blood coagulation. **10**
- Q.4 Define the following:
- a) Hypoxia
 - b) GFR
 - c) Cardiac Output
 - d) Eupnoea
 - e) Cerebrospinal fluid
- 2x5**

PART-B

- Q.5 Define cell. What are junctional complexes? **5**
- Q.6 Explain the different types of blood groups. **5**
- Q.7 What is the function of autonomic nervous system? **5**
- Q.8 Briefly describe the CO₂ transport in blood. **5**
- Q.9 Describe the physiology of taste. **5**
- Q.10 What is arterial blood pressure? Explain the factors affecting it. **5**
- Q.11 Match the following enzymes/hormones with the place of their occurrence:
- | | |
|--------------------|-------------|
| a) Stomach | Trypsinogen |
| b) Pancreas | Bile |
| c) Liver | Ptyalin |
| d) Small intestine | Pepsinogen |
| e) Mouth | Erepsin |
- 1x5**

End Semester Examination, May 2015
M. Sc. (N & D) – First Semester
ADVANCED NUTRITIONAL BIOCHEMISTRY (MND-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 'Proteins can be classified on various basis'. Elaborate the statement. **10**
- Q.2 With the help of Michaelis-Menten equation, explain the kinetics of enzymes. Also discuss how enzyme as act catalyst. **10**
- Q.3 What is TCA cycle? Describe the steps and explain why can't citric acid cycle operate in absence of oxygen. **10**
- Q.4 'Fatty acid oxidation is not simply the reversal of fatty acid synthesis' justify the statement. **10**

PART-B

- Q.5 With the help of chemical reactions discuss the properties of fats. **5**
- Q.6 Write short notes on structure of DNA and Chargabb's rule of DNA composition. **5**
- Q.7 Write the functions and deficiency symptoms of any two macro minerals. **5**
- Q.8 Explain urea cycle with the help of a diagram. **5**
- Q.9 Discuss composition and function of blood. **5**
- Q.10 Discuss the mode of action of group-I hormones. **5**
- Q.11 Give the structure of the following:
a) AMP
b) Lactose **5**

End Semester Examination, May 2015

B. Sc. (N & D) – Sixth Semester

FOOD SCIENCE (BND-601)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the followings:
a) Pasteurization.
b) Gelatinization.
c) Emulsions.
d) Fermentation. **2½x4**
- Q.2 Discuss the effect of heat on egg. **10**
- Q.3 Explain in detail the sensory characteristics of food. **10**
- Q.4 Write short notes on:
a) Retrogradation.
b) Hydrogenation. **5x2**

PART-B

- Q.5 Discuss the methods to evaluate the egg quality. **5**
- Q.6 Describe the post mortem changes occurring in meat. **5**
- Q.7 What are the effects of cooking on pigments of fruits and vegetables? **5**
- Q.8 Differentiate between enzymatic and non-enzymatic browning. **5**
- Q.9 Explain the process of crystallization in sugar cookery. **5**
- Q.10 Describe the structure and nutritive value of cereal grains. **5**
- Q.11 Explain any one non-fermented and one fermented milk product. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fifth Semester
STATISTICS AND RESEARCH METHODOLOGY (BND-502)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe some of the important research designs used in experimental hypothesis-testing research study. **10**
- Q.2 Explain the difference between collection of data through questionnaires and schedules. **10**
- Q.3 Following are the wages of 19 workers:
- | | | | | | |
|---------------|----|----|----|----|----|
| Wages (Rs.) | 10 | 20 | 30 | 40 | 50 |
| No of workers | 4 | 5 | 3 | 2 | 5 |
- Calculate arithmetic mean using a short cut method. **10**
- Q.4 Explain in detail different types of analysis of data, pointing out the significance of each. **10**

PART-B

- Q.5 Briefly describe the different steps involved in a research process. **5**
- Q.6 Distinguish between:
a) Convenience and purposive sampling.
b) Systematic and stratified sampling. **2½x2**
- Q.7 What is the meaning of measurement in a research? **5**
- Q.8 Find out median of the following series:
- | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|----|
| Size | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| Frequencies | 14 | 18 | 33 | 30 | 20 | 15 | 13 | 7 |
- 5**
- Q.9 Explain the survey method of research in brief. **5**
- Q.10 What does a measure of central tendency indicate? Explain in brief. **5**
- Q.11 Write a short note on objectives of a research. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – Fifth Semester

FOOD MICROBIOLOGY (BND-501)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What are the major types of food borne disease? Discuss any one of each type of disease in detail. **10**
- Q.2 Enumerate and elaborate on the various principles employed for the preservation of food. **10**
- Q.3 What do you mean by indicators of food quality? What are the various characteristics of the indicators used in a food microbiology? **10**
- Q.4 "All bacteria prokaryotic or eukaryotic organisms". Illustrate and discuss the various components of a bacterial cell. **10**

PART-B

- Q.5 Write about the industrial importance of fungi in relation to the food industry. **5**
- Q.6 What are various possible sources of contamination in a food industry? **5**
- Q.7 Write a short note on virus. **5**
- Q.8 How is HACCP beneficial to various players of a food industry? **5**
- Q.9 What all measures should be adopted by food handlers to ensure hygiene and safety of food products? **5**
- Q.10 Differentiate between two major forms of fungi using relevant diagrams. **5**
- Q.11 Write short notes on **(any two)**:
- a) Types of fishes
 - b) WHO
 - c) Low temperature preservation
 - d) Food sanitization
- 2½x2**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
ENTREPRENEURSHIP MANAGEMENT (BND-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the various functions of an entrepreneur in an enterprise. **10**
- Q.2 Discuss the major steps involved in setting up of small scale units. **10**
- Q.3 What do you understand by the identification of an opportunity? Write the three types of innovations to identify opportunities. **10**
- Q.4 Write the characteristic features of an entrepreneur. Explain why there is a need of entrepreneurship in any country. **10**

PART-B

- Q.5 How does the Government of India helps in promotion of entrepreneurship? **5**
- Q.6 Write a short note on "performance appraisal". **5**
- Q.7 Explain any one market survey technique in brief. **5**
- Q.8 Write a short note on books of accounts in an enterprise. **5**
- Q.9 Differentiate between standardization, grading and branding. **5**
- Q.10 Write the full forms of:
a) MSME-DO
b) RRA
c) NSIC
d) KUIC
e) NAS **5**
- Q.11 What is market research? Write the three types of market research in brief. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
ENTREPRENEURSHIP MANAGEMENT (BND-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the various functions of an entrepreneur in an enterprise. **10**
- Q.2 Discuss the major steps involved in setting up of small scale units. **10**
- Q.3 What do you understand by the identification of an opportunity? Write the three types of innovations to identify opportunities. **10**
- Q.4 Write the characteristic features of an entrepreneur. Explain why there is a need of entrepreneurship in any country. **10**

PART-B

- Q.5 How does the Government of India helps in promotion of entrepreneurship? **5**
- Q.6 Write a short note on "performance appraisal". **5**
- Q.7 Explain any one market survey technique in brief. **5**
- Q.8 Write a short note on books of accounts in a enterprise. **5**
- Q.9 Differentiate between standardization, grading and branding. **5**
- Q.10 Write the full forms of:
a) MSME-DO
b) RRA
c) NSIC
d) KUIC
e) NAS **5**
- Q.11 What is market research? Write the three types of market research in brief. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
NUTRITION FOR HEALTH, FITNESS AND SPORTS (BND-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the holistic approach to the management of fitness and health. **10**
- Q.2 Explain the composition of human body in detail. **10**
- Q.3 Compute the body fat percentage:
- | | | | |
|------------|-------------|-----------|------------|
| a) Female: | Triceps | - 24.5 mm | |
| | Subscapular | - 22 mm | |
| b) Male: | Triceps | - 23 mm | |
| | Subscapular | - 21 mm | 5x2 |
- Q.4 Discuss meditation as an alternative system for health and fitness. **10**

PART-B

Write short notes on:

- Q.5 Vegetarianism. **5**
- Q.6 Mobilization of fuel stores during exercise. **5**
- Q.7 Post game meals. **5**
- Q.8 Limitation a of height-weight tables. **5**
- Q.9 Components of specific fitness. **5**
- Q.10 Effect of dehydration among sports person. **5**
- Q.11 Tamsic food and Rajsic food. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
FOOD PROCESSING AND TECHNOLOGY (BND-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the various steps involved in the processing of milk at any milk co-operative dairy. **10**
- Q.2 With the help of a relevant flow chart explain the processing of any one cereal product. **10**
- Q.3 Write a detailed note on the storage of fruit and vegetables. **10**
- Q.4 Enlist the various packaging materials used in food industries. Discuss the effects of packaging on the nutritive value of the food. **10**

PART-B

- Q.5 Why was co-operative dairying initiated in India? Discuss any one co-operative dairy in brief. **5**
- Q.6 What are the different ways of extracting oil from oilseeds? **5**
- Q.7 Write about any two cooking methods used for legumes. **5**
- Q.8 Draw the flow chart representing the various stages of fruit ageing. **5**
- Q.9 Discuss the various types of changes seen in cereals during its storage. **5**
- Q.10 How are the by-products of legume processing utilized in food industries. **5**
- Q.11 Write short notes on **(any two)**:
- a) Decortications
 - b) Bleaching
 - c) Degumming
- 2½x2**

End Semester Examination, May 2015

B. Sc. (N & D) – Fourth Semester

COMMUNITY NUTRITION (BND-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss "Integrated Child Development Services (ICDS)" programme in detail. **10**
- Q.2 Discuss different methods of dietary assessment in detail. **10**
- Q.3 Explain in detail about concepts and contents of nutrition information communication (NIC). **10**
- Q.4 Define programme planning. Also discuss major steps in programme planning in details. **10**

PART-B

- Q.5 Write short notes on:
a) Composite nutrition programme.
b) Applied nutrition programme. **2½x2**
- Q.6 Give full forms of:
NGO, NNMB, NIDDCP, ICMR, ORT and USAID. **5**
- Q.7 Write short notes on:
a) Health care
b) Role of community nutritionist. **2½x2**
- Q.8 Discuss AGMARK standard in brief. **5**
- Q.9 Explain social functions of foods. **5**
- Q.10 Discuss inducing change in diet related behavior in brief. **5**
- Q.11 Write in brief on selecting initial projects and long range projects. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – Third Semester

COMPUTER APPLICATIONS (BND-304)

Time: 3 hrs

Max Marks: **60**

No. of pages: **1**

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write a detailed note on MS PowerPoint. **10**
- Q.2 Write a note on various types of I/O devices used in computer application. **10**
- Q.3 Discuss in details about the various characteristics of a computer. **10**
- Q.4 What do you mean by Windows? Discuss about the different types of Windows in brief. **10**

PART-B

- Q.5 What is MS Excel? Discuss its anyone feature in short. **5**
- Q.6 What is a control panel? Enumerate the various functions of a control panel. **5**
- Q.7 "Computer is a boon to the 21st Century". Justify the statement using relevant examples. **5**
- Q.8 Discuss the main features of Microsoft Windows NT. **5**
- Q.9 Write short notes on **(any two)**:
- a) Secondary storage devices
 - b) Bus Topology
 - c) Word Art
 - d) ALU
- 2½x2**
- Q.10 Convert the following:
- a) $(4BA)_{16} = (?)_{10}$
 - b) $(25)_{10} = (?)_2$
 - c) $(11010)_2 = (?)_{10}$
 - d) $(1100)_2 = (?)_{10}$
 - e) $(3056)_8 = (?)_{10}$
- 1x5**
- Q.11 What do you understand by the file management system? **5**

End Semester Examination, May 2015

B. Sc. (N & D) - Third Semester

COMMUNITY RESOURCE MANAGEMENT AND EXTENSION (BND-303)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is decision making? Explain in detail different steps involved in decision making. **10**
- Q.2 "Effective communication can only take place when there are no barriers" Justify this statement explaining different types of barriers and measures to overcome these barriers. **10**
- Q.3 Good extension worker must possess certain qualities. Explain qualities of an extension worker with suitable examples. **10**
- Q.4 Explain communication and extension approaches. Also explain any one method of community contact stating its advantages and disadvantages. **10**

PART-B

- Q.5 Define fatigue. What are the ways by which you can reduce fatigue? **5**
- Q.6 Explain different factors affecting utilization of resources with suitable examples. **5**
- Q.7 "Communicator-communicatee relationship is very important in the process of communication". Explain. **5**
- Q.8 What are projected aids? What points will you keep in mind while designing an audio-visual aids. **5**
- Q.9 Differentiate between:
a) Short term goals and long term goals.
b) Physiological fatigue and psychological fatigue. **2½x2**
- Q.10 Define planning. Explain the importance of planning in achieving goals. **5**
- Q.11 Write short notes on:
a) Universality of management.
b) Ethics in management. **2½x2**

End Semester Examination, May 2015
B. Sc. (N & D) – Third Semester
PROBLEMS IN HUMAN NUTRITION (BND-302)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | Discuss the dietary and community based management for PEM. | 10 |
| Q.2 | Explain the symptoms of fluorosis in detail. | 10 |
| Q.3 | Discuss the national Anemia Prophylaxis Programme in detail. | 10 |
| Q.4 | Explain the etiology of PEM in detail | 10 |

PART-B

Write short notes on:

- | | | |
|------|----------------------------------|----------|
| Q.5 | Sources of iron. | 5 |
| Q.6 | Etiology of fluorosis. | 5 |
| Q.7 | Symptoms of lathyrism. | 5 |
| Q.8 | Pathological changes in PEM. | 5 |
| Q.9 | Prevention and treatment of IDD. | 5 |
| Q.10 | Clinical features of PEM. | 5 |
| Q.11 | Prevention of fluorosis. | 5 |

End Semester Examination, May 2015
B. Sc. (N & D) – Third Semester
THERAPEUTIC NUTRITION AND DIETETICS (BND-301)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the etiology in the development of typhoid. What are the common signs and symptoms in this condition? State the mode of treatment and the dietary modification prescribed. **10**
- Q.2 Discuss etiology, manifestation and dietary management for gout. **10**
- Q.3 What are the methods of feeding patients in a hospital? Also explain therapeutic adaptation of a normal diet in detail. **10**
- Q.4 Explain etiology, manifestation and dietary treatment for diarrhea. **10**

PART-B

- Q.5 Write a short note on soft diet and fluid diet. **5**
- Q.6 Explain dietary management in surgical condition pre-and-post operative in brief. **5**
- Q.7 Write a short note on dietary management for atherosclerosis. **5**
- Q.8 Discuss crash diet and Yo-Yo effect in brief. **5**
- Q.9 Explain dietary management for burns. **5**
- Q.10 State principles involved in planning diet for a patient suffering from infective hepatitis. **5**
- Q.11 Write a short note on allergies. **5**

End Semester Examination, May 2015

B. Sc. (N & D) - Second Semester

CLINICAL PSYCHOLOGY (BND-203)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define stress. Explain different ways by which you can reduce your stress. **10**
- Q.2 Define development. Explain in detail general principles of development citing a suitable example. **10**
- Q.3 List various methods of studying behaviors. Explain advantages and disadvantages of any one method of studying behaviors. **10**
- Q.4 Explain in detail different steps in counseling. **10**

PART-B

- Q.5 Explain the role of a counselor in counseling. **5**
- Q.6 What is a reality therapy? Explain its importance. **5**
- Q.7 Explain any two theories associated with emotions. **5**
- Q.8 Write short notes on relative importance of heredity and environment in child's development. **5**
- Q.9 Explain any one consulting technique for children. **5**
- Q.10 Write short notes on:
a) Family therapy.
b) Mood disorder. **2½x2**
- Q.11 Write a short note on contribution of psychology in the field of nutrition and dietetics. **5**

End Semester Examination, May 2015
B. Sc. (N & D) - Second Semester
NUTRITION THROUGH LIFE CYCLE (BND-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the growth and development pattern during an infancy. Explain the nutritional requirements of an infant. **10**
- Q.2 Why adequate nutrition is important during adolescent stage? How psycho-social influences affect food behavior of an adolescent? **10**
- Q.3 Discuss the nutritional needs and dietary modifications suggested during first six months of lactation. **10**
- Q.4 What advise would you give to a 65 years old man so as to add healthy years to his life? Discuss. **10**

PART-B

- Q.5 Write celebration dates of the following days:
a) World Health Day.
b) International Children's Day.
c) International Women's Day.
d) National Nutrition Week.
e) World Cancer Day. **1x5**
- Q.6 Write nutritional requirement of a reference man and woman. **5**
- Q.7 Explain the principles of weaning. **5**
- Q.8 Describe the baby friendly hospital initiatives. **5**
- Q.9 What is human milk composition and importance of colostrums. **5**
- Q.10 Write a short note on packed lunches. **5**
- Q.11 Define:
a) Physical activity
b) Fetus
c) Hyperplasia
d) Hypertrophy
e) Galactogogues **5**

End Semester Examination, May 2015
B. Sc. (N & D) - Second Semester
NUTRITIONAL BIOCHEMISTRY (BND-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|---|-----------|
| Q.1 | What is cellular transport? Discuss various modes of active transport. | 10 |
| Q.2 | Explain the metabolism of glycogen in detail. What is its significance? | 10 |
| Q.3 | Discuss various modes of enzyme action. | 10 |
| Q.4 | Explain the structure and functions of DNA. | 10 |

PART-B

- | | | |
|------|--|----------|
| Q.5 | Write a short note on passive transport. | 5 |
| Q.6 | Briefly discuss the role of hormones in lipid metabolism. | 5 |
| Q.7 | Define genetic code. Write down functions of RNA. | 5 |
| Q.8 | Give account of total number of ATP produced during Krebs's cycle. | 5 |
| Q.9 | Explain the biochemical importance of B-oxidation of fatty acids. | 5 |
| Q.10 | Briefly write down about the importance of urea cycle. | 5 |
| Q.11 | What are various factors that affect enzyme activity? | 5 |

End Semester Examination, May 2015

B. Sc. (N & D) - First Semester

ENGLISH (BND-104)

Time: 3 hrs

Max Marks: **60**

No. of pages: 3

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write an essay on **any one** of the following:
a) Women Empowerment
b) Gender Sensitization
c) Bollywood mesmerizing the youth **10**
- Q.2 A friend of yours has been out of station for a month and there was a workshop on enhancement of communication skills held in your college while he/she was away. Write a letter to your friend describing the workshop and your experience with it. **10**
- Q.3 Youth today are very much fascinated with fashion and bollywood. Today youth feel that the change in fashion and movies in bollywood have affected the life style and the culture of the society. Write an article, in 150-200 words, expressing your views. **10**
- Q.4 Read the passage given below and then answers the following questions:

It is reported that the Government is close to finalizing a system of dual pricing for the public procurement of food grains. There would be two basic elements to this system: A fixed minimum support price (MSP) covering the cost of cultivation, as at present, recommended by the Commission on Agricultural Costs and Prices (CACP), and variable procurement prices, at the discretion of the department of food, depending on market. For example, according to a working group of the Planning Commission, over the five year period ending 2001-02, when there was a steep rise in procurement price resulting in accumulation of embarrassing large stock of food grains of over 60 million tones with Government, consumption of food grains in the country was reduced, on this account, by at least five million tones per annum. The new system by assigning a greater role for private trade can improve the efficiency in the distribution of food grains and substantially cut down subsidies, which can help to step up much needed public investment in agriculture. The proposed dual pricing system is a better alternative than total marketization of food grains trade by disbanding altogether public procurement at MSP.

Such a dismantling could lead to a crash in market prices of food grains in years of food harvest. Even though this may take exports competitive and raise domestic consumption of food grains in the short run, it may undermine food security by sapping producer incentives. The experience of green revolution underlines the importance of assured MSP including the farmers to step up their own investment and effort and derive full benefit from available infrastructure.

For the dual pricing system to yield desired results, it needs to be backed by several other policy measures. Since the impetus for crop diversification would be greater in

the infrastructural developed regions like the north-west, this can slow down the growth of food grains output in the country and, in particular, the surpluses procured, unless immediate measures are taken to strengthen public support for irrigation, technology, extension and credit in the rest of the country, especially in the central and eastern regions where there is a large potential as the growth of food grains output has barely kept pace with population growth since the mid-90s. This also calls for more effective public procurement of food grains at MSP in these regions, as farmers have to often sell their produce immediately after the harvest at prices that are lower than MSP. Therefore, dual pricing system can be sustained only through non-price interventions such as infrastructural support for regional dispersal of growth in food grain output.

The new system requires better market intelligence forecasts as well as concurrent analyses on prices and sales in markets in India and abroad.

