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Fifth Semester B.Sc. Degree Examination, March/April 2021

(CBCS – Semester Scheme)

Biochemistry

Paper VI — BIOCHEMISTRY

Time : 3 Hours]

[Max. Marks : 70

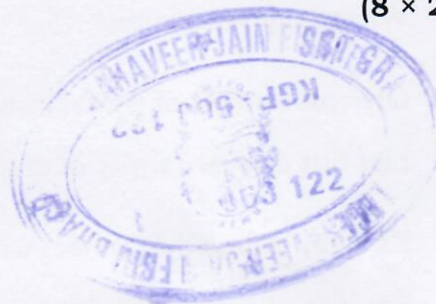
Instructions to Candidates :

- 1) This paper is for the students of new syllabus: 2014-15.
- 2) The Question Paper has two Parts: Part-A and Part-B.
- 3) Answer any EIGHT questions from Part-A.
- 4) Answer any NINE questions from Part-B.

PART – A

Answer any **EIGHT** of the following questions. Each question carries **2** marks :
(8 × 2 = 16)

1. What are mutagens? Give an example.
2. What is meant by Pribnow box?
3. Define Co-enzyme. Give an example.
4. Mention the types of RNA polymerase.
5. Distinguish between Lagging and Leading strands.
6. What is active site of an enzyme?
7. What is meant by semi conservative replication?
8. What is optimum pH of an enzyme?
9. Define Holoenzyme.
10. What are nucleotides? Give an example.
11. What is base excision repair?
12. What are endonucleases?



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PART - B

Answer any **NINE** of the following questions. Each question carries **6** marks :

(9 × 6 = 54)

13. Explain the classification of enzymes with suitable example. (6)
14. (a) Write a note on isolation and sequencing of nucleic acid.
(b) What is mis-sense mutation? (4 + 2)
15. (a) Explain the dependent termination of transcription.
(b) Mention the role of m-RNA in translation. (4 + 2)
16. (a) Distinguish between competitive and uncompetitive inhibition.
(b) Mention the types of DNA polymerase. (4 + 2)
17. (a) Write the structure of ATP and GTP.
(b) What is renaturation? (4 + 2)
18. (a) Give an outline of translation in Eukaryotes.
(b) List out any two units of enzyme activity. (4 + 2)
19. (a) Explain induced fit model with suitable diagram.
(b) What is allosteric inhibition? Mention the types of effectors. (3 + 3)
20. (a) Explain the characteristic features of an enzyme.
(b) Write the significance of K_m and V_{max} . (4 + 2)
21. (a) Write the characteristic features of genetic code.
(b) What are nucleo proteins? (4 + 2)
22. (a) Explain Maxim-Gilbert method of DNA sequencing.
(b) What is an operon? (4 + 2)
23. (a) Write a note on enzyme assay.
(b) Write the composition of eukaryotic ribosomes. (4 + 2)

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24. (a) Explain the mechanism of DNA replication in prokaryotes.
(b) What is denaturation? **(4 + 2)**
25. (a) Write the structure of Lac operon. Explain its regulation.
(b) What is photoactivation? **(4 + 2)**
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