

Model Question Paper
Botany-Cell Biology and genetics-Part I

12th Standard

Biology

Reg.No. :

--	--	--	--	--	--

I. Answer all the questions.

II. Use blue pen only.

Time : 01:00:00 Hrs

Total Marks : 65

5 x 1 = 5

Part-A

- 1) The term chromosome was introduced by
(a) Bridges (b) Waldeyer (c) Balbiani (d) Flemming
- 2) Who had first proved that the genes are carried by the chromosome?
(a) Bridges (b) Waldeyer (c) Balbiani (d) Flemming
- 3) The coupling test cross ratio is
(a) 1:7:7:1 (b) 7:1:1:7 (c) 1:1:1:1 (d) 9:3:3:1
- 4) Recombination of chromosome takes place in _____ stage of prophase I of meiosis.
(a) leptotene (b) zygotene (c) pachytene (d) diplotene
- 5) Hugo de Vries first used the term mutation based on his observation on
(a) Sorghum (b) Neurospora (c) Oenothera lamarckiana (d) Cicer gigas

Part-B

- 6) What are autosomes?
- 7) What are sex chromosomes?
- 8) What are B - Chromosomes?
- 9) What is a Polytene Chromosome?
- 10) Define a gene.

5 x 3 = 15

Part-C

- 11) Write short notes on the structure of chromosomes.
- 12) Write short notes on the types of chromosomes. (or) Explain the types of chromosomes on the basis of shape and position of centromere with diagram.
- 13) Describe special types of chromosomes (or) Write short notes on special types of chromosomes or giant chromosomes.
- 14) Write short notes on genome.
- 15) Write short notes on crossing over.

5 x 5 = 25

Part-D

- 16) Explain chromosomal aberration with the help of diagrams.
- 17) a) What is crossing over? Write the significance of crossing over.
b) Write short notes on gene mapping.

2 x 10 = 20