- a) What are the two elements of dual pricing system for procuring food grains?
- b) How will the above proposed system benefit the nation?
- c) Mention atleast four non-food grain items used by the consumers.
- d) What is the result of ecological degradation in the north-western region of India?
- e) In order to boost the dual system what urgent measures are needed to be taken?

2x5

PART-B

Q.5 Read and correct the incorrect sentences:

- a) Either Mohan or his friend go for the dance classes.
- b) Neither the teachers nor the professors takes the workshop.
- c) Everybody know the answer.
- d) One of the student is making noise.
- e) Half of the pies in gone from the plate.

1x5

Q.6 Use the following vowel in a word and then make a sentence.

/a:/, /u:/, /ae/, /^/, /l:/

5

Q.7 The following sentences have errors. Identify the errors in each line and write the correct sentence:

- a) I will like to discuss about the matter with the boss.
- b) I have a cousin brother.
- c) Please repeat that again for me.
- d) What is your good name.
- e) I met my friend today morning.

1x5

- Q.8
- a) Give the synonyms of the following:
Ability, Cautious, Interrupt, Noble, Opportunity
 - b) Give the antonyms of the following:
Ascent, Freedom, Saint, Usual, Zenith

2¹/₂x2

Q.9 Choose the right prepositions and complete the sentence:

- a) The rat ran _____ (into/in) the hole.
- b) My office is _____ (at /on) the 4th floor.
- c) I have been living in England _____ (Since/For) 2 years.
- d) I saw him driving the car _____ (at/in) the night.

e) The building is _____(beside/besides) McDonlds.

1x5

Q.10 What do you mean by the word 'Active Listening' and how does it benefit an individual?
5

Q.11 Choose the right form of the tenses and rewrite the sentence:

- a) He (drink/drank) the entire glass of water.
- b) I have (seen/saw) him cheating in the examination hall.
- c) He (choose/chose) him the president of the college.
- d) Riya did not (go/went) to the market.
- e) He had already (gone/went) to Manali.

1x5

End Semester Examination, May 2015
B. Sc. (N & D) – First Semester
FUNDAMENTALS OF BIOCHEMISTRY (BND-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define proteins. Write the structure of proteins. **10**
- Q.2 Explain the relationship between biochemistry and other biological sciences. **10**
- Q.3 What are monosaccharides? Classify them alongwith examples. **10**
- Q.4 Differentiate between essential and non-essential amino acids. **10**

PART-B

- Q.5 Write the deficiency symptoms of vitamin-D. **5**
- Q.6 Write the structure of starch. **5**
- Q.7 Explain the classification of proteins. **5**
- Q.8 Write a short note on glycosides . **5**
- Q.9 Give the major biochemical function of:
a) Biotin
b) Zinc
c) Flourine
d) Thiamine
e) Copper **1x5**
- Q.10 Write the physical properties of fats. **5**
- Q.11 Classify polysaccharides. Write the structure of glycogen. **5**

End Semester Examination, May 2015

B. Sc. (N & D) - First Semester

PHYSIOLOGY-I (BND-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the coagulation of blood. **10**
- Q.2 Give the structure of nervous tissue. What is the difference between myelinated and non-myelinated nervous tissue. **10**
- Q.3 Describe a detailed structure of human urinary system. **10**
- Q.4 Explain the structure of heart and its working. **10**

PART-B

- Q.5 Write short notes on:
a) Cell structure
b) Platelets
c) Red blood cells
d) White blood cells
e) Physical properties of blood **1x5**
- Q.6 Explain the structure and functions of stomach. **5**
- Q.7 What is O₂ dissociation curve? Explain. **5**
- Q.8 What is blood pressure? What are the various factors that affect blood pressure? **5**
- Q.9 Describe menstruation cycle in females. **5**
- Q.10 What is bile? Explain its role in the process of digestion. **5**
- Q.11 Write the function of:
a) Hypothalamus
b) Pituitary gland. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – Sixth Semester

FOOD SCIENCE (BND-601)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the followings:
a) Pasteurization.
b) Gelatinization.
c) Emulsions.
d) Fermentation. **2½x4**
- Q.2 Discuss the effect of heat on egg. **10**
- Q.3 Explain in detail the sensory characteristics of food. **10**
- Q.4 Write short notes on:
a) Retrogradation.
b) Hydrogenation. **5x2**

PART-B

- Q.5 Discuss the methods to evaluate the egg quality. **5**
- Q.6 Describe the post mortem changes occurring in meat. **5**
- Q.7 What are the effects of cooking on pigments of fruits and vegetables? **5**
- Q.8 Differentiate between enzymatic and non-enzymatic browning. **5**
- Q.9 Explain the process of crystallization in sugar cookery. **5**
- Q.10 Describe the structure and nutritive value of cereal grains. **5**
- Q.11 Explain any one non-fermented and one fermented milk product. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fifth Semester
STATISTICS AND RESEARCH METHODOLOGY (BND-502)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe some of the important research designs used in experimental hypothesis-testing research study. **10**
- Q.2 Explain the difference between collection of data through questionnaires and schedules. **10**
- Q.3 Following are the wages of 19 workers:
- | | | | | | |
|---------------|----|----|----|----|----|
| Wages (Rs.) | 10 | 20 | 30 | 40 | 50 |
| No of workers | 4 | 5 | 3 | 2 | 5 |
- Calculate arithmetic mean using a short cut method. **10**
- Q.4 Explain in detail different types of analysis of data, pointing out the significance of each. **10**

PART-B

- Q.5 Briefly describe the different steps involved in a research process. **5**
- Q.6 Distinguish between:
a) Convenience and purposive sampling.
b) Systematic and stratified sampling. **2½x2**
- Q.7 What is the meaning of measurement in a research? **5**
- Q.8 Find out median of the following series:
- | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|----|
| Size | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| Frequencies | 14 | 18 | 33 | 30 | 20 | 15 | 13 | 7 |
- 5**
- Q.9 Explain the survey method of research in brief. **5**
- Q.10 What does a measure of central tendency indicate? Explain in brief. **5**
- Q.11 Write a short note on objectives of a research. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – Fifth Semester

FOOD MICROBIOLOGY (BND-501)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What are the major types of food borne disease? Discuss any one of each type of disease in detail. **10**
- Q.2 Enumerate and elaborate on the various principles employed for the preservation of food. **10**
- Q.3 What do you mean by indicators of food quality? What are the various characteristics of the indicators used in a food microbiology? **10**
- Q.4 "All bacteria prokaryotic or eukaryotic organisms". Illustrate and discuss the various components of a bacterial cell. **10**

PART-B

- Q.5 Write about the industrial importance of fungi in relation to the food industry. **5**
- Q.6 What are various possible sources of contamination in a food industry? **5**
- Q.7 Write a short note on virus. **5**
- Q.8 How is HACCP beneficial to various players of a food industry? **5**
- Q.9 What all measures should be adopted by food handlers to ensure hygiene and safety of food products? **5**
- Q.10 Differentiate between two major forms of fungi using relevant diagrams. **5**
- Q.11 Write short notes on **(any two)**:
- a) Types of fishes
 - b) WHO
 - c) Low temperature preservation
 - d) Food sanitization
- 2½x2**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
ENTREPRENEURSHIP MANAGEMENT (BND-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the various functions of an entrepreneur in an enterprise. **10**
- Q.2 Discuss the major steps involved in setting up of small scale units. **10**
- Q.3 What do you understand by the identification of an opportunity? Write the three types of innovations to identify opportunities. **10**
- Q.4 Write the characteristic features of an entrepreneur. Explain why there is a need of entrepreneurship in any country. **10**

PART-B

- Q.5 How does the Government of India helps in promotion of entrepreneurship? **5**
- Q.6 Write a short note on "performance appraisal". **5**
- Q.7 Explain any one market survey technique in brief. **5**
- Q.8 Write a short note on books of accounts in an enterprise. **5**
- Q.9 Differentiate between standardization, grading and branding. **5**
- Q.10 Write the full forms of:
a) MSME-DO
b) RRA
c) NSIC
d) KUIC
e) NAS **5**
- Q.11 What is market research? Write the three types of market research in brief. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
ENTREPRENEURSHIP MANAGEMENT (BND-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the various functions of an entrepreneur in an enterprise. **10**
- Q.2 Discuss the major steps involved in setting up of small scale units. **10**
- Q.3 What do you understand by the identification of an opportunity? Write the three types of innovations to identify opportunities. **10**
- Q.4 Write the characteristic features of an entrepreneur. Explain why there is a need of entrepreneurship in any country. **10**

PART-B

- Q.5 How does the Government of India helps in promotion of entrepreneurship? **5**
- Q.6 Write a short note on "performance appraisal". **5**
- Q.7 Explain any one market survey technique in brief. **5**
- Q.8 Write a short note on books of accounts in a enterprise. **5**
- Q.9 Differentiate between standardization, grading and branding. **5**
- Q.10 Write the full forms of:
a) MSME-DO
b) RRA
c) NSIC
d) KUIC
e) NAS **5**
- Q.11 What is market research? Write the three types of market research in brief. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
NUTRITION FOR HEALTH, FITNESS AND SPORTS (BND-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the holistic approach to the management of fitness and health. **10**
- Q.2 Explain the composition of human body in detail. **10**
- Q.3 Compute the body fat percentage:
- | | | | |
|------------|-------------|-----------|------------|
| a) Female: | Triceps | - 24.5 mm | |
| | Subscapular | - 22 mm | |
| b) Male: | Triceps | - 23 mm | |
| | Subscapular | - 21 mm | 5x2 |
- Q.4 Discuss meditation as an alternative system for health and fitness. **10**

PART-B

Write short notes on:

- Q.5 Vegetarianism. **5**
- Q.6 Mobilization of fuel stores during exercise. **5**
- Q.7 Post game meals. **5**
- Q.8 Limitation a of height-weight tables. **5**
- Q.9 Components of specific fitness. **5**
- Q.10 Effect of dehydration among sports person. **5**
- Q.11 Tamsic food and Rajsic food. **5**

End Semester Examination, May 2015
B. Sc. (N & D) – Fourth Semester
FOOD PROCESSING AND TECHNOLOGY (BND-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the various steps involved in the processing of milk at any milk co-operative dairy. **10**
- Q.2 With the help of a relevant flow chart explain the processing of any one cereal product. **10**
- Q.3 Write a detailed note on the storage of fruit and vegetables. **10**
- Q.4 Enlist the various packaging materials used in food industries. Discuss the effects of packaging on the nutritive value of the food. **10**

PART-B

- Q.5 Why was co-operative dairying initiated in India? Discuss any one co-operative dairy in brief. **5**
- Q.6 What are the different ways of extracting oil from oilseeds? **5**
- Q.7 Write about any two cooking methods used for legumes. **5**
- Q.8 Draw the flow chart representing the various stages of fruit ageing. **5**
- Q.9 Discuss the various types of changes seen in cereals during its storage. **5**
- Q.10 How are the by-products of legume processing utilized in food industries. **5**
- Q.11 Write short notes on **(any two)**:
- a) Decortications
 - b) Bleaching
 - c) Degumming
- 2½x2**

End Semester Examination, May 2015

B. Sc. (N & D) – Fourth Semester

COMMUNITY NUTRITION (BND-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss "Integrated Child Development Services (ICDS)" programme in detail. **10**
- Q.2 Discuss different methods of dietary assessment in detail. **10**
- Q.3 Explain in detail about concepts and contents of nutrition information communication (NIC). **10**
- Q.4 Define programme planning. Also discuss major steps in programme planning in details. **10**

PART-B

- Q.5 Write short notes on:
a) Composite nutrition programme.
b) Applied nutrition programme. **2½x2**
- Q.6 Give full forms of:
NGO, NNMB, NIDDCP, ICMR, ORT and USAID. **5**
- Q.7 Write short notes on:
a) Health care
b) Role of community nutritionist. **2½x2**
- Q.8 Discuss AGMARK standard in brief. **5**
- Q.9 Explain social functions of foods. **5**
- Q.10 Discuss inducing change in diet related behavior in brief. **5**
- Q.11 Write in brief on selecting initial projects and long range projects. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – Third Semester

COMPUTER APPLICATIONS (BND-304)

Time: 3 hrs

Max Marks: **60**

No. of pages: **1**

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write a detailed note on MS PowerPoint. **10**
- Q.2 Write a note on various types of I/O devices used in computer application. **10**
- Q.3 Discuss in details about the various characteristics of a computer. **10**
- Q.4 What do you mean by Windows? Discuss about the different types of Windows in brief. **10**

PART-B

- Q.5 What is MS Excel? Discuss its anyone feature in short. **5**
- Q.6 What is a control panel? Enumerate the various functions of a control panel. **5**
- Q.7 "Computer is a boon to the 21st Century". Justify the statement using relevant examples. **5**
- Q.8 Discuss the main features of Microsoft Windows NT. **5**
- Q.9 Write short notes on **(any two)**:
- a) Secondary storage devices
 - b) Bus Topology
 - c) Word Art
 - d) ALU
- 2½x2**
- Q.10 Convert the following:
- a) $(4BA)_{16} = (?)_{10}$
 - b) $(25)_{10} = (?)_2$
 - c) $(11010)_2 = (?)_{10}$
 - d) $(1100)_2 = (?)_{10}$
 - e) $(3056)_8 = (?)_{10}$
- 1x5**
- Q.11 What do you understand by the file management system? **5**

End Semester Examination, May 2015

B. Sc. (N & D) - Third Semester

COMMUNITY RESOURCE MANAGEMENT AND EXTENSION (BND-303)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 What is dec

ision making? Explain in detail different steps involved in decision making.

10

Q.2 "Effective communication can only take place when there are no barriers" Justify this statement explaining different types of barriers and measures to overcome these barriers. **10**

Q.3 Good extension worker must possess certain qualities. Explain qualities of an extension worker with suitable examples. **10**

Q.4 Explain communication and extension approaches. Also explain any one method of community contact stating its advantages and disadvantages. **10**

PART-B

Q.5 Define fatigue. What are the ways by which you can reduce fatigue? **5**

Q.6 Explain different factors affecting utilization of resources with suitable examples. **5**

Q.7 "Communicator-communicatee relationship is very important in the process of communication". Explain. **5**

Q.8 What are projected aids? What points will you keep in mind while designing an audio-visual aids. **5**

Q.9 Differentiate between:
a) Short term goals and long term goals.
b) Physiological fatigue and psychological fatigue. **2½x2**

Q.10 Define planning. Explain the importance of planning in achieving goals. **5**

Q.11 Write short notes on:
a) Universality of management.
b) Ethics in management. **2½x2**

End Semester Examination, May 2015
B. Sc. (N & D) – Third Semester
PROBLEMS IN HUMAN NUTRITION (BND-302)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | Discuss the dietary and community based management for PEM. | 10 |
| Q.2 | Explain the symptoms of fluorosis in detail. | 10 |
| Q.3 | Discuss the national Anemia Prophylaxis Programme in detail. | 10 |
| Q.4 | Explain the etiology of PEM in detail | 10 |

PART-B

Write short notes on:

- | | | |
|------|----------------------------------|----------|
| Q.5 | Sources of iron. | 5 |
| Q.6 | Etiology of fluorosis. | 5 |
| Q.7 | Symptoms of lathyrism. | 5 |
| Q.8 | Pathological changes in PEM. | 5 |
| Q.9 | Prevention and treatment of IDD. | 5 |
| Q.10 | Clinical features of PEM. | 5 |
| Q.11 | Prevention of fluorosis. | 5 |

End Semester Examination, May 2015
B. Sc. (N & D) – Third Semester
THERAPEUTIC NUTRITION AND DIETETICS (BND-301)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the etiology in the development of typhoid. What are the common signs and symptoms in this condition? State the mode of treatment and the dietary modification prescribed. **10**
- Q.2 Discuss etiology, manifestation and dietary management for gout. **10**
- Q.3 What are the methods of feeding patients in a hospital? Also explain therapeutic adaptation of a normal diet in detail. **10**
- Q.4 Explain etiology, manifestation and dietary treatment for diarrhea. **10**

PART-B

- Q.5 Write a short note on soft diet and fluid diet. **5**
- Q.6 Explain dietary management in surgical condition pre-and-post operative in brief. **5**
- Q.7 Write a short note on dietary management for atherosclerosis. **5**
- Q.8 Discuss crash diet and Yo-Yo effect in brief. **5**
- Q.9 Explain dietary management for burns. **5**
- Q.10 State principles involved in planning diet for a patient suffering from infective hepatitis. **5**
- Q.11 Write a short note on allergies. **5**

End Semester Examination, May 2015

B. Sc. (N & D) - Second Semester

CLINICAL PSYCHOLOGY (BND-203)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define stress. Explain different ways by which you can reduce your stress. **10**
- Q.2 Define development. Explain in detail general principles of development citing a suitable example. **10**
- Q.3 List various methods of studying behaviors. Explain advantages and disadvantages of any one method of studying behaviors. **10**
- Q.4 Explain in detail different steps in counseling. **10**

PART-B

- Q.5 Explain the role of a counselor in counseling. **5**
- Q.6 What is a reality therapy? Explain its importance. **5**
- Q.7 Explain any two theories associated with emotions. **5**
- Q.8 Write short notes on relative importance of heredity and environment in child's development. **5**
- Q.9 Explain any one consulting technique for children. **5**
- Q.10 Write short notes on:
a) Family therapy.
b) Mood disorder. **2½x2**
- Q.11 Write a short note on contribution of psychology in the field of nutrition and dietetics. **5**

End Semester Examination, May 2015
B. Sc. (N & D) - Second Semester
NUTRITION THROUGH LIFE CYCLE (BND-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the growth and development pattern during an infancy. Explain the nutritional requirements of an infant. **10**
- Q.2 Why adequate nutrition is important during adolescent stage? How psycho-social influences affect food behavior of an adolescent? **10**
- Q.3 Discuss the nutritional needs and dietary modifications suggested during first six months of lactation. **10**
- Q.4 What advise would you give to a 65 years old man so as to add healthy years to his life? Discuss. **10**

PART-B

- Q.5 Write celebration dates of the following days:
a) World Health Day.
b) International Children's Day.
c) International Women's Day.
d) National Nutrition Week.
e) World Cancer Day. **1x5**
- Q.6 Write nutritional requirement of a reference man and woman. **5**
- Q.7 Explain the principles of weaning. **5**
- Q.8 Describe the baby friendly hospital initiatives. **5**
- Q.9 What is human milk composition and importance of colostrums. **5**
- Q.10 Write a short note on packed lunches. **5**
- Q.11 Define:
a) Physical activity
b) Fetus
c) Hyperplasia
d) Hypertrophy
e) Galactogogues **5**

End Semester Examination, May 2015
B. Sc. (N & D) - Second Semester
NUTRITIONAL BIOCHEMISTRY (BND-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|---|-----------|
| Q.1 | What is cellular transport? Discuss various modes of active transport. | 10 |
| Q.2 | Explain the metabolism of glycogen in detail. What is its significance? | 10 |
| Q.3 | Discuss various modes of enzyme action. | 10 |
| Q.4 | Explain the structure and functions of DNA. | 10 |

PART-B

- | | | |
|------|--|----------|
| Q.5 | Write a short note on passive transport. | 5 |
| Q.6 | Briefly discuss the role of hormones in lipid metabolism. | 5 |
| Q.7 | Define genetic code. Write down functions of RNA. | 5 |
| Q.8 | Give account of total number of ATP produced during Krebs's cycle. | 5 |
| Q.9 | Explain the biochemical importance of β -oxidation of fatty acids. | 5 |
| Q.10 | Briefly write down about the importance of urea cycle. | 5 |
| Q.11 | What are various factors that affect enzyme activity? | 5 |

End Semester Examination, May 2015

B. Sc. (N & D) - First Semester

ENGLISH (BND-104)

Time: 3 hrs

Max Marks: **60**

No. of pages: 3

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write an essay on **any one** of the following:
a) Women Empowerment
b) Gender Sensitization
c) Bollywood mesmerizing the youth **10**
- Q.2 A friend of yours has been out of station for a month and there was a workshop on enhancement of communication skills held in your college while he/she was away. Write a letter to your friend describing the workshop and your experience with it. **10**
- Q.3 Youth today are very much fascinated with fashion and bollywood. Today youth feel that the change in fashion and movies in bollywood have affected the life style and the culture of the society. Write an article, in 150-200 words, expressing your views. **10**
- Q.4 Read the passage given below and then answers the following questions:

It is reported that the Government is close to finalizing a system of dual pricing for the public procurement of food grains. There would be two basic elements to this system: A fixed minimum support price (MSP) covering the cost of cultivation, as at present, recommended by the Commission on Agricultural Costs and Prices (CACP), and variable procurement prices, at the discretion of the department of food, depending on market. For example, according to a working group of the Planning Commission, over the five year period ending 2001-02, when there was a steep rise in procurement price resulting in accumulation of embarrassing large stock of food grains of over 60 million tones with Government, consumption of food grains in the country was reduced, on this account, by at least five million tones per annum. The new system by assigning a greater role for private trade can improve the efficiency in the distribution of food grains and substantially cut down subsidies, which can help to step up much needed public investment in agriculture. The proposed dual pricing system is a better alternative than total marketization of food grains trade by disbanding altogether public procurement at MSP.

