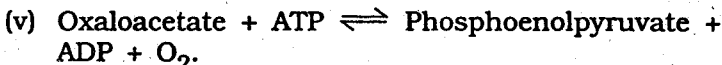
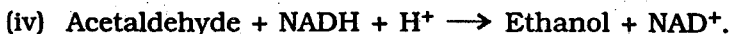
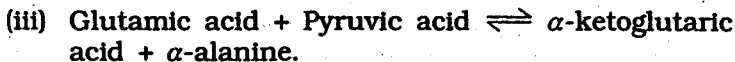
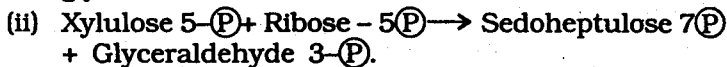
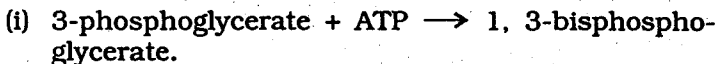


**2009****M.Sc. Part-II Examination****BOTANY****PAPER—VII***Full Marks : 60**Time : 3 Hours**The figures in the right-hand margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.**Illustrate the answers wherever necessary.**Answer Q. No. 1 and any three from the rest.*

1. (a) Answer any six of the following : 2×6
- (i) What is meant by seed invigoration ?
  - (ii) Mention the dual role performed by the enzyme Rubisco.
  - (iii) What does it mean by oxidative phosphorylation ?
  - (iv) Mention two free living microorganisms which can fix nitrogen.
  - (v) What are unsaturated fatty acids ?
  - (vi) Name one aromatic amino acid. Write its structure.
  - (vii) Glucose is a reducing sugar but sucrose is not. Why ?
  - (viii) Define KM.
  - (ix) What are allosteric enzymes ?

(b) Name the enzymes which catalyze the following reactions (any three) : 1×3



2. Write short notes on the following (any three) : 5×3

(a) Electrophoresis ;

(b) GLC ;

(c) Ethylene biosynthesis ;

(d) Polysaccharides ; and

(e) Phytochromes.

3. Mention the different modes of CO<sub>2</sub> fixation in higher plants? State the differences between C<sub>3</sub> and C<sub>4</sub> plants. Point out the biological significance of C<sub>4</sub> cycle.

2+10+3

4. What are growth promoters, growth retardants and growth inhibitors? Write down the chemistry, physiological roles, bioassay and agrihorticultural uses of a natural growth inhibitor.

3+12

5. What is meant by enzyme inhibition? Describe in detail about different types of enzyme inhibition. What is feed back inhibition?

1+12+2

6. What is peptide linkage? What are different types of secondary structures found in protein? Give a detail account of these structures. Briefly describe about fibrous proteins and globular proteins.

1+10+4