

CSM : 15

ZOOLOGY

PAPER - II

Time Allowed : 3 hours

Full Marks : 100

Marks for each question is indicated against it.

Attempt any 5 (five) questions taking not more than 3 (three) questions from each Part.

PART A

1. What is a cell cycle? Describe the stages of cell cycle. How is cell cycle regulated through cyclin-CDK complexes? **(2+10+8=20)**
2. Describe the phenomenon of cytoplasmic inheritance with the help of examples. Discuss Mendel's laws. **(12+8=20)**
3. Define DNA replication. Explain the semiconservative replication. **(4+16=20)**
4. Give a detail account of the reactions of glycolysis. What is the biological significance of producing pyruvic acid? **(16+4=20)**

PART B

5. Distinguish between open and closed types of blood circulation. Illustrate the structure of mammalian heart. **(8+12=20)**
6. What is action potential? How is nerve impulse generated and propagated through nerve cells? **(4+16=20)**
7. What are reproductive cycles? Discuss the phases of menstrual cycle and hormonal regulation of the various phases. **(2+10+8=20)**
8. Delineate the structure of an immunoglobulin. Describe the mechanism of antibody-antigen interaction. **(10+10=20)**

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