Such a dismantling could lead to a crash in market prices of food grains in years of food harvest. Even though this may take exports competitive and raise domestic consumption of food grains in the short run, it may undermine food security by sapping producer incentives. The experience of green revolution underlines the importance of assured MSP including the farmers to step up their own investment and effort and derive full benefit from available infrastructure.

For the dual pricing system to yield desired results, it needs to be backed by several other policy measures. Since the impetus for crop diversification would be greater in

the infrastructural developed regions like the north-west, this can slow down the growth of food grains output in the country and, in particular, the surpluses procured, unless immediate measures are taken to strengthen public support for irrigation, technology, extension and credit in the rest of the country, especially in the central and eastern regions where there is a large potential as the growth of food grains output has barely kept pace with population growth since the mid-90s. This also calls for more effective public procurement of food grains at MSP in these regions, as farmers have to often sell their produce immediately after the harvest at prices that are lower than MSP. Therefore, dual pricing system can be sustained only through non-price interventions such as infrastructural support for regional dispersal of growth in food grain output.

The new system requires better market intelligence forecasts as well as concurrent analyses on prices and sales in markets in India and abroad.

- f) What are the two elements of dual pricing system for procuring food grains?
- g) How will the above proposed system benefit the nation?
- h) Mention atleast four non-food grain items used by the consumers.
- i) What is the result of ecological degradation in the north-western region of India?
- j) In order to boost the dual system what urgent measures are needed to be taken?

2x5

PART-B

Q.5 Read and correct the incorrect sentences:

- a) Either Mohan or his friend go for the dance classes.
- b) Neither the teachers nor the professors takes the workshop.
- c) Everybody know the answer.
- d) One of the student is making noise.
- e) Half of the pies in gone from the plate.

1x5

Q.6 Use the following vowel in a word and then make a sentence.

/a:/, /u:/, /ae/, /^/, /l:/

5

Q.7 The following sentences have errors. Identify the errors in each line and write the correct sentence:

- a) I will like to discuss about the matter with the boss.
- b) I have a cousin brother.
- c) Please repeat that again for me.
- d) What is your good name.
- e) I met my friend today morning.

1x5

Q.8 a) Give the synonyms of the following:

Ability, Cautious, Interrupt, Noble, Opportunity

b) Give the antonyms of the following:

Ascent, Freedom, Saint, Usual, Zenith

2¹/₂x2

Q.9 Choose the right prepositions and complete the sentence:

- a) The rat ran _____ (into/in) the hole.
- b) My office is _____ (at /on) the 4th floor.
- c) I have been living in England _____ (Since/For) 2 years.
- d) I saw him driving the car _____ (at/in) the night.

e) The building is _____(beside/besides) McDonlds.

1x5

Q.10 What do you mean by the word 'Active Listening' and how does it benefit an individual?
5

Q.11 Choose the right form of the tenses and rewrite the sentence:

- a) He (drink/drank) the entire glass of water.
- b) I have (seen/saw) him cheating in the examination hall.
- c) He (choose/chose) him the president of the college.
- d) Riya did not (go/went) to the market.
- e) He had already (gone/went) to Manali.

1x5

End Semester Examination, May 2015
B. Sc. (N & D) – First Semester
FUNDAMENTALS OF BIOCHEMISTRY (BND-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define proteins. Write the structure of proteins. **10**
- Q.2 Explain the relationship between biochemistry and other biological sciences. **10**
- Q.3 What are monosaccharides? Classify them alongwith examples. **10**
- Q.4 Differentiate between essential and non-essential amino acids. **10**

PART-B

- Q.5 Write the deficiency symptoms of vitamin-D. **5**
- Q.6 Write the structure of starch. **5**
- Q.7 Explain the classification of proteins. **5**
- Q.8 Write a short note on glycosides . **5**
- Q.9 Give the major biochemical function of:
a) Biotin
b) Zinc
c) Flourine
d) Thiamine
e) Copper **1x5**
- Q.10 Write the physical properties of fats. **5**
- Q.11 Classify polysaccharides. Write the structure of glycogen. **5**

End Semester Examination, May 2015

B. Sc. (N & D) - First Semester

PHYSIOLOGY-I (BND-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the coagulation of blood. **10**
- Q.2 Give the structure of nervous tissue. What is the difference between myelinated and non-myelinated nervous tissue. **10**
- Q.3 Describe a detailed structure of human urinary system. **10**
- Q.4 Explain the structure of heart and its working. **10**

PART-B

- Q.5 Write short notes on:
 a) Cell structure
 b) Platelets
 c) Red blood cells
 d) White blood cells
 e) Physical properties of blood **1x5**
- Q.6 Explain the structure and functions of stomach. **5**
- Q.7 What is O₂ dissociation curve? Explain. **5**
- Q.8 What is blood pressure? What are the various factors that affect blood pressure? **5**
- Q.9 Describe menstruation cycle in females. **5**
- Q.10 What is bile? Explain its role in the process of digestion. **5**
- Q.11 Write the function of:
 a) Hypothalamus
 b) Pituitary gland. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – First Semester

FUNDAMENTALS OF FOOD AND NUTRITION (BND-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Classify carbohydrates. Discuss in detail about functions, RDA, dietary sources and deficiency problems related to carbohydrates. **10**
- Q.2 How do we determine energy value of food? Give the RDA of energy for different age group population. **10**
- Q.3 What are the objectives of cooking? Explain different methods of cooking with suitable examples. **10**

Q.4 Classify minerals. Give functions, RDA, dietary sources and deficiency problems related to calcium and iron. **10**

PART-B

Q.5 Define the following:

- a) Food
- b) Nutrition
- c) Adequate nutrition
- d) Nutritional status
- e) Malnutrition

1x5

Q.6 What are the physiological functions of foods? **5**

Q.7 Explain the social and psychological functions of foods with suitable examples. **5**

Q.8 Discuss about food groups and food pyramid. **5**

Q.9 Explain about functional foods and their benefits. **5**

Q.10 Explain about organic foods and their nutritional benefits. **5**

Q.11 Discuss the advantages and limitations of vegetarianism. **5**

End Semester Examination, May 2015

B. Sc. (N & D) – First Semester

FUNDAMENTALS OF FOOD AND NUTRITION (BND-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 Classify carbohydrates. Discuss in detail about functions, RDA, dietary sources and deficiency problems related to carbohydrates. **10**

Q.2 How do we determine energy value of food? Give the RDA of energy for different age group population. **10**

Q.3 What are the objectives of cooking? Explain different methods of cooking with suitable examples. **10**

Q.4 Classify minerals. Give functions, RDA, dietary sources and deficiency problems related to calcium and iron. **10**

PART-B

Q.5 Define the following:

- a) Food
- b) Nutrition
- c) Adequate nutrition
- d) Nutritional status
- e) Malnutrition

1x5

- Q.6 What are the physiological functions of foods? **5**
- Q.7 Explain the social and psychological functions of foods with suitable examples. **5**
- Q.8 Discuss about food groups and food pyramid. **5**
- Q.9 Explain about functional foods and their benefits. **5**
- Q.10 Explain about organic foods and their nutritional benefits. **5**
- Q.11 Discuss the advantages and limitations of vegetarianism. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
DISABILITY PREVENTION AND REHABILITATION (PT-804)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the functions of various members of rehabilitation team. **10**
- Q.2 Briefly explain assessment of a stroke patient. Describe physiotherapy management of a stroke patient in detail. **10**
- Q.3 Describe pulmonary rehabilitation for COPD patients. **10**
- Q.4 What are the signs and symptoms of DMD? Describe its physiotherapy management in detail. **10**

PART-B

- Q.5 Briefly explain the levels of prevention of disability. **5**
- Q.6 Write a short note on rule of nine in burn size estimation. **5**
- Q.7 Explain AFO with its uses. **5**
- Q.8 Write a short note on vocational rehabilitation. **5**
- Q.9 Briefly describe motor, sensory, autonomic effects and deformities in median nerve injury. **5**
- Q.10 What are the various cause of cerebral palsy? **5**
- Q.11 What is ICIDH classification of WHO? **5**
- Q.12 Write a short note on STNR. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
GENERAL PHYSIOTHERAPY (PT-803)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe various types of burns. Discuss its estimation. What rehabilitation principles are followed in burns? **10**
- Q.2 Explain the principles of exercise prescription in pregnancy. **10**
- Q.3 What are the components of geriatric assessment? Also discuss physiological changes associated with ageing. **10**
- Q.4 What is Lymphoedema? Explain its types. Also throw light on management of oedema. **10**

PART-B

- Q.5 Briefly explain the respiratory complications following abdominal surgery and its management. **5**
- Q.6 Briefly explain types of cerebral palsy. **5**
- Q.7 Explain WRMSD's in brief. **5**
- Q.8 Write a short note on physiotherapy management of a radical mastectomy. **5**
- Q.9 Explain the patho-physiology and management of Otitis media. **5**
- Q.10 Explain the role of PUVA therapy in management of psoriasis. **5**
- Q.11 Discuss the role of physiotherapy in cancer management. **5**
- Q.12 Explain the types on incontinence. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (PT-802)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you understand by shoulder impingement? Give its classification and various causes for the same. **10**
- Q.2 Discuss the various roles and responsibilities of a physiotherapist in a sports team. **10**
- Q.3 Discuss the principles of training in detail. **10**
- Q.4 What is tennis elbow? Write down its causes, pathology, sign/symptoms and special tests for it. Add an note on its management. **10**

PART-B

- Q.5 Explain in detail the importance of pre-game meal on performance. **5**
- Q.6 What are the precautions a diabetic athlete should take while training and competition? **5**
- Q.7 What are the problems faced by a senior athlete and how can these be managed? **5**
- Q.8 Write in short about the advantages and disadvantages for carbohydrate loading. **5**
- Q.9 Explain the features of overtraining syndrome. **5**
- Q.10 Write a short note on protective equipments in sports. **5**
- Q.11 Write short notes on:
a) Supraspinatus tendinitis
b) Patello femoral pain syndrome. **5**
- Q.12 Write short notes on:
a) Shin splint.
b) Olecranon Bursitis. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Eighth Semester
COMMUNITY BASED REHABILITATION (PT-801)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the various theories behind the concept of health and disease. **10**
- Q.2 Explain the role of a community based physiotherapist in preventing various kinds of disabilities. **10**
- Q.3 Discuss in detail the contribution of ESIC in providing social security to the people. **10**
- Q.4 Discuss the problems of vulnerable groups and ways of minimizing it. **10**

PART-B

- Q.5 What are the measures of central tendency? **5**
- Q.6 Write a short note on water norma for potability purification. **5**
- Q.7 Discuss demographic cycle. **5**
- Q.8 Write a short note on family planning. **5**
- Q.9 Explain the role of a social health worker. **5**
- Q.10 Discuss the disabilities encountered in LEPROSY. How can it be prevented? **5**
- Q.11 Advise and draft a diet plan for a pregnant lady assuming you are the only person available to do so in a community setting. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Seventh Semester
PEDIATRICS AND PEDIATRIC PHYSIOTHERAPY (PT-703)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 The parents of a 5 year old boy complains of frequent falling and inability to climb stairs. Also his condition is deteriorating but fine movements are preserved. Write down the detailed assessment and management of the case. **10**
- Q.2 What do you understand by growth? Explain various parameters assessed to evaluate a pediatric growth. **10**
- Q.3 What is scoliosis? Classify it and write down its detailed assessment. **10**
- Q.4 What is CTEV? Write down its detailed management. **10**

PART-B

- Q.5 Briefly explain osteogenesis imperfecta. **5**
- Q.6 Write a short note on lead poisoning. **5**
- Q.7 Explain the immunization programs in India. **5**
- Q.8 Briefly explain various measures taken to prevent a disability. **5**
- Q.9 Explain the clinical features and management of marfan's syndrome. **5**
- Q.10 Briefly explain management of club foot. **5**
- Q.11 Write a short note on down's syndrome. **5**
- Q.12 Write a short note on post-polio-paralysis. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Seventh Semester
CARDIOPULMONARY PHYSIOTHERAPY (PT-702)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain pulmonary rehabilitation of a 50 year old male COPD patient. Briefly explain surface marking of lungs. **10**
- Q.2 What is coronary artery disease? Explain physiotherapy management of a patient managed surgically. **10**
- Q.3 What are secretion clearance techniques? Explain any three in detail. **10**
- Q.4 What are congenital heart diseases? Discuss tetralogy of fallot in detail with PT management. **10**

PART-B

Write short notes on:

- Q.5 Mechanism of heart sounds. **5**
- Q.6 Systemic circulation. **5**
- Q.7 Active cycle of breathing technique. **5**
- Q.8 Reynolds disease and its physiotherapy management. **5**
- Q.9 Incision over thorax. Indications of median Sternotomy. **5**
- Q.10 Importance of pre-operative physiotherapy in elective surgical management of diseases. **5**
- Q.11 Chest trauma and its management. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Seventh Semester
CARDIOPULMONARY AND CARDIOPULMONARY SURGERY (PT-701)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss clinical features and diagnosis of a Rheumatic fever. **10**
- Q.2 Describe clinical features, complications and treatment of myocardial infraction. **10**
- Q.3 Describe lung disorders due to cigarette smoking. Explain the differences between obstructive and restrictive lung disorders. **10**
- Q.4 Describe clinical features and types of carcinoma lung. **10**

PART-B

Write short notes on:

- Q.5 Risk factors of atherosclerosis. **5**
- Q.6 Ventricular septal defect. **5**
- Q.7 Treatment of bronchial asthma. **5**
- Q.8 Pneumothorax. **5**
- Q.9 Differentiate between emphysema and chronic bronchitis. **5**
- Q.10 Anti tubercular drugs. **5**
- Q.11 Complications of myocardial infarction. **5**
- Q.12 Treatment of pneumonia. **5**

End Semester Examination, May 2015
 Bachelor of Physiotherapy - Sixth Semester
RESEARCH METHODOLOGY AND BIOSTATISTICS (PT-604)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 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, median and mode.

10

Q.2 Explain sampling. Enumerate various sampling methods in detail.

10

Q.3 Calculate the Karl Pearson coefficient of correlation from the following table and comment on the type of correlation:

X	20	30	40	50	60	70
Y	8	12	20	10	6	4

10

Q.4 What do you understand by a research? Describe various study designs in detail.

10

PART-B

Q.5 What are the different laws of statistics?

5

Q.6 Describe the types of errors in a clinical research.

5

Q.7 Discuss the characteristics of a good average.

5

Q.8 Discuss any five ethical principles to be followed in a clinical research.

5

Q.9 Write a short note on various types of theoretical distributions.

5

Q.10 Two workers on the same job show the following results over a long period of time:

	Worker A	Worker B
Mean time of completing the job in m	30	25
Standard deviation	6	4

a) Which worker appears to be more consistent in the time he requires to complete the job?

b) Which worker appears to be faster in completing the job?

2½x2

Q.11 Calculate standard deviation of the following series:

Daily wages	0-10	10-20	20-30	30-40	40-50
No. of works	2	7	10	5	3

5

Q.12 Define and explain the types of validity in brief.

5

End Semester Examination, May 2015
Bachelor of Physiotherapy – Sixth Semester
MANUAL THERAPY (PT-603)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the 'Maitland concept' of manual therapy. Describe in detail about the glides with help of a labeled diagram. **10**
- Q.2 What is massage therapy? What are the physiological changes that occur after massage? **10**
- Q.3 Explain the 10-step corrective technique method given by McKenzie for back pain. **10**
- Q.4 Explain in detail about the slump test. What are the main differences between slump test and SLR? **10**

PART-B

- Q.5 Write the lower limb tension test for deep a peroneal nerve. **5**
- Q.6 Describe how can we achieve pain relief through Kaltenborn concept of mobilization? **5**
- Q.7 Explain about the Kneading technique of massage. **5**
- Q.8 Differentiate between mulligan and Maitland concepts of mobilization. **5**
- Q.9 Explain mobilization technique of shoulder joint. **5**
- Q.10 Explain indication and contraindications of massage. **5**
- Q.11 Explain ULTT-3. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Sixth Semester
NEUROLOGICAL PHYSIOTHERAPY (PT-602)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | Explain in detail physiology of pain along its management. | 10 |
| Q.2 | Write in detail physiotherapy management of patient with cerebral palsy. | 10 |
| Q.3 | Write in detail physiotherapy management of patient with head injury. | 10 |
| Q.4 | Write in detail physiotherapy management of patient with poliomyelitis. | 10 |

PART-B

- | | | |
|------|---|----------|
| Q.5 | Describe various principles of PNF. | 5 |
| Q.6 | Describe various inhibitory techniques of rood's approach. | 5 |
| Q.7 | Describe briefly various coordination test. | 5 |
| Q.8 | Describe briefly primitive reflexes. | 5 |
| Q.9 | Describe briefly various superficial sensation along its testing. | 5 |
| Q.10 | Describe briefly hemiplegic gait. | 5 |
| Q.11 | Describe briefly structure of neuron. | 5 |

End Semester Examination, May 2015
Bachelor of Physiotherapy (Neurology) – Sixth Semester
NEUROLOGY AND NEUROSURGERY (PT-601)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is a stroke? Mention the etiology of stroke in detail. Explain the investigation to rule out a stroke. Mention the plan of treatment of a stroke patient. **10**
- Q.2 What is motor neuron disease? Mention the types of motor neuron diseases. Explain the investigation and treatment pertaining to a motor neuron disease. **10**
- Q.3 What is Parkinsonism? Explain the etiology, clinical features and plan of treatment in Parkinsonism. **10**
- Q.4 Define cerebral palsy. Describe the different types of cerebral palsy and plan of its management. **10**

PART-B

- Q.5 Explain bell's palsy in detail. **5**
- Q.6 Write the management of Duchene muscular dystrophy. **5**
- Q.7 Describe 'Meningitis', its etiology and treatment. **5**
- Q.8 Describe Guillain-Barre syndrome. **5**
- Q.9 Describe cholera. **5**
- Q.10 Explain in brief the myasthenia gravis. **5**
- Q.11 Differentiate between syncope and seizure. **5**
- Q.12 Explain the management of a head injury. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
BIOMECHANICS-II (PT-503)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Elaborate on the principles of a VDT unit. Highlight the major guidelines of it. **10**
- Q.2 Enumerate on the prevention strategies for a work related musculoskeletal disorders. **10**
- Q.3 Define biomechanics. Write in detail the importance of biomechanics in the field of physiotherapy. **10**
- Q.4 Explain in details the various determinants of a GAIT. **10**

PART-B

- Q.5 Define Newton's Second law of motion with an example. **5**
- Q.6 How will you design a workstation for a physical therapist? **5**
- Q.7 What will be the prevention strategy for work related neck pain? **5**
- Q.8 Discuss the Trendelenberg GAIT. **5**
- Q.9 How to calculate and write uses of 'Q' angle? **5**
- Q.10 Explain the length tension curve. **5**
- Q.11 Name the various ligaments of spine and write the functions of each. **5**
- Q.12 Write short notes on:
a) Stride length
b) Degree of toe out. **2½x2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
ORTHOPAEDICS PHYSIOTHERAPY (PT-502)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss an assessment in case of a below knee amputation and its management principles. **10**
- Q.2 Describe the local complications of fracture with PT management and explain the guidelines of each of them. **10**
- Q.3 Explain the pre-and post-operative PT management for TKR. **10**
- Q.4 Describe the assessment and PT management for L₄ –L₅ disc lesion. **10**

PART-B

- Q.5 Describe the variants of a tennis elbow. **5**
- Q.6 Explain the importance of Cobb's angle. **5**
- Q.7 Differentiate between osteotomy and arthrodesis. **5**
- Q.8 Discuss the various stages of a frozen shoulder with PT management. **5**
- Q.9 Write down the clinical assessment of a median nerve injury. **5**
- Q.10 Explain the pathophysiology of a "bamboo" spine along with its clinical features. **5**
- Q.11 Describe the assessment for a musculoskeletal injury. **5**
- Q.12 Explain the complications of surgical neck of a humerus fracture along with PT management. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
ORTHOPEDECS (PT-501)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain osteosarcoma. Explain its clinical features, radiological features, diagnosis and management. **10**
- Q.2 Explain fracture along with its classification and complications. **10**
- Q.3 Explain paraplegic patient, his rehabilitation and management. **10**
- Q.4 Explain prolapse intervertebral disc-etio-pathogenesis, clinical presentation diagnosis and treatment. **10**

