SC–1320

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

HUMAN ANATOMY

(Common to all batches)

Time : 3 Hours Maximum : 100 Marks

Your answers shall be specific to the questions asked.
Draw neat and labelled diagrams wherever necessary.

I. Long Essays : (Answer any *four*)

1 Boundaries and contents of Axilla.
2 Arches of foot.
3 Blood supply of brain.
4 Hip joint.
5 Right kidney.

(4 × 10 = 40 marks)

II. Short Essays : (Answer any *eight*)

6 Gluteus maximus.
7 Basal ganglia.
8 Ossification.
9 Fertilization.
10 Cubital fossa.
11 Elbow joint.
12 Deltoid muscle.
13 Broncho-pulmonary segments.
14 Hilum of lungs.
15 Spinal cord.

(8 × 5 = 40 marks)

III. Short Answers :

16 Ground bone.
17 Smooth muscle.
18 Types of Epithelia.
19 Brachial artery.
20 Blood supply of long bones.
21 Superior colliculi.
22 Spermatozoa.
23 Pleura.
24 Internal capsule.
25 Hyaline cartilage.

(10 × 2 = 20 marks)

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(Pages 2) SC–1321

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

PHYSIOLOGY AND BIOCHEMISTRY

Time : 3 Hours Maximum : 100 Marks

Answer Section A and Section B in **separate** *answer-books.*
Your answers shall be specific to the questions asked.
Draw neat and labelled diagrams wherever necessary.

Section A (Physiology)

(50 marks)

I. Long Essays : (Answer any *two*)

1 Explain the excitation contraction coupling in skeletal muscle. What is myasthenia gravis ?

2 Define Cardiac output and Cardiac index giving their normal values. List the factors controlling cardiac output and explain any *one* of them.

3 Trace the pathway for corticospinal tract. Mention its functions and effect of lesion of the tract in the internal capsule.

(2 × 10 = 20 marks)

II. Short Essays : (Answer any *four*)

4 Name the female sex hormones and list the actions of any *one* of them.

5 What is Erythropoiesis ? Add a note on factors influencing erythropoiesis.

6 Compare the effects of upper motor neuron and lower motor neuron lesion.

7 Normal rate of coronary blood flow and factors regulating it.

8 Write the actions and control of insulin.

(4 × 5 = 20 marks)

III. Short Answers :

9 What is Surfactant and its function ?

10 First heart sound.

11 Acromegaly.

12 Hypoparathyroidism.

13 Mention *four* functions of cerebellum.

(5 × 2 = 10 marks)

Turn over

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Section B (Biochemistry)

(50 marks)

I. Long Essays : (Answer any *two*)

1 Define Enzymes. Classify them with suitable examples. Explain in detail the physic factors which affect enzyme activity.

2 Discuss the chemistry, sources, metabolism, functions, deficiency manifestations and dail requirement of vitamin D.

3 Classify Carbohydrates with suitable examples. Add a note on Mucopolysaccharide.

(2 × 10 = 20 marks)

II. Short Essays : (Answer *all*)

4 Structure of proteins.

5 Scurvy.

6 Electrophoresis.

7 Metabolic acidosis.

(4 × 5 = 20 marks)

III. Short Answers : (Answer *all*)

8 Protein-calorie malnutrition.

9 Give *two* examples each of acidic aminoacids and aromatic amino acids.

10 Biological value of proteins.

11 Essential fatty acids—Definition and names.

12 Coenzyme form and functions of pantothenic acid.

(5 × 2 = 10 marks)

SC–1322

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

BIOMECHANICS

Time : Three Hours Maximum : 100 Marks

Your answers shall be specific to the question asked.
Draw neat labelled diagrams wherever necessary.

I. Long Essays : (Attempt any *four*)

1 Gait.—kinetics.
2 Postural deviation.
3 Movement analysis of various grips.
4 Muscle work.—Types.
5 Describe biomechanical analysis of shoulder complex with reference to stability.

