2022

ZOOLOGY — HONOURS

Paper : CC-4

(Cell Biology)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer ***any five*** questions : 2×5

   (a) Distinguish between v-one and c-one.

   (b) Define cis-trans polarity of Golgi.

   (c) Name two kinetochore associated protein.

   (d) Distinguish active transport and facilitated diffusion.

   (e) Name two enzymes of inner mitochondrial membrane.

   (f) Distinguish between N-linked and O-linked glycosylation.

   (g) Why RTKs are so called?

   (h) Which organelle is known as 'traffic police' and why?

Answer ***any four*** from the following.

2. (a) With suitable diagrammatic illustration explain signal transduction through RTK pathway.

   (b) Define and explain membrane asymmetry.

   (c) What is RBC ghost? (2+3)+(1+3)+1

3. (a) Describe the modification of secretory protein in Golgi.

   (b) Mention the function of KDEL.

   (c) Explain the endosymbiotic hypothesis of mitochondrial origin. 5+2+3

4. (a) Explain the role of P_{53} in DNA damage checkpoint.

   (b) Briefly mention the process of G2-M transition of cell cycle in yeast.

   (c) Define APC/C. 4+4+2

5. (a) What [illegible]

(b) [illegible]

(c) [illegible]

6. [illegible]

(a) [illegible]

(b) [illegible]

(c) [illegible] DNA packaging

7. [illegible] any two:

(a) [illegible] and [illegible]

(b) [illegible]

(c) [illegible]

(d) [illegible]

8. (a) Distinguish between proto-oncogene and tumour suppressor gene.

(b) Define burkitt's lymphoma, glycocalyx, transducer.

(c) What are MPF? [illegible]