PART-B

Write short notes on:

- Q.5 CTEV shoes. **5**
- Q.6 Tennis Elbow. **5**
- Q.7 Plaster of paris. **5**
- Q.8 Radiological feature of osteoarthritis of knee joint. **5**
- Q.9 Brodie's abscess. **5**
- Q.10 Fracture with dislocation, definition and examples. **5**
- Q.11 Lachmann's and mcmurray's test. **5**
- Q.12 Functional cast bracing. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fourth Semester
ADMINISTRATION AND ETHICS (PT-405)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | What is performance appraisal? Discuss 360° method of appraisal. | 10 |
| Q.2 | Explain Consumer Protection Act in detail. | 10 |
| Q.3 | How do you plan for setting up a new clinic of physiotherapy? Explain. | 10 |
| Q.4 | Elaborate on medical insurance in India. | 10 |

PART-B

- | | | |
|------|--|----------|
| Q.5 | Write a short note on budget. | 5 |
| Q.6 | Explain utilization review. | 5 |
| Q.7 | What are standards of practice for physiotherapy? | 5 |
| Q.8 | How do you take care of equipments in physiotherapy OPD? | 5 |
| Q.9 | Briefly outline the history of physical therapy. | 5 |
| Q.10 | What are the benefits available to disabled persons in India? Elaborate them. | 5 |
| Q.11 | Explain the requirements or information you need before taking a lecture on ethics in physiotherapy. | 5 |

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
PSYCHOLOGY AND PSYCHIATRY (PT-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail about Freud's psychoanalytic theory of dynamic approaches of personality with a suitable diagram. **10**
- Q.2 Write in detail about experimental method of psychology. **10**
- Q.3 What do you understand by psychiatric disorders? Explain in detail the etiological factors of psychological disorders. Mention the names of neurological transmitters and explain their role in psychiatric disorders. **10**
- Q.4 Define amnesia. Describe different types of amnesia. **10**

PART-B

- Q.5 Enumerate indicators of arousal. Write a short note on arousal and its performance. **5**
- Q.6 Explain with example the concept of stereotype in social perceptions. **5**
- Q.7 Explain the factors responsible for an attitude change. **5**
- Q.8 Write a short note on obsessive compulsory disorder(OCD). **5**
- Q.9 Explain hallucination in brief. **5**
- Q.10 Discuss about puerperal mental disorder. **5**
- Q.11 Add a note on suicidal tendency. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
BIOMECHANICS (PT-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write in detail about the precision and prehension of the hand. **10**
- Q.2 Define a joint. Give classification of joints of the human body with examples. **10**
- Q.3 How does study or knowledge of biomechanics helps physiotherapist? Write in detail with examples. **10**
- Q.4 Discuss the biomechanics of an Elbow joint. Also write a note on carrying angle. **10**

PART-B

- Q.5 Define Newton's second law of motion with an example. **5**
- Q.6 Define force and discuss the various internal and external forces that affect a human motion. **5**
- Q.7 Explain the length tension curve of skeletal muscles. **5**
- Q.8 What is scapula humeral rhythm? Write down its uses. **5**
- Q.9 What do you understand by concave-convex rule? Explain with the help of a diagram. **5**
- Q.10 Discuss the various types of muscle work. **5**
- Q.11 Explain stress-strain curve with the help of a diagram. **5**
- Q.12 Give classification of a skeletal muscle fibre according to arrangement of fibres. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
SURGERY INCLUDING GYNAECOLOGY AND OBSTERICS (PT-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Mention in detail the physiological changes during pregnancy. **10**
- Q.2 What is hernia? Define inguinal hernia and all operative procedure of inguinal hernia. **10**
- Q.3 What is skin grafting? Explain in detail the types of skin grafting. **10**
- Q.4 What is dysfunctional uterine bleeding? Mention the causes, differential diagnosis and management of dysfunctional uterine bleeding. **10**

PART-B

Write short notes on the followings:

- Q.5 Antenatal care. **5**
- Q.6 Carbuncle. **5**
- Q.7 Wounds. **5**
- Q.8 Ectopic pregnancy. **5**
- Q.9 Abortion. **5**
- Q.10 Cholecystectomy. **5**
- Q.11 Foetal distress. **5**
- Q.12 Normal labour. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fourth Semester
MEDICINE (PT-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is nephrotic syndrome? Mention the causes and treatment of nephrotic syndrome in detail. **10**
- Q.2 What is diabetes mellitus? Describe the types, risk factors and management of diabetes mellitus in detail. **10**
- Q.3 What is renal failure? Explain the acute renal failure, its etiology and treatment. **10**
- Q.4 What is a hepatic encephalopathy? What are the signs and symptoms of a hepatic encephalopathy? Also describe the etiology of a hepatic encephalopathy and its management. **10**

PART-B

Write short notes on the following:

- Q.5 Hepatitis. **5**
- Q.6 Haemodialysis and ESRD. **5**
- Q.7 Treatment of typhoid fever. **5**
- Q.8 Bronchial asthma. **5**
- Q.9 Insulin. **5**
- Q.10 Types of Jaundice. **5**
- Q.11 Iron deficiency anemia. **5**
- Q.12 Pitting pedal edema. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Third Semester
EXERCISE THERAPY-II (PT-304)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|---|-----------|
| Q.1 | Explain the classification of crutches and types of crutch walking in detail. | 10 |
| Q.2 | Explain various determinants of gait. | 10 |
| Q.3 | Explain various causes of incoordination and its management. | 10 |
| Q.4 | Explain various types of suspension in detail. | 10 |

PART-B

- | | | |
|------|---|----------|
| Q.5 | Explain deep vein thrombosis. | 5 |
| Q.6 | Explain hand to knee gait. | 5 |
| Q.7 | Discuss aerobic exercise. | 5 |
| Q.8 | Discuss hold-relax technique. | 5 |
| Q.9 | Discuss various techniques of relaxation. | 5 |
| Q.10 | Discuss patterns of PNF. | 5 |
| Q.11 | Discuss various breathing exercises. | 5 |
| Q.12 | Discuss mat exercises. | 5 |

End Semester Examination, May 2015

Bachelor of Physiotherapy – Third Semester

ELECTROTHERAPY-II (PT-303)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe about properties of ultrasound waves. Discuss the thermal and non-thermal effects of ultrasound. **10**
- Q.2 Describe the principles of heating in short wave diathermy. Explain the different methods of placements of short wave diathermy. **10**
- Q.3 Enumerate the physical characteristics of L.A.S.E.R. and discuss the production of laser. **10**
- Q.4 Write the generation of non-luminous generator. Differentiate between the luminous and non-luminous generator. **10**

PART-B

- Q.5 Define bio feed back and explain its role in rehabilitation. **5**
- Q.6 Write a note on clinical application of combination therapy. **5**
- Q.7 Write the contraindication for use of cryotherapy. **5**
- Q.8 Discuss the dangers of ultraviolet therapy. **5**
- Q.9 Write the advantages and disadvantages of fluidotherapy. **5**
- Q.10 Explain contrast bath. **5**
- Q.11 Write a note on phonophoresis. **5**
- Q.12 Explain the following term:
a) Inverse square law.
b) Magnetron. **2¹/₂x2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Third Semester
PATHOLOGY AND MICROBIOLOGY (PT-302)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Differentiate between benign and malignant tumors. **10**
- Q.2 Differentiate between necrosis and apoptosis. **10**
- Q.3 Describe the modes of transmission of human immunodeficiency virus and the laboratory tests to detect the infection. **10**
- Q.4 Describe the cause of enteric fever and the laboratory diagnosis at different weeks of fever. **10**

PART-B

Write short notes on **any six** of the following:

- Q.5 Diabetes mellitus. **5**
- Q.6 Types of anemia. **5**
- Q.7 Causative factors of oedema. **5**
- Q.8 Haemolytic jaundice. **5**
- Q.9 Different stages in the life cycle of *Entamoeba histolytica*. **5**
- Q.10 Methods of sterilization by heat. **5**
- Q.11 Polio virus vaccine. **5**
- Q.12 Active immunity. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Third Semester
PHARMACOLOGY (PT-301)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What are the sympathomimetics drugs? Classify them. Mention the uses and side effects of sympathomimetics drugs. **10**
- Q.2 Mention the classification of receptors and explain what are the mechanism of action of drugs. **10**
- Q.3 Write the classification of the antihypertensive drugs. **10**
- Q.4 Write the classification of anticonvulsants drugs. Also mention the mode of action of anti convulsants drugs. **10**

PART-B

- Q.5 Write a short note on organophosphorous poisoning. **5**
- Q.6 Explain the bioavailability of drugs in brief. **5**
- Q.7 Explain the action of Nitrates. **5**
- Q.8 Discuss the action of 3rd generation Beta blockers. **5**
- Q.9 Explain the diuretics drugs and mode of their action. **5**
- Q.10 Name and explain the drugs which are COX-2 inhibitors. **5**
- Q.11 Write a note on long acting Penicillin antibiotic. **5**
- Q.12 Write a short note on Paracetamol/Acetaminophen **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
EXERCISE THERAPY-I (PT-204)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is PRE? Explain the DAPRE technique in detail. **10**
- Q.2 Discuss the principles and grades of manual muscle testing. Describe the testing procedures for right hip extensors. **10**
- Q.3 Define stretching. Write the principle and determinants of stretching. **10**
- Q.4 Explain the fundamental position of standing along with four derived positions. **10**

PART-B

- Q.5 Explain the types of goniometer. **5**
- Q.6 Explain Obee's test. **5**
- Q.7 Write the indication, contraindication and techniques of application of continuous passive movement. **5**
- Q.8 Discuss the principle of a passive movement. **5**
- Q.9 Explain the terms: active insufficiency and passive insufficiency with examples. **5**
- Q.10 Define the following terms:
a) Arthrokinematics.
b) Functional excursion. **5**
- Q.11 Write the indication for a joint mobilization. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
ELECTROTHERAPY-I (PT-203)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail indications of faradic type current. **10**
- Q.2 Explain in detail strength duration curve of normal innervated muscle. **10**
- Q.3 Explain physiology of pain and write parameters of TENS along its contraindications. **10**
- Q.4 Define iontophoresis. Write its principle, indication and contraindication in brief. **10**

PART-B

- Q.5 Explain types of nerve injuries. **5**
- Q.6 Write a note on high voltage pulsed galvanic stimulation. **5**
- Q.7 Explain various nerve conduction velocity. **5**
- Q.8 Explain various physiological effects of faradic type current. **5**
- Q.9 Write a note on medium frequency current. **5**
- Q.10 Write a note on chronaxie. **5**
- Q.11 Write a note on surging. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
PHYSIOLOGY-II (PT-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define a receptor. Give classification and properties of receptors. **10**
- Q.2 Describe the chemical regulation of respiration. **10**
- Q.3 Discuss the mechanism of formation of urine. **10**
- Q.4 Name the hormones secreted by pituitary gland. Describe the actions and control of secretion of ADH. **10**

PART-B

- Q.5 Describe various levels of control of body movements. **5**
- Q.6 Describe the functions of hypothalamus. **5**
- Q.7 Define vital capacity. Give its normal values. What are the factors affecting vital capacity. **5**
- Q.8 Describe parts and functions of middle ear. **5**
- Q.9 Differentiate between two types of nephrons in kidney. **5**
- Q.10 Discuss endocrine functions of testis. **5**
- Q.11 Explain the effects of exercise on respiratory system. **5**
- Q.12 Describe the transmission of nerve impulse across neuromuscular junctions. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
ANATOMY-II (PT-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe the anatomy of pancreas under following headings:
a) Parts, surfaces and borders.
b) Blood supply and applied. **5x2**
- Q.2 Describe in brief:
a) Circle of Willis with applied.
b) Origin, insertion, action and nerve supply of extra ocular muscles. **5x2**
- Q.3 Describe gross features of cerebellum. **10**
- Q.4 a) Enumerate with a well labeled diagram of Sulci and Gyri of cerebrum. **5**
b) Write a short note on down's syndrome. **5**

PART-B

- Q.5 Write short notes on:
a) Urogenital Diaphragm. **3**
b) Innervation of Bladder. **2**
- Q.6 Describe ascending tracts of a spinal cord. **5**
- Q.7 Describe thyroid gland in short. **5**
- Q.8 Enumerate:
a) Branches of facial nerve. **3**
b) Structures forming stomach bed. **2**
- Q.9 Write short notes on:
a) Bronchopulmonary segments. **3**
b) Implantation. **2**
- Q.10 Describe division of anterior triangle of neck with contents of carotid triangle with a suitable diagram. **5**
- Q.11 Write short notes on:
a) Meninges **3**
b) Fourth ventricle **2**
- Q.12 Write short notes on:
a) CSF **3**
b) Cauda Equina. **2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
SOCIOLOGY (PT-105)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What are various problems faced by a disabled socially? Comment on few of them. **10**
- Q.2 Elaborate on existing caste system in India. **10**
- Q.3 What is social change? Discuss various factors of social change. **10**
- Q.4 Discuss the relationship of sociology with other sciences. **10**

PART-B

- Q.5 Write a short on juvenile delinquency. **5**
- Q.6 Briefly describe the social security measures available in India. **5**
- Q.7 Comment on concept of culture. Discuss the relationship between culture and disease. **5**
- Q.8 Write the importance of sociology to health care professionals. **5**
- Q.9 Discuss the theories of work. **5**
- Q.10 How does various social change leads to stress? **5**
- Q.11 Comment on various types of families. **5**
- Q.12 Write a short note on alcoholism. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
FUNDAMENTALS OF PHYSIOTHERAPY (PT-104)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define lever. Classify different types of levers with examples and physiotherapeutic relevance. **10**
- Q.2 Define axis and planes. What are different axis and planes in anatomic position? Describe movement along them. **10**
- Q.3 Write in detail about characteristics of synovial joints and its classifications with suitable examples and diagrams. **10**
- Q.4 What do you understand by the word equilibrium? Classify equilibrium and describe the factors affecting equilibrium. **10**

PART-B

- Q.5 Explain muscle work and group action of muscles. **5**
- Q.6 Describe electromagnetic spectrum and relevance of different radiations. **5**
- Q.7 What is electric shock? Write about the first-aid management of an electric shock. **5**
- Q.8 Define Ohm's law. **5**
- Q.9 Describe function of pulley and its classification. **5**
- Q.10 Describe role of line of gravity in a human body. **5**
- Q.11 Explain clinical implications of an electric current in physiotherapy practice. **5**
- Q.12 Describe principles of hydrotherapy. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
BIOCHEMISTRY (PT-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is gluconeogenesis? How pyruvate can be converted to glucose? **10**
- Q.2 What is normal blood calcium level? Explain the mechanism by which Ca is maintained. **10**
- Q.3 Explain the co-enzyme functions of various B-complex vitamins with examples. **10**
- Q.4 Classify protein with examples. Explain the structure of protein and add a note on the structure-function relationship. **10**

PART-B

- Q.5 What are isoenzymes? Give an example. What are their clinical significance? **5**
- Q.6 Describe Jaundice and how do you investigate a case of jaundice. **5**
- Q.7 What is diabetes mellitus? What are acute and chronic complications in diabetes mellitus? **5**
- Q.8 What is atherosclerosis? How lipid profile values are associated with it? **5**
- Q.9 Briefly explain the structure and functions of DNA. **5**
- Q.10 How glucose is converted to glycogen in the body? Write the various steps of it. **5**
- Q.11 What are fatty acids? How they are classified? What are the functions of fatty acids? **5**
- Q.12 Explain the role of calcium in our body and how is it regulated. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
PHYSIOLOGY-I (PT-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss synthesis, catabolism and functions of haemoglobin. Also add a note on jaundice. **10**
- Q.2 Describe characteristic features of neuro-muscular junction. Explain transmission of nerve impulse at neuro-muscular junction. **10**
- Q.3 Describe nerve supply of heart and role of cardiac innervations in control of heart rate. **10**
- Q.4 Give the composition and functions of pancreatic juice. How its secretion is regulated? **10**

PART-B

- Q.5 Discuss structure and functions of platelets. **5**
- Q.6 Differentiate between isotonic and isometric contractions. **5**
- Q.7 Describe cardiac cycle. **5**
- Q.8 Write a note on strength–duration curve. **5**
- Q.9 Explain ionic basis of action potential in a nerve. **5**
- Q.10 Describe movements of small intestine. **5**
- Q.11 Discuss excitation-contraction coupling. **5**
- Q.12 Describe facilitated diffusion with an example. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
ANATOMY-I (PT-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the shoulder joint with special emphasis on abduction with labeled diagram. **10**
- Q.2 Describe brachial plexus along with its roots, trunks, cords and branches with labeled diagram and clinical anatomy. **10**
- Q.3 Classify in detail muscles of human body with examples. **10**
- Q.4 Describe structure of heart with chambers, coverings, surfaces, borders with clinical anatomy and labeled diagrams. **10**

PART-B

Write short notes on **any Six** of the following:

- Q.5 Osteology of humerus. **5**
- Q.6 Typical ribs. **5**
- Q.7 Cubital fossa. **5**
- Q.8 Bronchopulmonary segment. **5**
- Q.9 Inguinal canal and Inguinal hernia. **5**
- Q.10 Arches of foot. **5**
- Q.11 Venous drainage of lower limb. **5**
- Q.12 Quadriceps femaris muscle. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
DISABILITY PREVENTION AND REHABILITATION (PT-804)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the functions of various members of rehabilitation team. **10**
- Q.2 Briefly explain assessment of a stroke patient. Describe physiotherapy management of a stroke patient in detail. **10**
- Q.3 Describe pulmonary rehabilitation for COPD patients. **10**
- Q.4 What are the signs and symptoms of DMD? Describe its physiotherapy management in detail. **10**

PART-B

- Q.5 Briefly explain the levels of prevention of disability. **5**
- Q.6 Write a short note on rule of nine in burn size estimation. **5**
- Q.7 Explain AFO with its uses. **5**
- Q.8 Write a short note on vocational rehabilitation. **5**
- Q.9 Briefly describe motor, sensory, autonomic effects and deformities in median nerve injury. **5**
- Q.10 What are the various cause of cerebral palsy? **5**
- Q.11 What is ICIDH classification of WHO? **5**
- Q.12 Write a short note on STNR. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
DISABILITY PREVENTION AND REHABILITATION (PT-804)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the functions of various members of rehabilitation team. **10**
- Q.2 Briefly explain assessment of a stroke patient. Describe physiotherapy management of a stroke patient in detail. **10**
- Q.3 Describe pulmonary rehabilitation for COPD patients. **10**
- Q.4 What are the signs and symptoms of DMD? Describe its physiotherapy management in detail. **10**

PART-B

- Q.5 Briefly explain the levels of prevention of disability. **5**
- Q.6 Write a short note on rule of nine in burn size estimation. **5**
- Q.7 Explain AFO with its uses. **5**
- Q.8 Write a short note on vocational rehabilitation. **5**
- Q.9 Briefly describe motor, sensory, autonomic effects and deformities in median nerve injury. **5**
- Q.10 What are the various cause of cerebral palsy? **5**
- Q.11 What is ICIDH classification of WHO? **5**
- Q.12 Write a short note on STNR. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
GENERAL PHYSIOTHERAPY (PT-803)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe various types of burns. Discuss its estimation. What rehabilitation principles are followed in burns? **10**
- Q.2 Explain the principles of exercise prescription in pregnancy. **10**
- Q.3 What are the components of geriatric assessment? Also discuss physiological changes associated with ageing. **10**
- Q.4 What is Lymphoedema? Explain its types. Also throw light on management of oedema. **10**

PART-B

- Q.5 Briefly explain the respiratory complications following abdominal surgery and its management. **5**
- Q.6 Briefly explain types of cerebral palsy. **5**
- Q.7 Explain WRMSD's in brief. **5**
- Q.8 Write a short note on physiotherapy management of a radical mastectomy. **5**
- Q.9 Explain the patho-physiology and management of Otitis media. **5**
- Q.10 Explain the role of PUVA therapy in management of psoriasis. **5**
- Q.11 Discuss the role of physiotherapy in cancer management. **5**
- Q.12 Explain the types on incontinence. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (PT-802)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you understand by shoulder impingement? Give its classification and various causes for the same. **10**
- Q.2 Discuss the various roles and responsibilities of a physiotherapist in a sports team. **10**
- Q.3 Discuss the principles of training in detail. **10**
- Q.4 What is tennis elbow? Write down its causes, pathology, sign/symptoms and special tests for it. Add an note on its management. **10**

