Turn Over



Reg No	:	
Name	:	

B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2024

Second Semester

B.Sc Botany Model II Plant Biotechnology

Vocational Course - BO2VOT28 - FUNDAMENTALS OF ENZYMOLOGY AND RADIOBIOLOGY

2017 ADMISSION ONWARDS

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Time: 3 Hours

Max. Marks : 60

Answer any **ten** questions.

Each question carries 1 mark.

- 1. What is acid?.Give one example.
- 2. Define pH.
- 3. What change does a pH paper detect to get the visual indications regarding pH?
- 4. Write down the EC number of alcohol dehydrogenase enzyme.
- 5. Give an example for cofactor.
- 6. Explain lock and key hypothesis.
- 7. What is meant by half maximal velocity in an enzymatic reaction?
- 8. What is known as Michaelis-Menten constant?
- 9. Define Km value.
- 10. Give the half life of any one beta emitter.
- 11. What are the main components in a GM counter?
- 12. What is used as a scintillator for the detection of alpha particles in solid scintillation counter?

(10×1=10)



Part A

Part B

Answer any **six** questions.

Each question carries 5 marks.

- 13. Explain briefly how the polarity of water molecule plays a signifucant role in biological systems.
- 14. Explain molarity, molality and normality of solutions.
- 15. Enzymes are biological catalysts.Explain.
- 16. Briefly explain allosteric enzyme regulation.
- 17. Write a note on competitive enzyme inhibition.
- 18. Write a note on the significance of isoenzymes taking LDH as an example.
- 19. Write a note on radioactivity.
- 20. Write a short note on autoradiography.
- ^{21.} Write a note on the applications of C^{14} and P^{32} .

(6×5=30)

Part C

Answer any **two** questions. Each question carries **10** marks.

- 22. Briefly discuss about buffers and their role in biological system with suitable examples.
- 23. Write an essay on enzyme commission's system of enzyme classification.
- 24. Discuss in detail about various factors that affect an enzymatic reaction.
- 25. Write an essay on the applications of radioisotopes.

(2×10=20)