

Time: 3 hours

Full Marks: 300

The figures in the right-hand margin indicate marks.

Candidates should attempt Q. No. 1 from

Section – A and Q. No. 5 from Section – B which

are compulsory and three of the remaining

questions, selecting at least one from each Section.

## Section - A

1. Give an account of any three of the following:

 $20 \times 3 = 60$ 

- (a) Polymorphism in lysosomes
- (b) Mendel's law of inheritance
- (c) Genetic drift
- (d) Human genome project
- Explain the various salient features of cancer cells.

DA - 32/2

(Tum over)



- Write an essay on organisation of eukaryotic chromosomes.
- 4. Write notes on the following:  $15 \times 4 = 60$ 
  - (a) Cell cycle
  - (b) Genetic basis of sex determination
  - (c) Principle of animal classification
  - (d) DNA finger printing

## Section - B

- 5. Explain any three of the following:  $20 \times 3 = 60$ 
  - (a) Krebs cycle
  - (b) Cardiac cycle
  - (c) Spermatogenesis
  - (d) Hypersensitivity
- Give a detailed account on the mechanisms of action of peptide hormones.
- Describe the sequential events in the process of fertilization.

DA - 32/2 (2) Contd.



Write notes on the following:

 $15 \times 4 = 60$ 

- (a) Laws of thermodynamics
- (b) Blood coagulation
- (c) Mammalian placenta
- (d) Mode of action of antibiotics