PART-B

- Q.5 Explain in detail the importance of pre-game meal on performance. **5**
- Q.6 What are the precautions a diabetic athlete should take while training and competition? **5**
- Q.7 What are the problems faced by a senior athlete and how can these be managed? **5**
- Q.8 Write in short about the advantages and disadvantages for carbohydrate loading. **5**
- Q.9 Explain the features of overtraining syndrome. **5**
- Q.10 Write a short note on protective equipments in sports. **5**
- Q.11 Write short notes on:
a) Supraspinatus tendinitis
b) Patello femoral pain syndrome. **5**
- Q.12 Write short notes on:
a) Shin splint.
b) Olecranon Bursitis. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Eighth Semester
COMMUNITY BASED REHABILITATION (PT-801)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the various theories behind the concept of health and disease. **10**
- Q.2 Explain the role of a community based physiotherapist in preventing various kinds of disabilities. **10**
- Q.3 Discuss in detail the contribution of ESIC in providing social security to the people. **10**
- Q.4 Discuss the problems of vulnerable groups and ways of minimizing it. **10**

PART-B

- Q.5 What are the measures of central tendency? **5**
- Q.6 Write a short note on water norma for potability purification. **5**
- Q.7 Discuss demographic cycle. **5**
- Q.8 Write a short note on family planning. **5**
- Q.9 Explain the role of a social health worker. **5**
- Q.10 Discuss the disabilities encountered in LEPROSY. How can it be prevented? **5**
- Q.11 Advise and draft a diet plan for a pregnant lady assuming you are the only person available to do so in a community setting. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Seventh Semester
PEDIATRICS AND PEDIATRIC PHYSIOTHERAPY (PT-703)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 The parents of a 5 year old boy complains of frequent falling and inability to climb stairs. Also his condition is deteriorating but fine movements are preserved. Write down the detailed assessment and management of the case. **10**
- Q.2 What do you understand by growth? Explain various parameters assessed to evaluate a pediatric growth. **10**
- Q.3 What is scoliosis? Classify it and write down its detailed assessment. **10**
- Q.4 What is CTEV? Write down its detailed management. **10**

PART-B

- Q.5 Briefly explain osteogenesis imperfecta. **5**
- Q.6 Write a short note on lead poisoning. **5**
- Q.7 Explain the immunization programs in India. **5**
- Q.8 Briefly explain various measures taken to prevent a disability. **5**
- Q.9 Explain the clinical features and management of marfan's syndrome. **5**
- Q.10 Briefly explain management of club foot. **5**
- Q.11 Write a short note on down's syndrome. **5**
- Q.12 Write a short note on post-polio-paralysis. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Seventh Semester
CARDIOPULMONARY PHYSIOTHERAPY (PT-702)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain pulmonary rehabilitation of a 50 year old male COPD patient. Briefly explain surface marking of lungs. **10**
- Q.2 What is coronary artery disease? Explain physiotherapy management of a patient managed surgically. **10**
- Q.3 What are secretion clearance techniques? Explain any three in detail. **10**
- Q.4 What are congenital heart diseases? Discuss tetralogy of fallot in detail with PT management. **10**

PART-B

Write short notes on:

- Q.5 Mechanism of heart sounds. **5**
- Q.6 Systemic circulation. **5**
- Q.7 Active cycle of breathing technique. **5**
- Q.8 Reynolds disease and its physiotherapy management. **5**
- Q.9 Incision over thorax. Indications of median Sternotomy. **5**
- Q.10 Importance of pre-operative physiotherapy in elective surgical management of diseases. **5**
- Q.11 Chest trauma and its management. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Seventh Semester
CARDIOPULMONARY AND CARDIOPULMONARY SURGERY (PT-701)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss clinical features and diagnosis of a Rheumatic fever. **10**
- Q.2 Describe clinical features, complications and treatment of myocardial infraction. **10**
- Q.3 Describe lung disorders due to cigarette smoking. Explain the differences between obstructive and restrictive lung disorders. **10**
- Q.4 Describe clinical features and types of carcinoma lung. **10**

PART-B

Write short notes on:

- Q.5 Risk factors of atherosclerosis. **5**
- Q.6 Ventricular septal defect. **5**
- Q.7 Treatment of bronchial asthma. **5**
- Q.8 Pneumothorax. **5**
- Q.9 Differentiate between emphysema and chronic bronchitis. **5**
- Q.10 Anti tubercular drugs. **5**
- Q.11 Complications of myocardial infarction. **5**
- Q.12 Treatment of pneumonia. **5**

End Semester Examination, May 2015
 Bachelor of Physiotherapy - Sixth Semester
RESEARCH METHODOLOGY AND BIOSTATISTICS (PT-604)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 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, median and mode.

10

Q.2 Explain sampling. Enumerate various sampling methods in detail.

10

Q.3 Calculate the Karl Pearson coefficient of correlation from the following table and comment on the type of correlation:

X	20	30	40	50	60	70
Y	8	12	20	10	6	4

10

Q.4 What do you understand by a research? Describe various study designs in detail.

10

PART-B

Q.5 What are the different laws of statistics?

5

Q.6 Describe the types of errors in a clinical research.

5

Q.7 Discuss the characteristics of a good average.

5

Q.8 Discuss any five ethical principles to be followed in a clinical research.

5

Q.9 Write a short note on various types of theoretical distributions.

5

Q.10 Two workers on the same job show the following results over a long period of time:

	Worker A	Worker B
Mean time of completing the job in m	30	25
Standard deviation	6	4

c) Which worker appears to be more consistent in the time he requires to complete the job?

d) Which worker appears to be faster in completing the job?

2½x2

Q.11 Calculate standard deviation of the following series:

Daily wages	0-10	10-20	20-30	30-40	40-50
No. of works	2	7	10	5	3

5

Q.12 Define and explain the types of validity in brief.

5

End Semester Examination, May 2015

Bachelor of Physiotherapy – Sixth Semester

MANUAL THERAPY (PT-603)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the 'Maitland concept' of manual therapy. Describe in detail about the glides with help of a labeled diagram. **10**
- Q.2 What is massage therapy? What are the physiological changes that occur after massage? **10**
- Q.3 Explain the 10-step corrective technique method given by McKenzie for back pain. **10**
- Q.4 Explain in detail about the slump test. What are the main differences between slump test and SLR? **10**

PART-B

- Q.5 Write the lower limb tension test for deep a peroneal nerve. **5**
- Q.6 Describe how can we achieve pain relief through Kaltenborn concept of mobilization? **5**
- Q.7 Explain about the Kneading technique of massage. **5**
- Q.8 Differentiate between mulligan and Maitland concepts of mobilization. **5**
- Q.9 Explain mobilization technique of shoulder joint. **5**
- Q.10 Explain indication and contraindications of massage. **5**
- Q.11 Explain ULTT-3. **5**

End Semester Examination, May 2015

Bachelor of Physiotherapy – Sixth Semester

NEUROLOGICAL PHYSIOTHERAPY (PT-602)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail physiology of pain along its management. **10**

- Q.2 Write in detail physiotherapy management of patient with cerebral palsy. **10**
- Q.3 Write in detail physiotherapy management of patient with head injury. **10**
- Q.4 Write in detail physiotherapy management of patient with poliomyelitis. **10**

PART-B

- Q.5 Describe various principles of PNF. **5**
- Q.6 Describe various inhibitory techniques of rood's approach. **5**
- Q.7 Describe briefly various coordination test. **5**
- Q.8 Describe briefly primitive reflexes. **5**
- Q.9 Describe briefly various superficial sensation along its testing. **5**
- Q.10 Describe briefly hemiplegic gait. **5**
- Q.11 Describe briefly structure of neuron. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy (Neurology) – Sixth Semester
NEUROLOGY AND NEUROSURGERY (PT-601)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is a stroke? Mention the etiology of stroke in detail. Explain the investigation to rule out a stroke. Mention the plan of treatment of a stroke patient. **10**
- Q.2 What is motor neuron disease? Mention the types of motor neuron diseases. Explain the investigation and treatment pertaining to a motor neuron disease. **10**
- Q.3 What is Parkinsonism? Explain the etiology, clinical features and plan of treatment in Parkinsonism. **10**
- Q.4 Define cerebral palsy. Describe the different types of cerebral palsy and plan of its management. **10**

PART-B

- Q.5 Explain bell's palsy in detail. **5**
- Q.6 Write the management of Duchene muscular dystrophy. **5**
- Q.7 Describe 'Meningitis', its etiology and treatment. **5**
- Q.8 Describe Guillain-Barre syndrome. **5**
- Q.9 Describe cholera. **5**
- Q.10 Explain in brief the myasthenia gravis. **5**
- Q.11 Differentiate between syncope and seizure. **5**
- Q.12 Explain the management of a head injury. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
BIOMECHANICS-II (PT-503)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Elaborate on the principles of a VDT unit. Highlight the major guidelines of it. **10**
- Q.2 Enumerate on the prevention strategies for a work related musculoskeletal disorders. **10**
- Q.3 Define biomechanics. Write in detail the importance of biomechanics in the field of physiotherapy. **10**
- Q.4 Explain in details the various determinants of a GAIT. **10**

PART-B

- Q.5 Define Newton's Second law of motion with an example. **5**
- Q.6 How will you design a workstation for a physical therapist? **5**
- Q.7 What will be the prevention strategy for work related neck pain? **5**
- Q.8 Discuss the Trendelenberg GAIT. **5**
- Q.9 How to calculate and write uses of 'Q' angle? **5**
- Q.10 Explain the length tension curve. **5**
- Q.11 Name the various ligaments of spine and write the functions of each. **5**
- Q.12 Write short notes on:
a) Stride length
b) Degree of toe out. **2½x2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
ORTHOPAEDICS PHYSIOTHERAPY (PT-502)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss an assessment in case of a below knee amputation and its management principles. **10**
- Q.2 Describe the local complications of fracture with PT management and explain the guidelines of each of them. **10**
- Q.3 Explain the pre-and post-operative PT management for TKR. **10**
- Q.4 Describe the assessment and PT management for L₄ –L₅ disc lesion. **10**

PART-B

- Q.5 Describe the variants of a tennis elbow. **5**
- Q.6 Explain the importance of Cobb's angle. **5**
- Q.7 Differentiate between osteotomy and arthrodesis. **5**
- Q.8 Discuss the various stages of a frozen shoulder with PT management. **5**
- Q.9 Write down the clinical assessment of a median nerve injury. **5**
- Q.10 Explain the pathophysiology of a "bamboo" spine along with its clinical features. **5**
- Q.11 Describe the assessment for a musculoskeletal injury. **5**
- Q.12 Explain the complications of surgical neck of a humerus fracture along with PT management. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
ORTHOPEDECS (PT-501)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain osteosarcoma. Explain its clinical features, radiological features, diagnosis and management. **10**
- Q.2 Explain fracture along with its classification and complications. **10**
- Q.3 Explain paraplegic patient, his rehabilitation and management. **10**
- Q.4 Explain prolapse intervertebral disc-etio-pathogenesis, clinical presentation diagnosis and treatment. **10**

PART-B

Write short notes on:

- Q.5 CTEV shoes. **5**
- Q.6 Tennis Elbow. **5**
- Q.7 Plaster of paris. **5**
- Q.8 Radiological feature of osteoarthritis of knee joint. **5**
- Q.9 Brodie's abscess. **5**
- Q.10 Fracture with dislocation, definition and examples. **5**
- Q.11 Lachmann's and mcmurray's test. **5**
- Q.12 Functional cast bracing. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fourth Semester
ADMINISTRATION AND ETHICS (PT-405)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | What is performance appraisal? Discuss 360° method of appraisal. | 10 |
| Q.2 | Explain Consumer Protection Act in detail. | 10 |
| Q.3 | How do you plan for setting up a new clinic of physiotherapy? Explain. | 10 |
| Q.4 | Elaborate on medical insurance in India. | 10 |

PART-B

- | | | |
|------|--|----------|
| Q.5 | Write a short note on budget. | 5 |
| Q.6 | Explain utilization review. | 5 |
| Q.7 | What are standards of practice for physiotherapy? | 5 |
| Q.8 | How do you take care of equipments in physiotherapy OPD? | 5 |
| Q.9 | Briefly outline the history of physical therapy. | 5 |
| Q.10 | What are the benefits available to disabled persons in India? Elaborate them. | 5 |
| Q.11 | Explain the requirements or information you need before taking a lecture on ethics in physiotherapy. | 5 |

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
PSYCHOLOGY AND PSYCHIATRY (PT-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail about Freud's psychoanalytic theory of dynamic approaches of personality with a suitable diagram. **10**
- Q.2 Write in detail about experimental method of psychology. **10**
- Q.3 What do you understand by psychiatric disorders? Explain in detail the etiological factors of psychological disorders. Mention the names of neurological transmitters and explain their role in psychiatric disorders. **10**
- Q.4 Define amnesia. Describe different types of amnesia. **10**

PART-B

- Q.5 Enumerate indicators of arousal. Write a short note on arousal and its performance. **5**
- Q.6 Explain with example the concept of stereotype in social perceptions. **5**
- Q.7 Explain the factors responsible for an attitude change. **5**
- Q.8 Write a short note on obsessive compulsory disorder(OCD). **5**
- Q.9 Explain hallucination in brief. **5**
- Q.10 Discuss about puerperal mental disorder. **5**
- Q.11 Add a note on suicidal tendency. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
BIOMECHANICS (PT-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write in detail about the precision and prehension of the hand. **10**
- Q.2 Define a joint. Give classification of joints of the human body with examples. **10**
- Q.3 How does study or knowledge of biomechanics helps physiotherapist? Write in detail with examples. **10**
- Q.4 Discuss the biomechanics of an Elbow joint. Also write a note on carrying angle. **10**

PART-B

- Q.5 Define Newton's second law of motion with an example. **5**
- Q.6 Define force and discuss the various internal and external forces that affect a human motion. **5**
- Q.7 Explain the length tension curve of skeletal muscles. **5**
- Q.8 What is scapula humeral rhythm? Write down its uses. **5**
- Q.9 What do you understand by concave-convex rule? Explain with the help of a diagram. **5**
- Q.10 Discuss the various types of muscle work. **5**
- Q.11 Explain stress-strain curve with the help of a diagram. **5**
- Q.12 Give classification of a skeletal muscle fibre according to arrangement of fibres. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
SURGERY INCLUDING GYNAECOLOGY AND OBSTERICS (PT-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Mention in detail the physiological changes during pregnancy. **10**
- Q.2 What is hernia? Define inguinal hernia and all operative procedure of inguinal hernia. **10**
- Q.3 What is skin grafting? Explain in detail the types of skin grafting. **10**
- Q.4 What is dysfunctional uterine bleeding? Mention the causes, differential diagnosis and management of dysfunctional uterine bleeding. **10**

PART-B

Write short notes on the followings:

- Q.5 Antenatal care. **5**
- Q.6 Carbuncle. **5**
- Q.7 Wounds. **5**
- Q.8 Ectopic pregnancy. **5**
- Q.9 Abortion. **5**
- Q.10 Cholecystectomy. **5**
- Q.11 Foetal distress. **5**
- Q.12 Normal labour. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fourth Semester
MEDICINE (PT-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is nephrotic syndrome? Mention the causes and treatment of nephrotic syndrome in detail. **10**
- Q.2 What is diabetes mellitus? Describe the types, risk factors and management of diabetes mellitus in detail. **10**
- Q.3 What is renal failure? Explain the acute renal failure, its etiology and treatment. **10**
- Q.4 What is a hepatic encephalopathy? What are the signs and symptoms of a hepatic encephalopathy? Also describe the etiology of a hepatic encephalopathy and its management. **10**

PART-B

Write short notes on the following:

- Q.5 Hepatitis. **5**
- Q.6 Haemodialysis and ESRD. **5**
- Q.7 Treatment of typhoid fever. **5**
- Q.8 Bronchial asthma. **5**
- Q.9 Insulin. **5**
- Q.10 Types of Jaundice. **5**
- Q.11 Iron deficiency anemia. **5**
- Q.12 Pitting pedal edema. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Third Semester
EXERCISE THERAPY-II (PT-304)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|---|-----------|
| Q.1 | Explain the classification of crutches and types of crutch walking in detail. | 10 |
| Q.2 | Explain various determinants of gait. | 10 |
| Q.3 | Explain various causes of incoordination and its management. | 10 |
| Q.4 | Explain various types of suspension in detail. | 10 |

PART-B

- | | | |
|------|---|----------|
| Q.5 | Explain deep vein thrombosis. | 5 |
| Q.6 | Explain hand to knee gait. | 5 |
| Q.7 | Discuss aerobic exercise. | 5 |
| Q.8 | Discuss hold-relax technique. | 5 |
| Q.9 | Discuss various techniques of relaxation. | 5 |
| Q.10 | Discuss patterns of PNF. | 5 |
| Q.11 | Discuss various breathing exercises. | 5 |
| Q.12 | Discuss mat exercises. | 5 |

End Semester Examination, May 2015

Bachelor of Physiotherapy – Third Semester

ELECTROTHERAPY-II (PT-303)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe about properties of ultrasound waves. Discuss the thermal and non-thermal effects of ultrasound. **10**
- Q.2 Describe the principles of heating in short wave diathermy. Explain the different methods of placements of short wave diathermy. **10**
- Q.3 Enumerate the physical characteristics of L.A.S.E.R. and discuss the production of laser. **10**
- Q.4 Write the generation of non-luminous generator. Differentiate between the luminous and non-luminous generator. **10**

PART-B

- Q.5 Define bio feed back and explain its role in rehabilitation. **5**
- Q.6 Write a note on clinical application of combination therapy. **5**
- Q.7 Write the contraindication for use of cryotherapy. **5**
- Q.8 Discuss the dangers of ultraviolet therapy. **5**
- Q.9 Write the advantages and disadvantages of fluidotherapy. **5**
- Q.10 Explain contrast bath. **5**
- Q.11 Write a note on phonophoresis. **5**
- Q.12 Explain the following term:
a) Inverse square law.
b) Magnetron. **2¹/₂x2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Third Semester
PATHOLOGY AND MICROBIOLOGY (PT-302)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Differentiate between benign and malignant tumors. **10**
- Q.2 Differentiate between necrosis and apoptosis. **10**
- Q.3 Describe the modes of transmission of human immunodeficiency virus and the laboratory tests to detect the infection. **10**
- Q.4 Describe the cause of enteric fever and the laboratory diagnosis at different weeks of fever. **10**

PART-B

Write short notes on **any six** of the following:

- Q.5 Diabetes mellitus. **5**
- Q.6 Types of anemia. **5**
- Q.7 Causative factors of oedema. **5**
- Q.8 Haemolytic jaundice. **5**
- Q.9 Different stages in the life cycle of *Entamoeba histolytica*. **5**
- Q.10 Methods of sterilization by heat. **5**
- Q.11 Polio virus vaccine. **5**
- Q.12 Active immunity. **5**

End Semester Examination, May 2015

Bachelor of Physiotherapy – Third Semester

PHARMACOLOGY (PT-301)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What are the sympathomimetics drugs? Classify them. Mention the uses and side effects of sympathomimetics drugs. **10**
- Q.2 Mention the classification of receptors and explain what are the mechanism of action of drugs. **10**
- Q.3 Write the classification of the antihypertensive drugs. **10**
- Q.4 Write the classification of anticonvulsants drugs. Also mention the mode of action of anti convulsants drugs. **10**

PART-B

- Q.5 Write a short note on organophosphorous poisoning. **5**
- Q.6 Explain the bioavailability of drugs in brief. **5**
- Q.7 Explain the action of Nitrates. **5**
- Q.8 Discuss the action of 3rd generation Beta blockers. **5**
- Q.9 Explain the diuretics drugs and mode of their action. **5**
- Q.10 Name and explain the drugs which are COX-2 inhibitors. **5**
- Q.11 Write a note on long acting Penicillin antibiotic. **5**
- Q.12 Write a short note on Paracetamol/Acetaminophen **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
EXERCISE THERAPY-I (PT-204)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is PRE? Explain the DAPRE technique in detail. **10**
- Q.2 Discuss the principles and grades of manual muscle testing. Describe the testing procedures for right hip extensors. **10**
- Q.3 Define stretching. Write the principle and determinants of stretching. **10**
- Q.4 Explain the fundamental position of standing along with four derived positions. **10**

