

Total No. of Printed Pages – 3

**SS/PBN-I/BP/03-18**

**2 0 1 8**

( 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 followings :**

**1×5=5**

- (a) Give the S.I unit of power.
- (b) What is isobar ?
- (c) Name the instrument used to measure atmospheric pressure.
- (d) What is a transducer?
- (e) Name the lens which is diverging in nature.

*(Turn Over)*

( 2 )

2. Answer the following : 2×6=12
- (a) Distinguish between speed and velocity
  - (b) What is systolic and diastolic pressure
  - (c) What is force of friction? Give a proper advantage of friction.
  - (d) Give two important application of pressure in nursing.
  - (e) What is osmosis?
  - (f) What do you mean by wavelength of light?
3. Answer the following : 3×4=12
- (a) What is radioactivity and how does it affect the human body?
  - (b) Write about the uses of laser in medicine.
  - (c) Give three important application of radioisotopes.
  - (d) What is a pacemaker and why it is called a lifesaving instrument.
4. Write short notes on ( *any two* ) 3×2=6
- (a) Rectifier
  - (b) C.T Scan
  - (c) Arterial blood pressure

SECOND HALF

5. What are the factors affecting enzyme activity? Name the enzymes required in carbohydrate digestion. Write briefly about lactose intolerance. 3+3+4=10

(Continued)

( 3 )

6. What are lipoproteins? What are the substances that are produced from cholesterol? Why HDL is said to be good cholesterol? 4+3+3=10
7. What do you mean by fluid balance? how it is maintained in our body ? Name some electrolyte present in our body. 2+6+2=10
8. Write short notes on (*any five*) 2×5=10
- (a) Glucose tolerance test
  - (b) Ketone bodies
  - (c) Cori's cycle
  - (d) Plasma proteins
  - (e) Urea cycle
  - (f) Gout
  - (g) Hormones

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