

[Time: 2 Hours.]

[Marks: 60]

Please check whether you have got the right question paper.

- N.B: 1. All questions are compulsory.  
2. Figures to the right indicate full marks.  
3. Draw neat and labelled diagrams wherever necessary.  
4. Answer the questions in proper order.

- Q. 1 Describe the following:** (16)
- a) Multiple alleles with suitable example. (08)
- OR
- a) Double recessive epistasis. (08)
- b) Double dominant epistasis. (08)
- OR
- b) Cytological variation of crossing over. (08)
- Q. 2 Explain the following:** (16)
- a) Classification of chromosome based on the centromere (08)
- OR
- a) Sex determination in Drosophila. (08)
- b) Environmental influence on sex determination (08)
- OR
- b) Haemophilia (08)
- Q. 3 Answer the following:** (16)
- a) Types of RNA (08)
- OR
- a) Singer and Conrat experiment (08)
- b) Translation process (08)
- OR
- b) Difference between DNA and RNA (08)
- Q. 4 Write short notes on:** (12)
- a) Rh blood group (04)
- OR
- a) Recessive lethal (04)
- b) XX-XO mechanism of sex determination (04)
- OR
- b) Lampbrush chromosome (04)
- c) One gene one polypeptide theory (04)
- OR
- c) Avery, MacLeod and McCarty experiment (04)