AQ – 860

First Semester M. Sc. (Part – I) Examination

(CBCS Pattern)

BIOINFORMATICS

Paper – II

Cell and Molecular Biology

P. Pages : 3

Time : Three Hours] [Max. Marks : 80

Note : (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

1. Write on :—

(a) G phase kinase. 5

(b) Ultra structure of mitochondria. 5

(c) Integral proteins. 6

OR

(d) S – phase in cell cycle. 5

(e) Prokaryotic cell structure. 5

(f) Difference between Mitotic and Meiotic anaphase. 6

2. Write on :—

(g) Nucleus structure. 5

(h) Structure of flagella. 5

(i) Ultrastructure of ER. 6

OR

(j) Functions of chloroplast. 5

(k) Blood plasma. 5

(l) Lysosomes. 6

3. Write on :—

(m) Nuclear pore complex. 5

(n) Chromatids. 5

(o) Histones. 6

OR

(p) Role of importin proteins in nuclear complex. 5

(q) Nucleolous. 5

(r) Nucleolar organizer. 6

4. Give an elaborated account on different types of DNA polymerase involved in the replication of DNA. Add a note on mechanism of replication of DNA.

OR

Elaborate on detail mechanism of transcription in eukaryotes. 16

5. Explain in detail structural organization of Lac operon. Explain on mechanism of regulation of Glucose biosynthesis from lactose in E·coli.

OR

Give an elaborated account on Past–translational modifications by using molecular chaperons. 16