PART-B

- Q.5 Explain the types of goniometer. **5**
- Q.6 Explain Obee's test. **5**
- Q.7 Write the indication, contraindication and techniques of application of continuous passive movement. **5**
- Q.8 Discuss the principle of a passive movement. **5**
- Q.9 Explain the terms: active insufficiency and passive insufficiency with examples. **5**
- Q.10 Define the following terms:
a) Arthrokinematics.
b) Functional excursion. **5**
- Q.11 Write the indication for a joint mobilization. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
ELECTROTHERAPY-I (PT-203)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail indications of faradic type current. **10**
- Q.2 Explain in detail strength duration curve of normal innervated muscle. **10**
- Q.3 Explain physiology of pain and write parameters of TENS along its contraindications. **10**
- Q.4 Define iontophoresis. Write its principle, indication and contraindication in brief. **10**

PART-B

- Q.5 Explain types of nerve injuries. **5**
- Q.6 Write a note on high voltage pulsed galvanic stimulation. **5**
- Q.7 Explain various nerve conduction velocity. **5**
- Q.8 Explain various physiological effects of faradic type current. **5**
- Q.9 Write a note on medium frequency current. **5**
- Q.10 Write a note on chronaxie. **5**
- Q.11 Write a note on surging. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
PHYSIOLOGY-II (PT-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define a receptor. Give classification and properties of receptors. **10**
- Q.2 Describe the chemical regulation of respiration. **10**
- Q.3 Discuss the mechanism of formation of urine. **10**
- Q.4 Name the hormones secreted by pituitary gland. Describe the actions and control of secretion of ADH. **10**

PART-B

- Q.5 Describe various levels of control of body movements. **5**
- Q.6 Describe the functions of hypothalamus. **5**
- Q.7 Define vital capacity. Give its normal values. What are the factors affecting vital capacity. **5**
- Q.8 Describe parts and functions of middle ear. **5**
- Q.9 Differentiate between two types of nephrons in kidney. **5**
- Q.10 Discuss endocrine functions of testis. **5**
- Q.11 Explain the effects of exercise on respiratory system. **5**
- Q.12 Describe the transmission of nerve impulse across neuromuscular junctions. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Second Semester
ANATOMY-II (PT-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe the anatomy of pancreas under following headings:
a) Parts, surfaces and borders.
b) Blood supply and applied. **5x2**
- Q.2 Describe in brief:
a) Circle of Willis with applied.
b) Origin, insertion, action and nerve supply of extra ocular muscles. **5x2**
- Q.3 Describe gross features of cerebellum. **10**
- Q.4 a) Enumerate with a well labeled diagram of Sulci and Gyri of cerebrum. **5**
b) Write a short note on down's syndrome. **5**

PART-B

- Q.5 Write short notes on:
a) Urogenital Diaphragm. **3**
b) Innervation of Bladder. **2**
- Q.6 Describe ascending tracts of a spinal cord. **5**
- Q.7 Describe thyroid gland in short. **5**
- Q.8 Enumerate:
a) Branches of facial nerve. **3**
b) Structures forming stomach bed. **2**
- Q.9 Write short notes on:
a) Bronchopulmonary segments. **3**
b) Implantation. **2**
- Q.10 Describe division of anterior triangle of neck with contents of carotid triangle with a suitable diagram. **5**
- Q.11 Write short notes on:
a) Meninges **3**
b) Fourth ventricle **2**
- Q.12 Write short notes on:
a) CSF **3**
b) Cauda Equina. **2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
SOCIOLOGY (PT-105)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What are various problems faced by a disabled socially? Comment on few of them. **10**
- Q.2 Elaborate on existing caste system in India. **10**
- Q.3 What is social change? Discuss various factors of social change. **10**
- Q.4 Discuss the relationship of sociology with other sciences. **10**

PART-B

- Q.5 Write a short on juvenile delinquency. **5**
- Q.6 Briefly describe the social security measures available in India. **5**
- Q.7 Comment on concept of culture. Discuss the relationship between culture and disease. **5**
- Q.8 Write the importance of sociology to health care professionals. **5**
- Q.9 Discuss the theories of work. **5**
- Q.10 How does various social change leads to stress? **5**
- Q.11 Comment on various types of families. **5**
- Q.12 Write a short note on alcoholism. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
FUNDAMENTALS OF PHYSIOTHERAPY (PT-106
)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define lever. Classify different types of levers with examples and physiotherapeutic relevance. **10**
- Q.2 Define axis and planes. What are different axis and planes in anatomic position? Describe movement along them. **10**
- Q.3 Write in detail about characteristics of synovial joints and its classifications with suitable examples and diagrams. **10**
- Q.4 What do you understand by the word equilibrium? Classify equilibrium and describe the factors affecting equilibrium. **10**

PART-B

- Q.5 Explain muscle work and group action of muscles. **5**
- Q.6 Describe electromagnetic spectrum and relevance of different radiations. **5**
- Q.7 What is electric shock? Write about the first-aid management of an electric shock. **5**
- Q.8 Define Ohm's law. **5**
- Q.9 Describe function of pulley and its classification. **5**
- Q.10 Describe role of line of gravity in a human body. **5**
- Q.11 Explain clinical implications of an electric current in physiotherapy practice. **5**
- Q.12 Describe principles of hydrotherapy. **5**

End Semester Examination, May 2015

Bachelor of Physiotherapy – First Semester

BIOCHEMISTRY (PT-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is gluconeogenesis? How pyruvate can be converted to glucose? **10**
- Q.2 What is normal blood calcium level? Explain the mechanism by which Ca is maintained. **10**
- Q.3 Explain the co-enzyme functions of various B-complex vitamins with examples. **10**
- Q.4 Classify protein with examples. Explain the structure of protein and add a note on the structure-function relationship. **10**

PART-B

- Q.5 What are isoenzymes? Give an example. What are their clinical significance? **5**
- Q.6 Describe Jaundice and how do you investigate a case of jaundice. **5**
- Q.7 What is diabetes mellitus? What are acute and chronic complications in diabetes mellitus? **5**
- Q.8 What is atherosclerosis? How lipid profile values are associated with it? **5**
- Q.9 Briefly explain the structure and functions of DNA. **5**
- Q.10 How glucose is converted to glycogen in the body? Write the various steps of it. **5**
- Q.11 What are fatty acids? How they are classified? What are the functions of fatty acids? **5**
- Q.12 Explain the role of calcium in our body and how is it regulated. **5**

End Semester Examination, May 2015

Bachelor of Physiotherapy – First Semester

PHYSIOLOGY-I (PT-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss synthesis, catabolism and functions of haemoglobin. Also add a note on jaundice. **10**
- Q.2 Describe characteristic features of neuro-muscular junction. Explain transmission of nerve impulse at neuro-muscular junction. **10**
- Q.3 Describe nerve supply of heart and role of cardiac innervations in control of heart rate. **10**
- Q.4 Give the composition and functions of pancreatic juice. How its secretion is regulated? **10**

PART-B

- Q.5 Discuss structure and functions of platelets. **5**
- Q.6 Differentiate between isotonic and isometric contractions. **5**
- Q.7 Describe cardiac cycle. **5**
- Q.8 Write a note on strength–duration curve. **5**
- Q.9 Explain ionic basis of action potential in a nerve. **5**
- Q.10 Describe movements of small intestine. **5**
- Q.11 Discuss excitation-contraction coupling. **5**
- Q.12 Describe facilitated diffusion with an example. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – First Semester
ANATOMY-I (PT-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the shoulder joint with special emphasis on abduction with labeled diagram. **10**
- Q.2 Describe brachial plexus along with its roots, trunks, cords and branches with labeled diagram and clinical anatomy. **10**
- Q.3 Classify in detail muscles of human body with examples. **10**
- Q.4 Describe structure of heart with chambers, coverings, surfaces, borders with clinical anatomy and labeled diagrams. **10**

PART-B

Write short notes on **any Six** of the following:

- Q.5 Osteology of humerus. **5**
- Q.6 Typical ribs. **5**
- Q.7 Cubital fossa. **5**
- Q.8 Bronchopulmonary segment. **5**
- Q.9 Inguinal canal and Inguinal hernia. **5**
- Q.10 Arches of foot. **5**
- Q.11 Venous drainage of lower limb. **5**
- Q.12 Quadriceps femaris muscle. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
DISABILITY PREVENTION AND REHABILITATION (PT-804)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the functions of various members of rehabilitation team. **10**
- Q.2 Briefly explain assessment of a stroke patient. Describe physiotherapy management of a stroke patient in detail. **10**
- Q.3 Describe pulmonary rehabilitation for COPD patients. **10**
- Q.4 What are the signs and symptoms of DMD? Describe its physiotherapy management in detail. **10**

PART-B

- Q.5 Briefly explain the levels of prevention of disability. **5**
- Q.6 Write a short note on rule of nine in burn size estimation. **5**
- Q.7 Explain AFO with its uses. **5**
- Q.8 Write a short note on vocational rehabilitation. **5**
- Q.9 Briefly describe motor, sensory, autonomic effects and deformities in median nerve injury. **5**
- Q.10 What are the various cause of cerebral palsy? **5**
- Q.11 What is ICIDH classification of WHO? **5**
- Q.12 Write a short note on STNR. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
GENERAL PHYSIOTHERAPY (PT-803)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe various types of burns. Discuss its estimation. What rehabilitation principles are followed in burns? **10**
- Q.2 Explain the principles of exercise prescription in pregnancy. **10**
- Q.3 What are the components of geriatric assessment? Also discuss physiological changes associated with ageing. **10**
- Q.4 What is Lymphoedema? Explain its types. Also throw light on management of oedema. **10**

PART-B

- Q.5 Briefly explain the respiratory complications following abdominal surgery and its management. **5**
- Q.6 Briefly explain types of cerebral palsy. **5**
- Q.7 Explain WRMSD's in brief. **5**
- Q.8 Write a short note on physiotherapy management of a radical mastectomy. **5**
- Q.9 Explain the patho-physiology and management of Otitis media. **5**
- Q.10 Explain the role of PUVA therapy in management of psoriasis. **5**
- Q.11 Discuss the role of physiotherapy in cancer management. **5**
- Q.12 Explain the types on incontinence. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Eighth Semester
SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (PT-802)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you understand by shoulder impingement? Give its classification and various causes for the same. **10**
- Q.2 Discuss the various roles and responsibilities of a physiotherapist in a sports team. **10**
- Q.3 Discuss the principles of training in detail. **10**
- Q.4 What is tennis elbow? Write down its causes, pathology, sign/symptoms and special tests for it. Add an note on its management. **10**

PART-B

- Q.5 Explain in detail the importance of pre-game meal on performance. **5**
- Q.6 What are the precautions a diabetic athlete should take while training and competition? **5**
- Q.7 What are the problems faced by a senior athlete and how can these be managed? **5**
- Q.8 Write in short about the advantages and disadvantages for carbohydrate loading. **5**
- Q.9 Explain the features of overtraining syndrome. **5**
- Q.10 Write a short note on protective equipments in sports. **5**
- Q.11 Write short notes on:
a) Supraspinatus tendinitis
b) Patello femoral pain syndrome. **5**
- Q.12 Write short notes on:
a) Shin splint.
b) Olecranon Bursitis. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Eighth Semester
COMMUNITY BASED REHABILITATION (PT-801)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the various theories behind the concept of health and disease. **10**
- Q.2 Explain the role of a community based physiotherapist in preventing various kinds of disabilities. **10**
- Q.3 Discuss in detail the contribution of ESIC in providing social security to the people. **10**
- Q.4 Discuss the problems of vulnerable groups and ways of minimizing it. **10**

PART-B

- Q.5 What are the measures of central tendency? **5**
- Q.6 Write a short note on water norma for potability purification. **5**
- Q.7 Discuss demographic cycle. **5**
- Q.8 Write a short note on family planning. **5**
- Q.9 Explain the role of a social health worker. **5**
- Q.10 Discuss the disabilities encountered in LEPROSY. How can it be prevented? **5**
- Q.11 Advise and draft a diet plan for a pregnant lady assuming you are the only person available to do so in a community setting. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Seventh Semester
PEDIATRICS AND PEDIATRIC PHYSIOTHERAPY (PT-703)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 The parents of a 5 year old boy complains of frequent falling and inability to climb stairs. Also his condition is deteriorating but fine movements are preserved. Write down the detailed assessment and management of the case. **10**
- Q.2 What do you understand by growth? Explain various parameters assessed to evaluate a pediatric growth. **10**
- Q.3 What is scoliosis? Classify it and write down its detailed assessment. **10**
- Q.4 What is CTEV? Write down its detailed management. **10**

PART-B

- Q.5 Briefly explain osteogenesis imperfecta. **5**
- Q.6 Write a short note on lead poisoning. **5**
- Q.7 Explain the immunization programs in India. **5**
- Q.8 Briefly explain various measures taken to prevent a disability. **5**
- Q.9 Explain the clinical features and management of marfan's syndrome. **5**
- Q.10 Briefly explain management of club foot. **5**
- Q.11 Write a short note on down's syndrome. **5**
- Q.12 Write a short note on post-polio-paralysis. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Seventh Semester
CARDIOPULMONARY PHYSIOTHERAPY (PT-702)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain pulmonary rehabilitation of a 50 year old male COPD patient. Briefly explain surface marking of lungs. **10**
- Q.2 What is coronary artery disease? Explain physiotherapy management of a patient managed surgically. **10**
- Q.3 What are secretion clearance techniques? Explain any three in detail. **10**
- Q.4 What are congenital heart diseases? Discuss tetralogy of fallot in detail with PT management. **10**

PART-B

Write short notes on:

- Q.5 Mechanism of heart sounds. **5**
- Q.6 Systemic circulation. **5**
- Q.7 Active cycle of breathing technique. **5**
- Q.8 Reynolds disease and its physiotherapy management. **5**
- Q.9 Incision over thorax. Indications of median Sternotomy. **5**
- Q.10 Importance of pre-operative physiotherapy in elective surgical management of diseases. **5**
- Q.11 Chest trauma and its management. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Seventh Semester
CARDIOPULMONARY AND CARDIOPULMONARY SURGERY (PT-701)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss clinical features and diagnosis of a Rheumatic fever. **10**
- Q.2 Describe clinical features, complications and treatment of myocardial infraction. **10**
- Q.3 Describe lung disorders due to cigarette smoking. Explain the differences between obstructive and restrictive lung disorders. **10**
- Q.4 Describe clinical features and types of carcinoma lung. **10**

PART-B

Write short notes on:

- Q.5 Risk factors of atherosclerosis. **5**
- Q.6 Ventricular septal defect. **5**
- Q.7 Treatment of bronchial asthma. **5**
- Q.8 Pneumothorax. **5**
- Q.9 Differentiate between emphysema and chronic bronchitis. **5**
- Q.10 Anti tubercular drugs. **5**
- Q.11 Complications of myocardial infarction. **5**
- Q.12 Treatment of pneumonia. **5**

End Semester Examination, May 2015
 Bachelor of Physiotherapy - Sixth Semester
RESEARCH METHODOLOGY AND BIOSTATISTICS (PT-604)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 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, median and mode.

10

Q.2 Explain sampling. Enumerate various sampling methods in detail.

10

Q.3 Calculate the Karl Pearson coefficient of correlation from the following table and comment on the type of correlation:

X	20	30	40	50	60	70
Y	8	12	20	10	6	4

10

Q.4 What do you understand by a research? Describe various study designs in detail.

10

PART-B

Q.5 What are the different laws of statistics?

5

Q.6 Describe the types of errors in a clinical research.

5

Q.7 Discuss the characteristics of a good average.

5

Q.8 Discuss any five ethical principles to be followed in a clinical research.

5

Q.9 Write a short note on various types of theoretical distributions.

5

Q.10 Two workers on the same job show the following results over a long period of time:

	Worker A	Worker B
Mean time of completing the job in m	30	25
Standard deviation	6	4

e) Which worker appears to be more consistent in the time he requires to complete the job?

f) Which worker appears to be faster in completing the job?

2½x2

Q.11 Calculate standard deviation of the following series:

Daily wages	0-10	10-20	20-30	30-40	40-50
No. of works	2	7	10	5	3

5

Q.12 Define and explain the types of validity in brief.

5

End Semester Examination, May 2015
Bachelor of Physiotherapy – Sixth Semester
MANUAL THERAPY (PT-603)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the 'Maitland concept' of manual therapy. Describe in detail about the glides with help of a labeled diagram. **10**
- Q.2 What is massage therapy? What are the physiological changes that occur after massage? **10**
- Q.3 Explain the 10-step corrective technique method given by McKenzie for back pain. **10**
- Q.4 Explain in detail about the slump test. What are the main differences between slump test and SLR? **10**

PART-B

- Q.5 Write the lower limb tension test for deep a peroneal nerve. **5**
- Q.6 Describe how can we achieve pain relief through Kaltenborn concept of mobilization? **5**
- Q.7 Explain about the Kneading technique of massage. **5**
- Q.8 Differentiate between mulligan and Maitland concepts of mobilization. **5**
- Q.9 Explain mobilization technique of shoulder joint. **5**
- Q.10 Explain indication and contraindications of massage. **5**
- Q.11 Explain ULTT-3. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Sixth Semester
NEUROLOGICAL PHYSIOTHERAPY (PT-602)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | Explain in detail physiology of pain along its management. | 10 |
| Q.2 | Write in detail physiotherapy management of patient with cerebral palsy. | 10 |
| Q.3 | Write in detail physiotherapy management of patient with head injury. | 10 |
| Q.4 | Write in detail physiotherapy management of patient with poliomyelitis. | 10 |

PART-B

- | | | |
|------|---|----------|
| Q.5 | Describe various principles of PNF. | 5 |
| Q.6 | Describe various inhibitory techniques of rood's approach. | 5 |
| Q.7 | Describe briefly various coordination test. | 5 |
| Q.8 | Describe briefly primitive reflexes. | 5 |
| Q.9 | Describe briefly various superficial sensation along its testing. | 5 |
| Q.10 | Describe briefly hemiplegic gait. | 5 |
| Q.11 | Describe briefly structure of neuron. | 5 |

End Semester Examination, May 2015
Bachelor of Physiotherapy (Neurology) – Sixth Semester
NEUROLOGY AND NEUROSURGERY (PT-601)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is a stroke? Mention the etiology of stroke in detail. Explain the investigation to rule out a stroke. Mention the plan of treatment of a stroke patient. **10**
- Q.2 What is motor neuron disease? Mention the types of motor neuron diseases. Explain the investigation and treatment pertaining to a motor neuron disease. **10**
- Q.3 What is Parkinsonism? Explain the etiology, clinical features and plan of treatment in Parkinsonism. **10**
- Q.4 Define cerebral palsy. Describe the different types of cerebral palsy and plan of its management. **10**

PART-B

- Q.5 Explain bell's palsy in detail. **5**
- Q.6 Write the management of Duchene muscular dystrophy. **5**
- Q.7 Describe 'Meningitis', its etiology and treatment. **5**
- Q.8 Describe Guillain-Barre syndrome. **5**
- Q.9 Describe cholera. **5**
- Q.10 Explain in brief the myasthenia gravis. **5**
- Q.11 Differentiate between syncope and seizure. **5**
- Q.12 Explain the management of a head injury. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
BIOMECHANICS-II (PT-503)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Elaborate on the principles of a VDT unit. Highlight the major guidelines of it. **10**
- Q.2 Enumerate on the prevention strategies for a work related musculoskeletal disorders. **10**
- Q.3 Define biomechanics. Write in detail the importance of biomechanics in the field of physiotherapy. **10**
- Q.4 Explain in details the various determinants of a GAIT. **10**

PART-B

- Q.5 Define Newton's Second law of motion with an example. **5**
- Q.6 How will you design a workstation for a physical therapist? **5**
- Q.7 What will be the prevention strategy for work related neck pain? **5**
- Q.8 Discuss the Trendelenberg GAIT. **5**
- Q.9 How to calculate and write uses of 'Q' angle? **5**
- Q.10 Explain the length tension curve. **5**
- Q.11 Name the various ligaments of spine and write the functions of each. **5**
- Q.12 Write short notes on:
a) Stride length
b) Degree of toe out. **2½x2**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
ORTHOPAEDICS PHYSIOTHERAPY (PT-502)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss an assessment in case of a below knee amputation and its management principles. **10**
- Q.2 Describe the local complications of fracture with PT management and explain the guidelines of each of them. **10**
- Q.3 Explain the pre-and post-operative PT management for TKR. **10**
- Q.4 Describe the assessment and PT management for L₄ –L₅ disc lesion. **10**

