

M.Sc. Botany - 3rd Sem.

(2116)

BOT-C-615: Plant Biochemistry**Time allowed: 3 hrs.****Max. Marks: 50****SECTION-A**

All parts of Question I are compulsory. Each part carries one mark

1. (a) What is phosphorylation?
- (b) What is pH scale?
- (c) What do you understand from control of blood glucose?
- (d) What is oxidation of pyruvate?
- (e) Name the pathways of hexose metabolism.
- (f) What do you understand from oxidation of fatty acids?
- (g) What do you mean by enzyme specificity?
- (h) What is distortion theory?

SECTION-B

Note:- Attempt any seven questions. Each question carries 3 marks.

1. Describe dephosphorylation of proteins.
2. Describe Handerson-Haselbatch equation.
3. Describe the catabolism of acetyl-CoA.
4. Discuss the glycolysis. How many ATPs are produced in this energy generating process?
5. Discuss the oxidation of fatty acids.
6. Describe the synthesis of cholesterol.
7. Discuss the mechanism of enzyme catalysis.
8. Explain the phenomenon of enzyme substrate complex.
9. Describe isoenzymes and allosteric enzymes.
10. Describe Lineweaver-Burk plot and their significance.

SECTION-C

Note:- Attempt any three questions. Each question carries 7 marks.

1. Discuss the group specificity, absolute specificity and stereo-chemical specificity of enzymes.
2. Give brief account of enzyme induction and repression giving suitable examples.
3. Discuss biosynthesis of fatty acids.
4. Describe the pentose phosphate pathway and other pathways of hexose metabolism.
5. Discuss electrostatic interactions and hydrostatic interactions giving suitable examples.

2406(2116)100