(4 × 10 = 40 marks)

II. Short Essays : (Any *eight*) :

1 Movement analysis of :
  (i) Sitting and getting up.
  (ii) Lifting heavy weight.
2 Movement analysis of Power grips.
3 Suspension apparatus.
4 Biomechanics of normal breathing.
5 Biomechanical principals of prosthetics.
6 Ergonomics measures for heavy work.
7 Principles of Hydrotherapy.
8 Hand arches and their function.
9 Scapulo-humoral rhythm.
10 Application of Levers in physiotherapy.

(8 × 5 = 40 marks)

III. Short Answers :

1 Agonist and anatagonist.
2 Critcutar cartilage.
3 Centre of gravity.
4 Tilt table.
5 Newton first law.
6 Ligaments.
7 Planes and axes.
8 Crutches.
9 Buoyanacy.
10 Springs.

(10 × 2 = 20 marks)

SC—1324

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

GENERAL PSYCHOLOGY AND SOCIOLOGY

(1996–97 and 1997-98 Batches)

Time : Three Hours Maximum : 100 Marks

Your answer shall be specific to the questions asked.
Draw neat and labelled diagrams wherever necessary.

Answer Sections A and B in **separate** *answer-books.*

Section A (General Psychology)

I. Long Essays : (Answer any *two*)

1 Define Personality. Explain the methods used in personality assessment.
2. What are defense mechanisms ? Discuss any *two*.
3 Define Psychology. Discuss the factors of heredity and environment.

(2 × 10 = 20 marks)

II. Short Essays : (Answer any *four*)

4 What are the primary and psychological needs ?
5 Discuss Thorndike's laws of learning.
6 What is approach-avoidance conflict ?
7 What are the methods used to change attitude ?
8 Explain authoritarian leadership.

(4 × 5 = 20 marks)

III. Short Answers :

9 Name the major schools of psychology.
10 What is reinforcement ?
11 What are mnemonic methods ?
12 What are delusions ?
13 What is psychotherapy ?

(5 × 2 = 10 marks)

Section B (Sociology)

I. Long Essay : (Answer any *two*)

1 Define sociology and indicate its scope.
2 Examine the role of family in socialization.
3 Elucidate the health hazards of urban dwellers.

(2 × 10 = 20 marks)

Turn over

II. Short Essays : (Answer any *four*)

4 Bring out the relationship of sociology and anthropology.

5 Explain the concept of culture in relation to health.

6 Briefly explain the health effects of alcohol on man.

7 Write a note on social security measures in relation to the disabled.

8 Explain the role of a medical social worker.

(4 × 5 = 20 m

III. Short Answers :

9 What is a questionnaire ?

10 Mention any *four* features of rural community.

11 Define Social change.

12 What are the effects of prostitution ?

13 Mention any *four* social legislations related to the disabled.

(5 × 2 = 10 m

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SC—1324

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

GENERAL PSYCHOLOGY AND SOCIOLOGY

(1998-99 Batch)

Time : Three Hours | Maximum : 80 Marks

Your answer shall be specific to the questions asked.
Draw neat and labelled diagrams wherever necessary.

Answer Sections A and B in **separate** *answer-books.*

Section A (General Psychology)

I. Long Essays : (Answer any *one*)

1 Define Psychology and explain its scope.

2 Define Emotions. Explain psychological changes of emotions.

(1 × 10 = 10 marks)

II. Short Essays : (Answer any *four*)

3 Observation method.

4 Varieties of attention.

5 Qualities of a leader.

6 Define Perception and list the principles of perception.

7 Questionnaires.

(4 × 5 = 20 marks)

III. Short Answers :

8 Definition of personality.

9 Identical twins.

10 Peptic ulcer.

11 Independent variable.

12 Homeostasis.

(5 × 2 = 10 marks)

Section B (Sociology)

I. Long Essay : (Answer any *one*)

1 Define Sociology and explain its importance with special reference to Health care professionals.

2 Bring out the difference between primary and secondary groups.

(1 × 10 = 10 marks)

