M 9832

Reg. No. : .....

Name : .....

V Semester B.Sc. Degree (CCSS-Reg./Supple./Imp.)
Examination, November 2015
CORE COURSE IN ZOOLOGY
5B07ZLG : Biochemistry and Biophysics

Time : 3 Hours Max. Weightage : 25

SECTION – A
(Biochemistry)

I. Answer **any one** (Weightage:**4 each**) :

1) Describe briefly the classification of lipids.

2) Explain the mechanism of enzyme action. **(1×4=4)**

II. Answer **any three** (Weightage:**2 each**) :

3) What are polysaccharides ? Mention types of polysaccharides.

4) Briefly explain the biological importance of proteins.

5) Explain different forms of DNA.

6) What is the difference between deamination and transamination ?

7) Derive the pathway of glycolysis. **(3×2=6)**

III. Answer **any five** (Weightage:**1 each**) :

8) Define pH.

9) What are macroelements ?

10) What are glycoproteins ?

11) What are coenzymes ?

P.T.O.

12) What are second messengers ?

13) Write an example of pentoses.

14) What is oxidative phosphorylation ? **(5×1=5)**

IV. Answer the following (Weightage:**1 each**) :

15) a) Cerebrosides are _____ lipids.

b) _____ is an example of trioses.

c) Lock and key model was proposed by _____

d) End product of gluconeogenesis is _____

16) Match the following :

a) Sucrose	abzymes
b) Active site	mitochondria
c) TCA cycle	enzyme
d) Haptens	polysaccharides
	disaccharide

(2×1=2)

SECTION – B

(Biophysics)

V. Answer **any two** (Weightage:**2 each**) :

17) Explain the principle and advantages of TEM.

18) Explain the components of spectrophotometer, mention its application.

19) Explain the procedures of gel electrophoresis.

20) Describe briefly ionizing and non ionizing radiations. **(2×2=4)**

VI. Answer **any two** (Weightage:**1 each**) :

21) What is supernatent ?

22) State Beer's law.

23) What is an electron gun ?

24) What is a collimator ? **(2×1=2)**

VII. Answer the following (Weightage :**1 each**) :

25) a) Electron gun is used in _____

(TEM/ELISA)

b) Collimator is a component of _____

(X-ray crystallography/Autoradiography/Centrifuge)

c) Mobile phase refers to _____

(electrophoresis/chromatography/autoradiography)

d) Atoms of same element differing in the number of neutrons but having same atomic number are called _____

26) Match the following :

a) Synchroton	Adsorption
b) Radioactive isotops	X-ray crystallography
c) Immunoelectrophoresis	centrifugation
d) Calomel electrode	autoradiography
	pH meter

(2×1=2)
