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शार्थ - 022

ZOOLOGY PAPER - II : ZOO-112

**Cell Biology
(115102)**

P. Pages : 3

Time : Two Hours

Max. Marks : 60

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory and figures to the right indicate full marks.
5. Draw neat labelled diagrams wherever necessary.

1. A) Multiple choice questions **any six**.

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- i) Cell biology is the study of -----
 - a) Tissue
 - b) Organ
 - c) Cell
 - d) None
- ii) ----- is the structural and functional unit of body.
 - a) Tissue
 - b) Organ
 - c) Cell
 - d) None
- iii) Lipid bilayer is -----
 - a) Hydrophilic
 - b) Hydrophobic
 - c) Hydrophilic and hydrophobic
 - d) Depends on the surrounding medium.
- iv) Which of the following membrane has the largest amount of proteins.

 - a) Erythrocyte membrane
 - b) Myelin sheath membrane
 - c) Inner mitochondrial membrane
 - d) Outer mitochondrial membrane.
- v) ----- is the power house of cell.
 - a) Ribosome
 - b) Lysosome
 - c) Mitochondria
 - d) Golgi.

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- vi) In cell cycle ----- phase known as synthetic phase.
- a) S-phase b) G1-phase
- c) G2-phase d) M-phase
- vii) The ageing also affects the ---
- a) Glycolysis b) Agelysis
- c) Glyco phospholysis d) None
- viii) The most simplest theory of ageing states that it is govern in an organism by genetic inheritance or. "-----"
- a) Age clock b) Genetic clock
- c) Genetic age d) Clock of age.

B) Answer in one sentence any six.

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- i) What is mean by prokaryotic cell?
- ii) What is Archaeobacteria?
- iii) What is mean by unicellular?
- iv) What is cell membrane?
- v) Enlist various shapes of nucleus.
- vi) What is Karyokinesis?
- vii) What do you mean by G2 phase?
- viii) What is cell ageing?

2. Define/Explain/comment. any six.

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- a) Eukaryotic cell
- b) Prokaryotic cell,
- c) Osmosis,
- d) Diffusion,
- e) Exosmosis,
- f) Endosmosis,
- g) Meiosis
- h) G1-phase,
- i) Cancer.

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3. Attempt **any four** from the following.

- i) Sketch and label eukaryotic cell.
- ii) Explain the unit membrane.
- iii) Explain ultrastructure of nucleus.
- iv) Write any four functions of mitochondria.
- v) Explain in short the phases of cell cycle.
- vi) Write a note on cellular theories of ageing.

4. Attempt **any three** from the following.

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- i) Explain the singer-Nicolson model.
- ii) Write a note on ER.
- iii) Give the functions of Ribosomes.
- iv) Sketch and label cell cycle.
- v) Write a note on cell ageing.

5. Describe in detail of the following **any two**.

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- i) Explain structure and function of Lysosome.
- ii) Give an account of the meiotic type of cell division.
- iii) Explain programmed cell death.
