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**ZOOLOGY PAPER - II : ZOO-112**  
**Cell Biology**  
**(115102)**

Max. Marks : 60

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. Figures to right indicate full marks.
5. Draw neat labelled diagrams wherever necessary.

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a) Tissue                      b) Organ  
c) Cell                         d) None.

- a) Hydrophilic
- b) Hydrophobic
- c) Hydrophilic & hydrophobic
- d) Depends on the surrounding medium.

a) Permeable                      b) Selectively permeable.  
c) Impermeable.                d) Semipermeable.

a) Ribosomes                      b) Liposomes  
c) Mitochondria                d) Golgi

a) Ribosomes                      b) Lysosomes  
c) Desmosomes                  d) Kinetosomes

- vi) Mitosis not occurs in -----  
 a) Roots  
 b) Shoots  
 c) Germ cells  
 d) Somatic cells.
- vii) In cell -cycle ----- phase is known as synthetic phase.  
 a) S-phase  
 b) G<sub>1</sub>-phase  
 c) G<sub>2</sub>-Phase  
 d) M-phase.
- viii) The process by which cancerous cells spread from one part of body to other by way of blood or lymph called.  
 a) Mitosis  
 b) meiosis  
 c) Both a & b  
 d) metastasis.

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b) Answer in one sentence any six.

- i) Who was first used the term cell.
- ii) F<sub>1</sub>- particles.
- iii) Who introduced the term "mitochondria".
- iv) Cisternae are found in...
- v) The division of cytoplasm is called.
- vi) What is apoptosis.
- vii) The tumour developed by abnormal growth of cells and surrounded by connective tissue is -----
- viii) Archaeobacteria ----

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2. Define / Explain / comment any six.

- |                     |                           |
|---------------------|---------------------------|
| a) Prokaryotic cell | b) Endocytosis            |
| c) Nucleus          | d) Endoplasmic reticulum  |
| e) Cell cycle       | f) G <sub>2</sub> - Phase |
| g) Cell aging       | h) Necrosis               |
| i) Suicide bag.     |                           |

3. Attempt **any four**. 12
- a) Sketch & label eukaryotic cell.
  - b) Functions of ribosomes
  - c) Significance of mitosis.
  - d) Biology of cancer.
  - e) Osmosis
  - f) Meiosis.
4. Attempt **any three**. 12
- i) Functions of ER.
  - ii) Regulation of cell-cycle.
  - iii) Sketch & label mitochondria.
  - iv) Explain Danielli-Davson model.
  - v) Write names of cancers according to the tissues from which they arise.
5. Describe in detail **any two**. 12
- a) Explain Structure and function of Golgi apparatus.
  - b) Describe cellular theories of aging.
  - c) Explain apoptosis or programmed cell death.

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