



KEEPING MOBILE PHONE/SMART WATCH, EVEN IN 'OFF' POSITION, IS TREATED AS EXAM MALPRACTICE
General Instruction: Draw diagrams and structures wherever necessary.

Answer any TEN Questions

(10 X 10 = 100 Marks)

1. Compare and contrast the structure and function of plant and animal cell.
2. a) What is the pH of a mixture of 0.025M acetic acid and 0.075 M sodium acetate? (pka=4.76) [5]
b) If 1 ml of 10 N sodium hydroxide is added to a liter of the buffer prepared in (a), how much will the pH change? [5]
3. Differentiate structural homopolysacchrides from storage homopolysacchrides with examples.
4. Trace the steps involved in HMP shunt and give its significance.
5. Sketch the structure of the given peptide.
His-Arg-Gly-Met-Thr
6. Distinguish the structure of myoglobin and haemoglobin.
7. Outline the structure and importance of glycolipids.
8. Describe the structural features of the following nucleic acid components.
7-methyl guanine, 5-methyl cytosine, pseudouridine, ribothymidine
9. Evaluate the energetics of oxidation of one molecule of glucose.
10. Construct the synthetic pathway of pyrimidines from carbamoyl phosphate.
11. Summarize the beta oxidation of fatty acids.
12. Write a note on hydrogen bonding in water and biomolecules.