PART-B

- Q.5 Describe the variants of a tennis elbow. **5**
- Q.6 Explain the importance of Cobb's angle. **5**
- Q.7 Differentiate between osteotomy and arthrodesis. **5**
- Q.8 Discuss the various stages of a frozen shoulder with PT management. **5**
- Q.9 Write down the clinical assessment of a median nerve injury. **5**
- Q.10 Explain the pathophysiology of a "bamboo" spine along with its clinical features. **5**
- Q.11 Describe the assessment for a musculoskeletal injury. **5**
- Q.12 Explain the complications of surgical neck of a humerus fracture along with PT management. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fifth Semester
ORTHOPEDECS (PT-501)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain osteosarcoma. Explain its clinical features, radiological features, diagnosis and management. **10**
- Q.2 Explain fracture along with its classification and complications. **10**
- Q.3 Explain paraplegic patient, his rehabilitation and management. **10**
- Q.4 Explain prolapse intervertebral disc-etio-pathogenesis, clinical presentation diagnosis and treatment. **10**

PART-B

Write short notes on:

- Q.5 CTEV shoes. **5**
- Q.6 Tennis Elbow. **5**
- Q.7 Plaster of paris. **5**
- Q.8 Radiological feature of osteoarthritis of knee joint. **5**
- Q.9 Brodie's abscess. **5**
- Q.10 Fracture with dislocation, definition and examples. **5**
- Q.11 Lachmann's and mcmurray's test. **5**
- Q.12 Functional cast bracing. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy – Fourth Semester
ADMINISTRATION AND ETHICS (PT-405)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | What is performance appraisal? Discuss 360° method of appraisal. | 10 |
| Q.2 | Explain Consumer Protection Act in detail. | 10 |
| Q.3 | How do you plan for setting up a new clinic of physiotherapy? Explain. | 10 |
| Q.4 | Elaborate on medical insurance in India. | 10 |

PART-B

- | | | |
|------|--|----------|
| Q.5 | Write a short note on budget. | 5 |
| Q.6 | Explain utilization review. | 5 |
| Q.7 | What are standards of practice for physiotherapy? | 5 |
| Q.8 | How do you take care of equipments in physiotherapy OPD? | 5 |
| Q.9 | Briefly outline the history of physical therapy. | 5 |
| Q.10 | What are the benefits available to disabled persons in India? Elaborate them. | 5 |
| Q.11 | Explain the requirements or information you need before taking a lecture on ethics in physiotherapy. | 5 |

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
PSYCHOLOGY AND PSYCHIATRY (PT-404)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail about Freud's psychoanalytic theory of dynamic approaches of personality with a suitable diagram. **10**
- Q.2 Write in detail about experimental method of psychology. **10**
- Q.3 What do you understand by psychiatric disorders? Explain in detail the etiological factors of psychological disorders. Mention the names of neurological transmitters and explain their role in psychiatric disorders. **10**
- Q.4 Define amnesia. Describe different types of amnesia. **10**

PART-B

- Q.5 Enumerate indicators of arousal. Write a short note on arousal and its performance. **5**
- Q.6 Explain with example the concept of stereotype in social perceptions. **5**
- Q.7 Explain the factors responsible for an attitude change. **5**
- Q.8 Write a short note on obsessive compulsory disorder(OCD). **5**
- Q.9 Explain hallucination in brief. **5**
- Q.10 Discuss about puerperal mental disorder. **5**
- Q.11 Add a note on suicidal tendency. **5**

End Semester Examination, May 2015
Bachelor of Physiotherapy - Fourth Semester
BIOMECHANICS (PT-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write in detail about the precision and prehension of the hand. **10**
- Q.2 Define a joint. Give classification of joints of the human body with examples. **10**
- Q.3 How does study or knowledge of biomechanics helps physiotherapist? Write in detail with examples. **10**
- Q.4 Discuss the biomechanics of an Elbow joint. Also write a note on carrying angle. **10**

PART-B

- Q.5 Define Newton's second law of motion with an example. **5**
- Q.6 Define force and discuss the various internal and external forces that affect a human motion. **5**
- Q.7 Explain the length tension curve of skeletal muscles. **5**
- Q.8 What is scapula humeral rhythm? Write down its uses. **5**
- Q.9 What do you understand by concave-convex rule? Explain with the help of a diagram. **5**
- Q.10 Discuss the various types of muscle work. **5**
- Q.11 Explain stress-strain curve with the help of a diagram. **5**
- Q.12 Give classification of a skeletal muscle fibre according to arrangement of fibres. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Sports) – Fourth Semester
EXERCISE PHYSIOLOGY AND EXERCISE PRESCRIPTION IN SPORTS
(MPS-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: *1*

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain why the ATP –Pcr and glycolytic energy systems are considered an aerobic. **10**
- Q.2 Explain the hormonal regulation of glucose metabolism during an exercise. **10**
- Q.3 Explain the regulation of respiration during an exercise. **10**
- Q.4 Discuss the bio-mechanical consideration in a strength training. **10**

PART-B

- Q.5 Explain the role of pre-game meal on performance. **5**
- Q.6 What importance is of Vo₂ max to endurance performance? **5**
- Q.7 Explain the changes in cardiac output during an exercise. **5**
- Q.8 Explain the importance of lactate threshold. **5**
- Q.9 Explain the factors that effect exercise prescription. **5**
- Q.10 What is runner's high? **5**
- Q.11 Discuss the importance of exercise testing for aging athlete. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Sports) - Second Semester
PHYSIOTHERAPY IN SPORTS (MPS-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define doping. What are the different ways of doping and what steps can be taken to control doping? **10**
- Q.2 What are the various injuries seen in adolescent athletes? Discuss any two of them in detail. **10**
- Q.3 Give classification of sports injuries according to acute and overuse. **10**
- Q.4 Define massage. Discuss its various physiologic effects in detail. **10**

PART-B

- Q.5 Define stretching. Give its beneficial effects in sports training. **5**
- Q.6 Write a short note on how to prevent DOMS. **5**
- Q.7 What is female athlete triad? How is it managed? **5**
- Q.8 What role do exercises have on mood enhancement? **5**
- Q.9 Discuss the role of physiotherapy management for obesity. **5**
- Q.10 What are the disadvantages of plyometric exercises and how to prevent them? **5**
- Q.11 Define Lewis hunting phenomenon. **5**

End Semester Examination, May 2015
Master of Physiotherapy - Second Semester
EVALUATION AND DIAGNOSIS IN SPORTS (MPS-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the importance of on-field assessment in sports. **10**
- Q.2 Write in detail the clinical examination, special tests, investigation and differential diagnosis of Patella tendonitis. **10**
- Q.3 Explain the following tests:
a) Speed test.
b) Anterior drawer test. **5x2**
- Q.4 Write in detail importance of field tests and describe any two field test used in sports rehabilitation in detail. **10**

PART-B

- Q.5 Write the importance of pre-participation evaluation. **5**
- Q.6 Explain slump test in brief. **5**
- Q.7 Discuss the importance of MRI as a diagnostic tool. **5**
- Q.8 How will you test tightness of Rectus Femoris? **5**
- Q.9 Write two tests for assessment of flexibility. **5**
- Q.10 Write the role of EMG studies in rehabilitation. **5**
- Q.11 Write any one test for agility assessment in sports. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Neurology) - Fourth Semester
EXERCISE PHYSIOLOGY AND EXERCISE PRESCRIPTION IN
NEUROLOGUY (MPN-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the principles of exercise prescription in the treatment of hypertension. **10**
- Q.2 Explain general principles of exercise testing. **10**
- Q.3 Discuss ACSM guidelines of exercise prescription in diabetes. **10**
- Q.4 Explain the role of exercise in athetoid cerebral palsy. **10**

PART-B

- Q.5 Write a short note on obesity. **5**
- Q.6 Explain Bruce's protocol. **5**
- Q.7 Explain VO₂ max. **5**
- Q.8 Explain principles of exercise prescription in patients diagnosed with neuromuscular disease. **5**
- Q.9 Describe the physiological adaptation to endurance exercise. **5**
- Q.10 Explain the effects of exercise on nervous system. **5**
- Q.11 Explain the role of exercise on cardiovascular system. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Neurology) - Second Semester
PHYSIOTHERAPY IN NEUROLOGY (MPN-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss in detail stage wise goals of physiotherapy management in parkinsonism as per Hoehn and Yahr scale. **10**
- Q.2 Describe the elective approach of management of a sub-acute MCA stroke patient in the light of recent advancements. **10**
- Q.3 Define complex regional pain syndrome. Classify it and give its management in physiotherapy practice. **10**
- Q.4 Write in detail about the physiotherapy management of T₄ level spinal cord injury patient along with its complications. **10**

PART-B

- Q.5 Write about a clinical picture of myasthenia gravis. **5**
- Q.6 What is autonomic dysreflexia? Give its physiotherapy management. **5**
- Q.7 Describe in brief about coma arousal technique. **5**
- Q.8 What is post-polio residual paralysis? Give details about gait and triple deformity in polio. **5**
- Q.9 Describe in brief about ataxia and its features. **5**
- Q.10 Describe about gower's sign. **5**
- Q.11 Give in detail about types of motor neuron disease. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Neurology) - Second Semester
EVALUATION AND DIAGNOSIS IN NEUROLOGY (MPN-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you understand by neurodynamics? Explain various maneuvers of SLR along with its clinical implications. **10**
- Q.2 Critically analyze a multidimensional functional assessment instrument. **10**
- Q.3 Examine the ANS functions of a 32 year old head injured patient. **10**
- Q.4 Highlight the role of various stages of a limb length testing and its clinical implications. **10**

PART-B

- Q.5 Briefly explain the assessment of dysarthria. **5**
- Q.6 Critically analyze the balance assessment as part of a neurological examination. **5**
- Q.7 Explain the role of sensory examination in assessment of a neurologically ill patient. **5**
- Q.8 Briefly examine the bowel and bladder functions of a T-6 SCI patient. **5**
- Q.9 Briefly explain the assessment of physical growth parameters. **5**
- Q.10 How will assess supratrochanteric shortening in lower extremity? **5**
- Q.11 Explain the classification of consciousness. **5**
- Q.12 Enumerate the usage of pain scales in neurological assessment. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Musculoskeletal) – Fourth Semester
EXERCISE PHYSIOLOGY AND EXERCISE PRESCRIPTION IN
MUSCULOSKELETAL (MPM-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the importance of immediate and anaerobic energy system on performance. **10**
- Q.2 Describe the levers of human body with suitable examples and diagrams. How is strength training affected by presence of levers? **10**
- Q.3 Explain the hormonal response during endurance training. **10**
- Q.4 What do you understand by recovery from training? What are various factors affecting recovery and what are various physiological and therapeutic means to enhance recovery? **10**

PART-B

- Q.5 Explain the importance of aerobic exercises in managing hypertension. **5**
- Q.6 Discuss the role of exercise in type II diabetes. **5**
- Q.7 Explain the principles of exercise prescription in neuromuscular diseases. **5**
- Q.8 Discuss the medical consideration in exercise for elderly. **5**
- Q.9 Enumerate important differences between exercise prescription for men and women. **5**
- Q.10 Define obesity according to WHO. Calculate the BMI for a person weighing 80 kg and height 5 feet 10 inches. **5**
- Q.11 Write a short note on chronological age and motor skill acquisition. **5**
- Q.12 Explain the effect of exercises on gastric emptying rate. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Musculoskeletal) - Second Semester
PHYSIOTHERAPY IN MUSCULOSKELETAL (MPM-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe the various parts of prosthesis. **10**
- Q.2 Describe the differences between mobilization and manipulation. Differentiate between Maitland and Kaltenborn schools of joint mobilization. **10**
- Q.3 What are the indications and contra-indications for TKR? What are the approaches used and rehabilitation protocol for the same? **10**
- Q.4 What is PFPS? Write a physiotherapy management for PFPS. **10**

PART-B

- Q.5 Describe the physiological aspects of ageing. **5**
- Q.6 Discuss the management options for shoulder instabilities. **5**
- Q.7 Discuss the different types of sacral dysfunctions. **5**
- Q.8 Describe rehabilitation for colles fracture. **5**
- Q.9 Describe the manipulation of CTEV. **5**
- Q.10 Write a short note on scoliosis. **5**
- Q.11 What is lateral list? **5**
- Q.12 Highlight the diagnostic criteria for RA. What physiotherapy management can be provided to a patient who is in exacerbation phase of the disease? **5**

End Semester Examination, May 2015
Master of Physiotherapy (Musculoskeletal) - Second Semester
EVALUATION AND DIAGNOSIS IN MUSCULOSKELETAL (MPM-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain in detail the metabolic disorders of bone and joints. **10**
- Q.2 Describe a radial nerve injury causes, clinical features, assessment and physiotherapy management. **10**
- Q.3 Write in detail about post prosthetic assessment and physiotherapy management of a below knee amputation. **10**
- Q.4 What is biofeedback? Explain the role of biofeedback in musculoskeletal physiotherapy. **10**

PART-B

- Q.5 Define burn? Explain the physiotherapy management of 2nd degree burn. **5**
- Q.6 Write a short note on assessment and management of CDH. **5**
- Q.7 Enumerate manual therapy approaches for the treatment of adhesive capsulitis. **5**
- Q.8 Write a short note on Isokinetic dynamometry. **5**
- Q.9 Explain lumbopelvic rhythm. **5**
- Q.10 Outline radiological findings of osteoarthritis of knee. **5**
- Q.11 What is posterior innominate rotation dysfunction? How will you diagnose and treat it? **5**

End Semester Examination, May 2015
Master of Physiotherapy(Cardiopulmonary) – Fourth Semester
EXERCISE PHYSIOLOGY AND PRESCRIPTION IN CARDIOPULMONARY
(MPC-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: *1*

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the general principles of exercise prescription. Enumerate the key points to prescribe exercise in Pulmonary Rehabilitation. **10**
- Q.2 Compare various exercise testing protocols with respect to their clinical relevance. **10**
- Q.3 Explain the reasons for conducting an exercise test. Write in detail about the termination criteria of the test. **10**
- Q.4 How does ventilatory movement strategies enhance the functional ability of a patient? What are the other techniques for improving functional capacity of an individual? **10**

PART-B

- Q.5 Define anaerobic threshold. What are the mechanisms of lactate increase as related to work rate? **5**
- Q.6 Write a short note on gas exchange kinetics. **5**
- Q.7 Write a critique on duration of test and incremental size of exercise test. **5**
- Q.8 Explain inpatient cardiac rehabilitation. **5**
- Q.9 Write about long term effect of exercise on blood pressure. **5**
- Q.10 Explain the role of smoking cessation in cardiopulmonary rehabilitation. **5**
- Q.11 Explain oxygen debt. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Cardiopulmonary) - Second Semester
PHYSIOTHERAPY IN CARDIOPULMONARY (MPC-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain Cardiac rehabilitation of a 25-years-old male who had undergone double valve replacement. **10**
- Q.2 List the neuromuscular disorders causing hypoventilation. How does physiotherapy play a role in managing the resulting symptoms? **10**
- Q.3 Draw the thoracic incisions. Explain the role of physiotherapy in cardiothoracic surgery. **10**
- Q.4 Draw and explain the process of myocardial infarction. Add a note on the role of physiotherapy in it. **10**

PART-B

- Q.5 Explain in brief about surfactant therapy. **5**
- Q.6 Describe Fontan procedure. **5**
- Q.7 Describe the pathology of hypertrophic cardiomyopathy. **5**
- Q.8 Enumerate the surgeries for Tetralogy of Fallot. **5**
- Q.9 Explain "APGAR" scoring. **5**
- Q.10 Explain coal worker's pneumoconiosis. **5**
- Q.11 List the valvular heart diseases. Write a note on heart valve replacement. **5**

End Semester Examination, May 2015
Master of Physiotherapy (Cardiopulmonary) - Second Semester
EVALUATION AND DIAGNOSIS IN CARDIOPULMONARY (MPC-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Draw a well labeled ECG of a normal 40 years old female. Explain the ECG finding of inferior wall myocardial infarction. **10**
- Q.2 Explain the term differential diagnosis, its importance in assessment. Explain the differential diagnosis of dyspnea. **10**
- Q.3 Write about the monitoring systems in an ICU. **10**
- Q.4 An elderly woman from a nursing home was transferred to hospital because of profound weakness and areflexia. Her oral intake had been poor for a few days. Current medication was a sleeping tablet which was administered by nursing staff as needed. Admission biochemistry (in mmol/l): Na⁺145, K⁺ 1.9, Cl⁻ 86, bicarbonate 45, anion gap 14 and a spot urine chloride 74 mmols/l.
pH-7.58
PCO₂-49 mm Hg
PO₂-not given
HCO₃-44.4 mmol/l
Identify and explain the acid base disorder **10**

PART-B

- Q.5 Give the differential diagnosis of Angina. **5**
- Q.6 Write a note on Arrhythmias. **5**
- Q.7 Describe CVP assessment in short. **5**
- Q.8 Explain clubbing and its stages. **5**
- Q.9 Describe shuttle walk test. **5**
- Q.10 Explain the differential diagnosis of cough. **5**
- Q.11 List the X-ray features of a patient with emphysema. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
SPORTS MANAGEMENT AND MARKETING (MNS-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define management. Explain various principles of management. **10**
- Q.2 Explain in detail various leadership styles giving suitable examples. **10**
- Q.3 What is meant promotion of sports? Explain various promotional methods and its determinants. **10**
- Q.4 Define marketing. Explain marketing mix with suitable examples. **10**

PART-B

- Q.5 Explain the role of exercise physiologist and nutritionist in sports. **5**
- Q.6 Write short notes on:
a) Group dynamics.
b) Types of groups. **5**
- Q.7 Explain briefly effect of media broadcasting on sports. **5**
- Q.8 Write a short note on future of sports marketing. **5**
- Q.9 Define conflict. Explain various ways of managing conflicts. **5**
- Q.10 "Goal setting is important for high performance". Justify the statement. **5**
- Q.11 Explain briefly high performance work practice. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
CURRENT TRENDS IN SPORTS NUTRITION (MNS-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the food guide pyramid as a teaching tool for athletes and also explain the myths about sports nutrition. **10**
- Q.2 Explain the role and functions of various boards and statutory bodies for control and promotion of sports. **10**
- Q.3 What are the role of sports in society? Discuss the issues that sports administrators faced on day to day basis. **10**
- Q.4 What are the role and functions of food packaging? Explain the product life cycle concept in detail. **10**

PART-B

- Q.5 How do we evaluate the athletes diet? **5**
- Q.6 Discuss the career opportunities in sports management companies. **5**
- Q.7 Discuss the role of Government in promotion of sports. **5**
- Q.8 Write a short note on nutrition guidelines for athletes. **5**
- Q.9 Write a short note on price of product/service. **5**
- Q.10 What is after sale service in a new product development? **5**
- Q.11 Write a short note on a new food product development. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
NUTRITION FOR VARIOUS GAMES AND SPORTS (MNS-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the role of nutrition in sports fitness and performance. **10**
- Q.2 Explain the competition day eating and special issues and requirements with reference to racket players, hydration, body fat and travel. **10**
- Q.3 Discuss in detail about the fluid and energy intake in team sports. **10**
- Q.4 Discuss about the banned substances in sports, their practices and effects. **10**

PART-B

Write short notes on:

- Q.5 The need to play sports. **5**
- Q.6 Post recovery meal in racket sports. **5**
- Q.7 Nutritional factors that could produce fatigue in team sports. **5**
- Q.8 Meal frequency in wrestlers. **5**
- Q.9 Impact of diet on menarche/menstrual functions. **5**
- Q.10 Protein needs in endurance sports. **5**
- Q.11 Proper weight cutting strategies for wrestlers. **5**

End Semester Examination, May 2015

M. Sc. (N & D) – Third Semester

EXERCISE PHYSIOLOGY (MNS-301)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What is exercise physiology? What are the objectives and scopes of exercise physiology? **10**
- Q.2 Describe the impact of physical training on muscular changes. **10**
- Q.3 Write down the adaptation to exercise in skeletal system. **10**
- Q.4 How does the body adapt during exercise at medium and high altitude? **10**

PART-B

- Q.5 Write a short note on acclimatization. **5**
- Q.6 Explain how does exercise helps in successful aging. **5**
- Q.7 Write down the significance of maximal O₂ consumption. **5**
- Q.8 Describe the concept recovery process and occurrence of fatigue in physical work. **5**
- Q.9 What are the technical preparation of sports person? **5**
- Q.10 Give the mechanism of thermal regulation of humans. **5**
- Q.11 "Nutrition education can help to enhance the performance level of an athlete". Is the statement correct? If yes, justify it. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
MICROBIOLOGY OF FOOD PROCESSING (MNF-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you mean by sterilization? Discuss the various techniques used in sterilization of equipments. **10**
- Q.2 Discuss the microbiological aspects of any food group in detail. **10**
- Q.3 Discuss the historical developments of various aspects in the field of food microbiology. **10**
- Q.4 Write in detail about any two latest trends of preservation methods used in food industries. **10**

