No. of Printed Pages : **2**

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GN-229

V Semester B.Sc. Examination, December - 2019
(CBCS) (F+R) (2016-17 and Onwards)

BIOCHEMISTRY - VI

Time : 3 Hours Max. Marks : 70

Instructions : *(i) The question paper has **two** Parts, **Part-A** and **Part-B**.*
*(ii) Answer **any eight** questions from **Part-A** and **nine** questions from **Part-B**.*

PART - A

Answer **any eight** of the following questions. Each question carries **two** marks. **8x2=16**

1. Explain the Induced Fit Model for enzyme substrate interaction.

2. Give the composition of 70S Ribosome.

3. Write a reaction catalysed by class 6 enzymes.

4. What is a Prosthetic group ? Give an example.

5. 'RNA is Versatile' justify.

6. What is the role of (i) PLP
(ii) NAD^+ Co-enzymes ?

7. How do strong acids affect nucleic acids ?

8. What is Hyperchromicity ?

9. Give the effect of (i) Chloramphenicol
(ii) Streptomycin on translation

10. Write the tautomeric forms of Adenine.

11. What is the function of (i) Structural gene
(ii) Regulatory gene in Lac Operon ?

12. How is DNA damage repaired by Nucleotide exision mechanism ?

P.T.O.

PART - B

Answer **any nine** of the following. Each question carries **six** marks. **9x6=54**

13. (a) Discuss uncompetitive inhibition using Line-weaver-Burk Plot. **4+2**
(b) What is the effect of temperature on enzyme activity ?

14. (a) What is meant by Enzyme assay ? Explain spectroscopic method of enzyme assay with an example. **4+2**
(b) What is Allosteric Inhibition ?

15. (a) How is K_m and V_{max} determined using Line-weaver-Burk Plot ? **4+2**
(b) How do enzymes enhance the rate of a reaction ?

16. (a) Explain Maxim Gilbert method of DNA Sequencing. **4+2**
(b) A DNA contains 25% of each base. How many strands does it have ? Justify the answer.

17. (a) How was bidirectional replication visualised using autoradiography ? **4+2**
(b) Differentiate between Lagging and Leading Strands.

18. (a) Explain the melting temperature curve of DNA. **4+2**
(b) Give two differences between RNA and DNA.

19. (a) Discuss Meselson and Stahl Experiment. **4+2**
(b) Name the modified bases of t-RNA.

20. (a) Give an outline of DNA replication in Eukaryotes. **4+2**
(b) Name any two chemical mutagens.

21. (a) Explain Frame shift mutation with an example. **4+2**
(b) How do DNA Pol-I and DNA Pol-III differ in their function ?

22. (a) Explain rho dependant termination of transcription. **4+2**
(b) What is a Promoter ? Give its importance.

23. (a) Explain attenuation control mechanism of Trp Operon. **4+2**
(b) What is the central dogma of Molecular Biology ?

24. (a) Discuss the termination process of Prokaryotic translation. **4+2**
(b) What is 'Shine-Dalgarno' sequence ?

25. (a) Give an outline of translation process in Eukaryotes. **4+2**
(b) What is Wobble hypothesis ?

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