

B. Sc. DEGREE EXAMINATION, NOVEMBER 2007
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : CELL BIOLOGY
TIME : 3 HOURS

MAX.MARKS:100

SECTION – A

ANSWER ALL QUESTIONS

(18 marks)

I CHOOSE THE CORRECT ANSWER:

- The Golgi complex occurs in
a. Bacteria b. Blue green algae c. Angiosperms d. Both a & b
- The lysosomes are tiny membrane bounded vesicular structures of the cytoplasm which contain destructive enzymes called
a. Polymerases b. Gyrases c. Hydrolases d. Helicases
- The mitochondria contain more than enzymes and co-enzymes
a. 50 b. 60 c. 70 d. 80
- The main protein that are present in the cytoskeleton of microtubule is
a. Actin b. Myosin c. Tubulin d. Desmin
- The pairing of homologous chromosomes starts from the end and continues towards their centro mere is called
a. Proterminal synapsis b. Procentric synapsis
c. Random synapsis d. Localized synapsis

II. Fill in the blanks:

- The nucleoplasm contains many thread like coiled and much elongated structure known as the
- The two ribosomal subunits remain united with each other due to low concentration of the
- The inner surface of the thylakoid consists of spherical particles called
- Ribosomal RNA constitutes the of the total cellular RNA.
- In 1967 synthesized a DNA molecule from the 6000 nucleotides.

III. Match the following:

- | | | |
|---------------|---|-------------------|
| 11. Sarcomas | - | Epithelial cells |
| 12. Lymphomas | - | Connective tissue |
| 13. Lipomas | - | Leucocytes |
| 14. Leukemia | - | Lymphatic |
| | - | Adipose |

IV. State whether true or false:

- The Genetic code contains many synonyms in that almost all aminoacids are represented by more than one codon.
- The ribosomes occur in both Prokaryotic and Eukaryotic cells.
- The Golgi apparatus is morphologically very similar in both plant and animal cells.
- Endoplasmic reticulum acts as nervous system for the cell.

Answer any six questions. Each answer not to exceed 50 words:

(6x3=18)

19. Cilia & flagella
20. Heterochromatin
21. significance of meiosis
22. TOS Ribosomes
23. Types of Tumour
24. Chargaff's rule
25. Mitochondrial DNA
26. Genetic Code
27. Phagocytosis and Pinocytosis

SECTION – B

Answer any four questions. Each answer not to exceed 200 words.

Draw diagrams wherever necessary:

(4x6=24)

28. List out the functions of agranular and granular Endoplasmic reticulum.
29. Describe the Golgi complex.
30. Describe the biogenesis of the mitochondria.
31. Explain "Operon concept".
32. Enumerate the characteristics of cancer cells.
33. Describe the molecular structure of tRNA.

SECTION – C

Answer any two questions. Each answer not to exceed 1000 words.

Draw diagrams wherever necessary:

(2x20=40)

34. Describe the Ultra structure of nucleus.
35. Write an essay on Protein synthesis.
36. Give an account of giant chromosomes.
37. Write short notes on the following
 - a. Lysosomes and diseases
 - b. Molecular organization of thylakoids.