PART-B

- Q.5 Write about the roles and responsibilities of any one national and an international food agency. **5**
- Q.6 Discuss about any two artificial additives used in food industry. **5**
- Q.7 Enumerate different types of drying process. Discuss any one type in detail. **5**
- Q.8 What are the different types of cleaning agents used in a food plant? **5**
- Q.9 What are the objectives of waste management in a food industry? **5**
- Q.10 With the help of a flowchart state the steps of survey of food borne disease outbreak. **5**
- Q.11 What is composting? Draw the diagram of a compost pile. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
ADVANCED FOOD PROCESSING AND TECHNOLOGY (MNF-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the following food products:
a) Bone meal.
b) Macaroni or pasta products.
c) Casing.
d) Yoghurt.
e) Mayonnaise. **2x5**
- Q.2 What are food additives? Explain any two of them. **10**
- Q.3 What is the principle of dehydration and discuss the methods of dehydration. **10**
- Q.4 Explain the sugar substitutes and sweetness used in confectionary. **10**

PART-B

- Q.5 Define:
a) Anticaking agent.
b) Bleaching agent.
c) Antioxidants.
d) Sweetness.
e) Germination. **1x5**
- Q.6 Write a short note on fermentation technology. **5**
- Q.7 Explain the preservation by sugar and curing. **5**
- Q.8 Discuss the forms of radiant energies with emphasis on ionizing radiation sources and properties. **5**
- Q.9 Describe the cool storage method and gas modification. **5**
- Q.10 Discuss preservation of meat and fish products. **5**
- Q.11 Discuss any two methods of milk processing in detail. **5**

End Semester Examination, May 2015
M. Sc. (N & D) - Fourth Semester
ADVANCED FOOD SCIENCE AND CHEMISTRY (MNF-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Describe the process of heat transfer during processing of food. **10**
- Q.2 What are enzymes? Explain various factors which influence enzyme activity. **10**
- Q.3 Discuss the types of food colors available with their properties and utilization in food processing. **10**
- Q.4 Give in detail the processing and chemical composition of coffee. **10**

PART-B

- Q.5 Explain the structure of water in brief. **5**
- Q.6 Write short notes on:
a) Freezing.
b) Shelf life **5**
- Q.7 Classify the proteins on the basis of their structures. **5**
- Q.8 Write a short note on enzymatic browning and saponification. **5**
- Q.9 Discuss on the role of polysaccharides in food industries. **5**
- Q.10 Explain the hydrogenation of fats. **5**
- Q.11 Write a short note on genetically modified foods. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Third Semester
FOOD PRODUCT DEVELOPMENT AND MARKETING (MNF-303)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|---|-----------|
| Q.1 | Write in detail about process of food products development. | 10 |
| Q.2 | Discuss role of packaging and labeling in food development process. | 10 |
| Q.3 | Explain the role of sensory evaluation in a new food product development. | 10 |
| Q.4 | Explain classification of a new food product development in detail. | 10 |

PART-B

- | | | |
|------|---|----------|
| Q.5 | Discuss technological and market place influences in relation to a new food product development in brief. | 5 |
| Q.6 | Enlist new products in food science and food ingredient industry. | 5 |
| Q.7 | Write a short note on objectives and criterion of screening of food products. | 5 |
| Q.8 | Discuss any two case studies related to new food products development. | 5 |
| Q.9 | Explain food spoilage in brief. | 5 |
| Q.10 | Write a note on test marketing in reference to a new food product development. | 5 |
| Q.11 | Explain thermal processing and irradiation in brief. | 5 |

End Semester Examination, May 2015
M. Sc. (N & D) – Third Semester
FOOD SAFETY AND QUALITY CONTROL (MNF-302)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss functions of food packaging. Also explain different materials and forms of food packaging. **10**
- Q.2 Classify the sensory tests and describe the different tests with suitable examples. **10**
- Q.3 Discuss HACCP as a method to control food borne diseases. **10**
- Q.4 Write short notes on:
a) Flavour enhancers
b) Non-nutritive sweeteners **5x2**

PART-B

- Q.5 Write a note on codex alimentarius. **5**
- Q.6 Which instruments would you use to test a) Cake b) Jalebi? **5**
- Q.7 List the preservatives added to food and explain their role. **5**
- Q.8 What are carcinogens and goitrogens? Explain in brief. **5**
- Q.9 What is shortometer? Describe its principle with examples. **5**
- Q.10 Explain nutrition labeling in brief. **5**
- Q.11 Write a short note on physical and biological hazards which endanger food safety. **5**

End Semester Examination, May 2015
M. Sc. (N & D) - Second Semester
STATISTICS AND RESEARCH METHODOLOGY (MND-205)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

Q.1 Of the 1000 workers in a factory exposed to an epidemic, 700 in all were attacked, 400 had been inoculated and of these, 200 were attacked. On the basis of this information, can it be said that inoculation and attack are independent. **10**

Q.2 Describe in detail, the layout of a research report, covering all relevant points. **10**

Q.3 Consider the following distribution:

X	0-10	10-20	20-30	30-40
f	12	18	20	25

Compute mean, median and mode. **10**

Q.4 Examine the merits and limitations of the questionnaire method in collecting data. Also enlist the main aspects of questionnaire. **10**

PART-B

Q.5 The following data give the number of passengers travelling by Boeing 747 from one city to another city in one week:
320, 290, 265, 300, 270, 200, 315
Calculate mean and standard deviation. **5**

Q.6 Write short notes on:
a) Consistency and inconsistency of data.
b) Coefficient of association. **2½x2**

Q.7 Explain any four sampling methods. **5**

Q.8 Define: mean, median, mode, random experiments and events. **5**

Q.9 What is the necessity of defining a research problem? Explain. **5**

Q.10 What is Chi-square test? Explain its significance in statistical analysis. **5**

Q.11 Write a short note on analysis of variance. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - Second Semester SPORTS NUTRITION (MND-204)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write in detail about the role of minerals in exercise performance. **10**
- Q.2 Discuss the management of disordered eating behavior in athletes. **10**
- Q.3 Explain in detail the general considerations for a physically active individual. **10**
- Q.4 Write a detailed note on recommended ORS. **10**

PART-B

Write short notes on:

- Q.5 Exercise and food intake. **5**
- Q.6 Pre-competition meal. **5**
- Q.7 Composition of human body. **5**
- Q.8 Physical activity as an important factor in weight control. **5**
- Q.9 Anorexia nervosa. **5**
- Q.10 Sports drinks. **5**
- Q.11 Respiratory quotient for carbohydrate. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - Second Semester CLINICAL NUTRITION (MND-203)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define:
a) Glycemic index.
b) Uremia.
c) Hepatic coma.
d) Prudent diet.
e) Impaired glucose tolerance. **2x5**
- Q.2 Explain the metabolic and anatomical changes in diabetes mellitus. **10**
- Q.3 Enumerate the points of MNT for **(ANY TWO)**:
a) Chronic pancreatitis.
b) Myocardial infarction.
c) Ulcerative colitis. **5x2**
- Q.4 Discuss the metabolic changes occurring during infection and fever. **10**

PART-B

- Q.5 Describe the nutrition care process in detail. **5**
- Q.6 Discuss the enteral mode of feeding with related complications. **5**
- Q.7 Write a short note on allergies. **5**
- Q.8 Explain the dietary management of acute renal failure. **5**
- Q.9 Describe the role of fibre in the dietary management of diarrhoea and constipation. **5**
- Q.10 Write a short note on sodium restricted diets. **5**
- Q.11 Explain the nutritional management of:
a) Malabsorption syndrome.
b) Gout. **2½x2**

End Semester Examination, May 2015
M. Sc. (N & D) - Second Semester
INSTRUMENTATION FOR FOOD ANALYSIS (MND-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you understand by photometry? Discuss the principle and working of colorimetry. **10**
- Q.2 Discuss nuclear magnetic resonance and its applications. **10**
- Q.3 What do you understand by RIA? Discuss its working in detail. **10**
- Q.4 Define electrophoresis. Explain the principle of gel electrophoresis. **10**

PART-B

- Q.5 Differentiate between GLC and HPLC. **5**
- Q.6 Briefly explain the principle of working of pH meter. **5**
- Q.7 Explain the theory of weak acid dissociation. **5**
- Q.8 Differentiate between:
a) Acids and Bases.
b) Bomb colorimetry and coffee cup colorimetry. **2½x2**
- Q.9 Write short notes on:
a) Radioactive isotopes.
b) BMR. **2½x2**
- Q.10 What are the various applications of ELISA technique? **5**
- Q.11 Briefly explain the principle of atomic absorptionmetry. **5**

End Semester Examination, May 2015

M. Sc. (N & D) - Second Semester FOOD MICROBIOLOGY (MND-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss in detail the principles of HACCP. **10**
- Q.2 What do you understand by fermentation? Discuss any four fermented products. **10**
- Q.3 Write in details about normal growth curve of bacteria. **10**
- Q.4 Discuss about food borne disease caused by salmonella, shigella and escherichia. **10**

PART-B

- Q.5 Differentiate between eukaryotic and prokaryotic cells. **5**
- Q.6 Write short notes on **(ANY TWO)**:
a) Radiation.
b) Freezing.
c) Drying. **5**
- Q.7 Write the properties of water affecting microbial population. **5**
- Q.8 Give the microbiology of:
a) Meat.
b) Milk. **5**
- Q.9 Write a short note on single cell protein. **5**
- Q.10 Discuss any one method for measurement of microbial growth in brief. **5**
- Q.11 Give Whittaker's five kingdom classification. **5**

End Semester Examination, May 2015

M. Sc. (N & D) – First Semester

FOOD AND NUTRITION (MND-105)

Time: 3 hrs

Max Marks: **60**

No. of pages: *1*

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Define protein quality. Discuss factors affecting the protein quality in detail. **10**
- Q.2 Classify different methods of cooking and explain any four in detail. **10**
- Q.3 What is the principle involved in the preservation of jams and jellies? Give the method of making jam in detail. **10**
- Q.4 Discuss canning as a method of preservation of food in detail. **10**

PART-B

- Q.5 Write a short note on selection of a fish and also give composition of a fish. **5**
- Q.6 Explain various functions of food in brief. **5**
- Q.7 Define BMR and explain factors affecting BMR in brief. **5**
- Q.8 Write a short note on fortification and enrichment. **5**
- Q.9 What are flavour compounds present in fruits and vegetables? Discuss. **5**
- Q.10 Define:
a) Malnutrition
b) Health **5**
- Q.11 Explain nutritive value and culinary uses of pulses. **5**

End Semester Examination, May 2015
M. Sc. (N & D) - First Semester
**PEDAGOGY, ADMINISTRATION AND ETHICAL ISSUES IN NUTRITION
AND DIETETICS (MND-104)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you mean by the term "Education"? How will you interpret education in its broader and narrower sense? **10**
- Q.2 Indicate the need and importance of curriculum. Point out factors affecting the curriculum development. **10**

- Q.3 Enumerate important methods of teaching. Give a detailed view of one method of your choice mentioning its merits and limitations. **10**
- Q.4 What are teaching aids? What factors to be kept in mind while preparing audio visual aids? Explain by giving suitable examples. **10**

PART-B

- Q.5 What are the salient features of idealism as a philosophy of education? **5**
- Q.6 Define educational psychology. What is the nature of educational psychology? **5**
- Q.7 Differentiate between educational and instructional objectives. **5**
- Q.8 Discuss the need and importance of a lesson planning. **5**
- Q.9 Write short notes on:
a) Evaluation devices.
b) Projected and non-projected audio-visual aids. **2½x2**
- Q.10 Explain Consumer Protection Act 1986 (CPA 1986) in detail. **5**
- Q.11 "Privatization of education is very important to meet the demand and challenges in the today's competitive world". Justify the statement. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – First Semester
NUTRITION FOR VULNERABLE AND SPECIAL GROUP (MND-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Give a broad classification of nutrients on the basis of their functions. Explain in detail about food groups and food pyramid in a meal planning. **10**
- Q.2 What do you mean by weaning? Which nutrients require special attention while planning weaning foods and why? **10**
- Q.3 What are the physiological functions which changes with age? How does these changes affects the nutritional intake of senior citizens? **10**
- Q.4 Discuss the factors which need attention to ensure successful lactation. Explain the nutritional needs during first six months of lactation. **10**

PART-B

- Q.5 Explain advantages of mother milk for an infant. **5**
- Q.6 How can we improve the nutritional status of an industrial workers? Explain. **5**
- Q.7 Discuss the complications and their nutritional management during pregnancy. **5**

- Q.8 Explain the recommended dietary reference allowances for man and woman. **5**
- Q.9 Discuss how parents can help their children to develop good food habits? **5**
- Q.10 Explain the general principles of deriving RDA. **5**
- Q.11 Explain the fundamental aspects of a meal planning. **5**

End Semester Examination, May 2015
M. Sc. (N & D) – First Semester
ADVANCED HUMAN PHYSIOLOGY (MND-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Explain the mechanism of urine formation. **10**
- Q.2 Briefly describe the role of pancreas, liver and gall bladder in the process of digestion. **10**
- Q.3 Describe the mechanism of blood coagulation. **10**
- Q.4 Define the following:
- a) Hypoxia
 - b) GFR
 - c) Cardiac Output
 - d) Eupnoea
 - e) Cerebrospinal fluid
- 2x5**

PART-B

- Q.5 Define cell. What are junctional complexes? **5**
- Q.6 Explain the different types of blood groups. **5**
- Q.7 What is the function of autonomic nervous system? **5**
- Q.8 Briefly describe the CO₂ transport in blood. **5**
- Q.9 Describe the physiology of taste. **5**
- Q.10 What is arterial blood pressure? Explain the factors affecting it. **5**
- Q.11 Match the following enzymes/hormones with the place of their occurrence:
- | | |
|--------------------|-------------|
| a) Stomach | Trypsinogen |
| b) Pancreas | Bile |
| c) Liver | Ptyalin |
| d) Small intestine | Pepsinogen |
| e) Mouth | Erepsin |
- 1x5**

End Semester Examination, May 2015
M. Sc. (N & D) – First Semester
ADVANCED NUTRITIONAL BIOCHEMISTRY (MND-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 'Proteins can be classified on various basis'. Elaborate the statement. **10**
- Q.2 With the help of Michaelis-Menten equation, explain the kinetics of enzymes. Also discuss how enzyme as act catalyst. **10**
- Q.3 What is TCA cycle? Describe the steps and explain why can't citric acid cycle operate in absence of oxygen. **10**
- Q.4 'Fatty acid oxidation is not simply the reversal of fatty acid synthesis' justify the statement. **10**

PART-B

- Q.5 With the help of chemical reactions discuss the properties of fats. **5**
- Q.6 Write short notes on structure of DNA and Chargabb's rule of DNA composition. **5**
- Q.7 Write the functions and deficiency symptoms of any two macro minerals. **5**
- Q.8 Explain urea cycle with the help of a diagram. **5**
- Q.9 Discuss composition and function of blood. **5**
- Q.10 Discuss the mode of action of group-I hormones. **5**
- Q.11 Give the structure of the following:
a) AMP
b) Lactose **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
ADVANCES IN NUTRITIONAL BIOCHEMISTRY (MNC-403)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Discuss the digestion of carbohydrates in the body. **10**
- Q.2 How is cellular growth of brain is affected by malnutrition? Explain. **10**
- Q.3 What do you mean by ketone bodies? Discuss its relation with blood glucose levels. **10**
- Q.4 Discuss catabolism and functions of hemoglobin in detail. **10**

PART-B

- Q.5 What do you understand by recombinant DNA technology? **5**
- Q.6 What are various applications of PCR technique? **5**
- Q.7 How is detoxification helpful in maintaining a body balance? **5**
- Q.8 What is the role of electrolytes in maintaining acid-base balance? **5**
- Q.9 What do you understand by gene expression? Explain in brief. **5**
- Q.10 Briefly explain celiac disease. **5**
- Q.11 What is the role of liver and pancreas in digestion? **5**

End Semester Examination, May 2015
M. Sc. (N & D) – Fourth Semester
NUTRITION IN EMERGENCIES AND DISASTERS (MNC-402)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Write factors giving rise to an emergency situation. Explain in detail nutritional management in any one emergency situation, illustrating using from Indian subcontinent. **10**
- Q.2 What are the causes of malnutrition in an emergency situation? How do we manage protein energy malnutrition in two phases? **10**
- Q.3 How do we assess the food need in emergency situation? Explain in detail about mass and supplementary feeding. **10**
- Q.4 Describe in detail the anthropometric assessment of nutritional status of emergency affected population. **10**

PART-B

- Q.5 Explain the various indicators of malnutrition during emergency in brief. **5**
- Q.6 Write short notes on nutrition surveillance and health surveillance. **5**
- Q.7 Write a brief note on hygiene and food storage in emergency situation. **5**
- Q.8 What are the preventive measures of communicable diseases during emergency? **5**

- Q.9 Explain about functions of national nutrition programme in emergency. **5**
- Q.10 How is public nutrition approach related to tackle nutritional problems in emergency? **5**
- Q.11 Write full forms of the followings:
- a) UNDHA
 - b) UNDRO
 - c) UNCHR
 - d) UN/ILO
 - e) USOFDA
- 5**

End Semester Examination, May 2015
M. Sc. (N & D) - Fourth Semester
MANAGEMENT OF NUTRITION PROGRAMMES (MNC-401)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 Draw and discuss the proceed, precede model of programme planning. **10**
- Q.2 State the meaning and objectives of evaluation. Depict the eight stage mode of evaluation plan. **10**
- Q.3 Discuss in detail the various components of health. **10**
- Q.4 Discuss the goals, merits, demerits and lacunae of any existing nutrition related programme in brief. **10**

PART-B

- Q.5 Depict and discuss the 'Triple A' cycle with respect to nutrition surveillance. **5**
- Q.6 Write a short note on chain model of programme development. **5**
- Q.7 Discuss the role of MIS in planning and monitoring of any nutrition programme. **5**
- Q.8 Write in short about the nature and scope of health care programmes in India. **5**
- Q.9 Discuss the role of right based approach for the formation of PWN in India. **5**
- Q.10 Elaborate on the various principles of working with a community. **5**
- Q.11 Discuss the following terms (**any two**):
- a) Monitoring
 - b) Goal
 - c) Programme
- 2½x2**

End Semester Examination, May 2015
M. Sc. (N & D) - Third Semester
NUTRITION RELATED DISORDERS (MNC-303)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- Q.1 What do you mean by malabsorption syndrome? Discuss any two types of malabsorption syndrome in brief. **10**
- Q.2 Write a detailed note on nutritional therapy given to a cancer patient. **10**
- Q.3 Discuss the various stages of dying process in details. **10**
- Q.4 Give a detailed information on the defects symptoms and management of familial hypercholesterolemia. **10**

PART-B

- Q.5 What precautions should be considered while planning a diet for galactosemic patient? **5**
- Q.6 What is the normal level of phenylalanine in human body? Discuss the dietary goals and management for a phenylketonuric patient. **5**
- Q.7 Name and explain the role of different proteins in a copper metabolism. How is it different in Wilson disease? **5**
- Q.8 Discuss the goals of nutrition therapy to overcome the complications of chronic alcoholism. **5**
- Q.9 Differentiate between the terms: food allergy, food intolerance and food sensitivity. **5**
- Q.10 Discuss in short the different stages of HIV. **5**
- Q.11 Write short note on **any two**:
- a) Rheumatoid Arthritis
 - b) Care of terminally ill
 - c) Liver diseases
 - d) Transmission of AIDS/HIV. **5**

End Semester Examination, May 2015

M. Sc. (N & D) – Third Semester

PUBLIC HEALTH NUTRITION (MNC-301)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

PART-A

- | | | |
|-----|--|-----------|
| Q.1 | Discuss any two community health planning models. | 10 |
| Q.2 | How will you monitor nutrition research for a public health application? | 10 |
| Q.3 | Discuss the policy making strategies in detail. | 10 |
| Q.4 | How can you provide nutrition care through a public health team? | 10 |

PART-B

- | | | |
|------|--|----------|
| Q.5 | Describe the essential knowledge and skills for public health nutrition practices. | 5 |
| Q.6 | How do public health nutritionists collect the data? | 5 |
| Q.7 | How will you educate consumers and food handlers to assure safe food? | 5 |
| Q.8 | Discuss disease prevention and control. | 5 |
| Q.9 | Discuss the importance of education of health professionals. | 5 |
| Q.10 | Explain leadership roles for public health nutritionists. | 5 |
| Q.11 | Discuss the importance of policies. | 5 |