



Reg. No. :

Name :



K19P 1075

**III Semester M.Sc. Degree (CBSS-Reg./Suppl./Imp.)
Examination, October - 2019
(2014 Admission Onwards)
Botany
BOT 3C11: BIOCHEMISTRY AND BIOPHYSICS**

Time : 3 Hours

Max. Marks : 60

Instructions to Candidate:

Draw diagrams wherever necessary.

SECTION - A

(2×8=16)

1. a) Write an account on the structure and function of major homopolysaccharides.
(OR)
b) Explain the methods and significance of hybridoma technology.
2. a) Write an account on the principle, types and applications of light based instruments.
(OR)
b) Describe the role of radioisotopes in biological research.

**SECTION - B
(Answer any Two)**

(2×6=12)

3. a) What are amino acids? **(1+3+2)**
b) Classify them.
c) Write on the significance of sulphur containing amino acids.
4. a) What are enzymes? **(1+3+2)**
b) Derive Michaelis Menton equation.
c) Add a note on enzyme inhibition.

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(2)



5. a) What is 'buffer'? (1+2+3)
b) What are its functions?
c) Describe Henderson - Hasselbalch equation.

SECTION - C
(Answer any Six)

(6×3=18)

6. Explain the tertiary structure of proteins.
7. How do you classify proteins?
8. Describe biodegradation of lipids
9. Explain cell mediated immunity.
10. Explain the role and significance of terpenes in plant defence mechanism.
11. Mention the principle and applications of TLC.
12. How X-ray diffraction studies are useful in biological research?
13. Write a brief note on CAT.

SECTION - D
(Answer any Seven)

(7×2=14)

14. Structure of vitamin A.
15. Cholesterol.
16. Triglycerides.
17. Biosynthesis of purines.
18. MHC.
19. Isozymes.
20. Vaccines.
21. Atomic Absorption Spectrophotometer.
22. PET.
23. GM counter.
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