II. Short Essays : (Answer any *four*)

3 Social survey method.

4 The process of socialisation.

5 Secondary groups.

6 Functions of family.

7 Features of rural community.

(5 × 4 = 20 marks)

Turn over

III. Short Answers :

8 Define Anthropology.

9 Mention the types of family.

10 Write any two features of urban community.

11 Mention any *four* types of beggary.

12 Write any *two* consequences of over population.

(5 × 2 = 10 m

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SC—1323

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

MEDICAL ELECTRONICS including COMPUTER APPLICATIONS

(1998—1999 Batch)

Time : Three Hours | Maximum : 80 Marks

Your answers should be specific to the questions asked.
Draw labelled diagrams wherever necessary.

I. Long Essays (Answer any *two*) :

1 With a neat diagram explain the working of cathode ray oscilloscope.

2 With a neat Block diagram explain the working of Microwave Diathermy.

3 Explain different parts of computer with a neat block diagram.

(2 × 10 = 20 marks)

II. Short Essays (Answer any *eight*) :

4 What are electrical stimulators ? Explain briefly.

5 Write a note on :

(a) Open circuit ; and (b) Short circuit.

6 Write a note on viruses with respect to computer.

7 Write a note on printers.

8 Write a note on short wave Diathermy.

9 Differentiate between RAM and ROM and give their applications.

10 Explain the generation and applications of ultrasound.

11 Write a note on transistors.

12 Explain the usage of computers in library and museum.

13 Explain the different types of storage devices with respect to computer.

(8 × 5 = 40 marks)

III. Short Answers :

14 State Kirchhoffs current law.

15 Mention different types of plugs and switches.

16 Explain the terms :

(a) Current ; (b) Voltage ; and (c) Resistance.

17 What is bio-feedback ?

18 Give the classification of transducers.

19 What is Ultrasonics ?

Turn over

(10)

20 What is the difference between a hardware and software ?

21 Advantages of signal processing.

22 Write a note on Networking with respect to computer.

23 What is Data Processing ?

24 Write a note on safety measures that should be taken while using medical instruments.

25 What is a compiler in case of computer ?

(10 × 2 = 20 ma

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Time :

I.

II

II

SC—1323

FIRST YEAR B.Sc. (PHYSIOTHERAPY) DEGREE EXAMINATION, 2001

MEDICAL ELECTRONICS including COMPUTER APPLICATIONS

(1996—1997/1997—1998 Batches)

Time : Three Hours | Maximum : 100 Marks

Your answers should be specific to the questions asked.
Draw labelled diagrams wherever necessary.

I. Long Essays (Answer any *four*) :

1 What are low frequency currents ? Describe their uses.

2 State Ohm's law. Explain the combinations of resistances in series and in parallel.

3 (a) Explain the application of computers in the field of physiotherapy.

(b) Explain the application of computers in the field of education.

(c) How is computer helpful in libraries ?

4 What is a computer ? Draw the architecture of a CPU.

5 What is a program ? Explain the principles of programming. What are the uses of computerisation over manual system ?

(4 × 10 = 40 marks)

II. Short Essays (Answer any *eight*) :

6 Describe the production of eddy currents.

7 Saltatory conduction.

8 Write a note on integrated circuits.

9 Testing of an electric stimulator.

10 Explain the principle of nebuliser.

11 What is secondary memory ? Mention different types of storage devices used.

12 What are the characteristics of information ?

13 Explain how you can classify the viruses.

14 What are the principles of programming ?

15 Explain different ways by which data loss or manipulation of data can occur.

(8 × 5 = 40 marks)

III. Short Answers :

16 Define impulse.

17 Define phase of a sine wave.



Turn over

18 Define laser.

19 Define latent heat.

20 Define IR rays.

21 Explain on any *two* output devices.

22 What are the measures to be taken to secure data ?

23 What is the importance of computerized E.M.G. ?

24 What is the role of computers in tomography ?

25 How is data represented with in a computer ?

(10 × 2 = 20 mar