

17P117

(Pages:2)

Name: .....

Reg.No. ....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2017

(CUCSS-PG)

CC17P Z01 C01 – BIOCHEMISTRY AND BIOPHYSICS

(Zoology)

(2017 Admission regular)

Time: Three Hours

Maximum: 36 Weightage

I. Answer *all* questions. Each question carries 1 weightage.

1. What is a disulfide bridge? Mention its biological importance.
2. What is an epimer? Give an example
3. Describe isoelectric point. Mention its practical application.
4. What are molecular chaperones? Mention its functions.
5. Distinguish between protein motifs and domains.
6. What are plasmalogens? Mention its importance.
7. What are polyunsaturated fatty acids (PUFA)? Mention its importance.
8. What are steroids? Give two examples of steroid hormones.
9. What are co enzymes? Give two examples.
10. Define entropy.
11. Distinguish between glycogenesis and glycogenolysis.
12. What is transamination?
13. Distinguish between colloids and crystalloids
14. What are porins?

(14x1= 14 Weightage)

II. Answer any *seven* questions. Each question carries 2 weightage.

15. Describe the structure and biological roles of disaccharides with suitable examples.
16. Discuss Ramachandran plot. Mention its importance.
17. Describe the structure and functions of prostaglandins.
18. Describe the nitrogen bases of nucleic acids.
19. Discuss the structure and functions of vitamins.
20. Briefly describe the biosynthesis of cholesterol.
21. Discuss the degradation of phenyl alanine.
22. Describe the biosynthesis of purines.

23. Discuss the different transport mechanisms across cell membrane.
24. Describe the biological effects of ionizing radiations.

(7x2= 14 Weightage)

III. Answer any *two* questions. Each question carries 4 weightage.

25. Describe the mechanism of enzyme action.
26. What is chemiosmotic hypothesis? Describe oxidative phosphorylation.
27. Discuss the pentose phosphate pathway in detail.
28. What are the characteristics of sound? Discuss the sound transduction mechanism in human ear.

(2x4= 8 Weightage)

(14x1= 14 Weightage)

15. Answer any seven questions. Each question carries 2 weightage.
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