

Total No. of Printed Pages – 3

**SS/PBN-I/BP/03-19**

**2 0 1 9**

( March )

**BIOPHYSICS & BIOCHEMISTRY**

*Full Marks : 75*

*Time : 3 hours*

*The figures in the margin indicate full marks  
for the questions*

Answer **all** questions

*Write the answers to the two Halves  
in separate books*

**FIRST HALF**

1. Answer the following :

1×5=5

- (a) Give the S.I. unit of two derive & quantities.
- (b) Define acceleration due to gravity
- (c) The focal length of a lens is 25 c.m. find the power of the lens.
- (d) What is ultrasound?
- (e) Define relative humidity.

(Turn Over)

( 2 )

2. Answer the following : 2×5=
- (a) State the law of conservation of energy. What is pulley?
  - (b) Give two proper application of gravity on human body.
  - (c) Define isotope and isobar.
  - (d) Differentiate between systolic and diastolic pressure.
  - (e) Write two applications of lesser in medicine.
3. Answer the following : 3×5=15
- (a) Describe the importance of pressure in nursing
  - (b) Discuss about physiological effects of heat.
  - (c) Explain the forces acting on human body
  - (d) Write shortly about three electronic equipments in patient care.
  - (e) Describe the radiation protection units and limits.
4. Write short notes on : (any two) 2½×2=5
- (a) Sterilization
  - (b) Transistor
  - (c) ECT

**SECOND HALF**

5. Draw the structure of an animal cell and label its various components. Mention the function of the cell. 5+5=10
6. What are lipoproteins? Why HDL is said to be good cholesterol? What is Atherosclerosis? 4+3+3=10
7. What are the enzymes involved in digestion of carbohydrates? Write briefly about anaerobic glycolysis and mention the enzymes involved in it. 3+3+4=10

(Continued)

( 3 )

8. Write short notes on : (any five)

2×5=10

(a) Glucose tolerance test

(b) Ketone bodies

(c) Immunoglobulin

(d) Gout

(e) Urea cycle

(f) Essential amino acids

(g) Gluconeogenesis.

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