

B.TECH DEGREE EXAMINATIONS DEC 2012

Second Semester

BIO TECHNOLOGY

BTY101: Basic Biology and Genetics

Time: Three Hours

Maximum Marks:100

Answer ALL Questions:-

PART A (10x1=10 Marks)

1. ----- is the most abundant of the organic molecule in living things
a. Carbohydrate b. Oxygen c. Protein d. Hydrogen
2. Bubble hypothesis was explained by
a. Oparin b. Morgan c. Michell d. Watson
3. Vibrio cholerae contain a ----- flagellum
a. Lophotrichous b. Amphitrichous c. Atrichous d. Monotrichous
4. Nomenclature of organisms is more specifically called as ----- taxonomy
a. Alpha b. beta c. gamma d. delta
5. In plants, light-dependent reactions occur in the ----- membranes of the chloroplasts
a. Stroma b. Grana c. Thylakoid membrane d. Mitochondria
6. ----- enzyme will involve in pmf generation
a. Photolyase b. ATP synthase c. Hydrolase d. Aldolase
7. ----- is the phenomenon where the effects of one gene are modified by one or several other genes
a. Epistasis b. Hypostatic d. Metaphosis d. Pleompic
8. Genetic linkage was first discovered by the ----- geneticists
a. US b. British c. Swedish d. Irish
9. Chromatin is structure present in -----
a. Unicellular Algae b. Bacteria c. Virus d. Plant
10. Numerical change in a whole set of chromosomes is called
a. Polyploidy b. Aneuploidy c. Monolploidy d. Aploidy

PART B (10 x 2 = 20 Marks)

11. Write short notes on darwinism

12. Briefly discuss about spontaneous generation
13. With suitable illustrations explain the structural organization of viruses
14. Write short notes on plant cell wall
15. Explain in detail about oxidative phosphorylation
16. With suitable illustrations explain the structure of Golgi apparatus
17. Write short notes on chromosome crossing over
18. Discuss briefly about epistasis
19. Write note on Aneuploidy
20. Write a brief note on polytene chromosome

PART C (5x 14 = 70 Marks)

21. a) Give an account on natural selection theory.

(OR)

b) Discuss the scientific contribution of Oparin.

22. a) Describe in detail about the structural organization of bacteria.

(OR)

b) Give a detailed account on the structural organization of fungi.

23. a) Give a detailed account on calvin cycle.

(OR)

b) With suitable diagram explain the structure and function of mitochondria.

24. a) Give an account on mendelian law.

(OR)

b) Discuss in detail about test cross.

25. a) Describe in elaborate about prokaryotic genome organization

(OR)

b) Write in elaborate about the genomic organization in eukaryotes
