

The H.N.S.B.Ltd. Science College, Himatnagar
Internal Examination September-2017

B.Sc. Semester: V
Marks: 40

Subject : Microbiology
Paper No. : MB: 503
(Classical Genetics)

Date : 13/09/2017
Time: 2:00 to 3:30

PART: A Answer any Five of Following.

05

1. During which phase mitotic spindle form
(A) Anaphase. (B) Telophase. (C) Prophase. (D) Metaphase.
2. Chromosome map is called as _____
(A) Recombination map (B) Genetic map (C) linkage map. (D) b & c both.
3. How much ratio observed in dihybride test cross ?
(A) 3 : 1 (B) 9 : 3 : 3 : 1 (C) 1 : 1 : 1 : 1 (D) 1 : 1
4. How much pairs of chromosome in peas ?
(A) 10 (B) 7 (C) 14 (D) 20
5. 100 % crossing over = _____
(A) 1 decimorgan unit (B) 1 centimorgan unit (C) 1 map unit (D) 1 morgan unit.
6. Who give theory of x – linked inheritance
(A) Gregor mendal (B) Thomas brno
(C) Robine holiday (D) Thomas hunt morgan
7. What is correct order of cell cycle event
(A) $G_2 \rightarrow S \rightarrow G_1 \rightarrow M$ (B) $G_1 \rightarrow S \rightarrow G_2 \rightarrow M$
(C) $M \rightarrow G_1 \rightarrow G_2 \rightarrow S$ (D) $S \rightarrow G_1 \rightarrow G_2 \rightarrow M$

PART: B Answer any Five of Following.

05

8. Define : Genetics.
9. What is mutation ?
10. Define : Coupling.
11. Explain the term “ central dogma”.
12. Which chromosomes called called as nominator gene ?
13. Equation of map distance.
14. Which was the experiment model of curt stern’s experiment ? *Prosophila* .

PART: C Answer any Three of Following.

09

15. What is test cross ?
16. Enlist the observable sever character of pea plant ?
17. Define : gene and trait.
18. Define : Double crossing over.
19. Difference between somatic cell & germ cell.
20. Write about previous stage of metaphase.

PART: D Answer any Four of Following.

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21. Give short notes on genetic linkage.
22. Chromosome interference in double crossing over.
23. Mendelian probability.
24. Explain holiday model.
25. Explain multiple crossing over.

PART: E Answer any Two of Following.

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26. Explain meiosis.
27. Explain multiple double crossing over.
28. Explain principle of independent assortment.
29. Describe the principle of segregation with example.