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GS-316

VI Semester B.Sc. Examination, May/June - 2019

BIOCHEMISTRY

Biochemistry-VIII

(CBCS) (F+R) (2016-17 & Onwards)

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****.*
(iii) Answer ***any nine*** *questions from* ***Part -B****.*

PART - A

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

1. How does UV-radiation brings sterilization ?
2. How are microorganisms isolated by streak plate method ?
3. What is hybridization ?
4. Write the principle of FISH.
5. Give the principle of precipitation.
6. Define Complement System.
7. Define hapten.
8. What are adjuvants ?
9. Define hypersensitivity reactions.
10. Name any two DNA modifying enzymes.
11. Give any two advantages of PUC 18.
12. Define epitope.

PART - B

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

13. (a) Briefly explain the bacterial growth curve. **4+2**
    (b) What is a batch culture ?
14. (a) Describe the design of fermentor with neat labelled diagram. **4+2**
    (b) What is immobilization of microbes ?

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15. (a) Explain any two methods for preservation of microbes. 4+2
(b) What is single fermentation ?

16. (a) Describe the industrial production of ethanol. 4+2
(b) Define SCP.

17. (a) Explain the principle and applications of Western blotting. 4+2
(b) Give the principle of RIA.

18. (a) Give the principle and applications of PCR. 4+2
(b) Mention any two applications of ELISA.

19. (a) Explain the steps involved in immuno electrophoresis. 4+2
(b) Name any two membranes used in blotting.

20. (a) With a neat labelled diagram explain the structure of IgG. 4+2
(b) Mention any two primary lymphoid organs.

21. (a) Define MHC. Give their physiological role. 4+2
(b) Give the features of dendrite cells.

22. (a) Explain different classes of vaccines. 4+2
(b) Differentiate between primary and secondary immune response.

23. (a) Define gene cloning. List out the tools required for gene cloning. 4+2
(b) What is the use of colony hybridization in RDT ?

24. (a) Mention any two features and advantages of yeast artificial chromosome. 4+2
(b) Give the role of DNA ligase in RDT.

25. (a) Write any four applications of gene library. 4+2
(b) What is insertional inactivation ?

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