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**SUBJECT CODE NO: Y-2023**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. (PATTERN-2013) T.Y (SEM V)**  
**Examination April / May - 2024**

**Botany Paper- XV (Cell Biology & Molecular Biology)**

[Time: 1:30 Hours]

[Max. Marks: 50]

Please check whether you have got right question paper.

N. B

- (i) Attempt all questions.
- (ii) All questions carry equal marks.
- (iii) Draw neat and well-labeled diagrams Wherever necessary.

**Q.1** Describe in details structure and Functions of Nucleus? **20**

**OR**

Describe in details mitosis definition. Process and its Significance?

**Q.2** What is Giant chromosome and describe Structure & function of polytene and lamp brush chromosomes. **20**

**OR**

**Write short Notes on (any four)**

- a) prokaryotic cell
- b) Functions of Endoplasmic Reticulum.
- c) Pachytene.
- d) Semi conservative DNA replication.
- e) Euchromatin.
- f) Deletion



**Q.3 Multiple choice questions.**

**10**

1. Which of the following Cell organelles. Is called a suicidal bag?

- |                  |                  |
|------------------|------------------|
| a) Lysosomes     | b) Golgi bodies  |
| c) Cell Membrane | d) Mitochondria. |



2. Name of the scientist who discovered Golgi apparatus.
- a) Robert Remake                      b) Rudolf Virchow  
c) Camillo Golgi                        d) Mendel
3. Which of the following polysaccharide is not in the eukaryotic plant cell wall?
- a) Chitin                                    b) Hemicellulose.  
c) Pectin                                    d) Cellulose.
4. The largest stage in the cell division is.....
- a) Leptotene                                b) Prophase-I  
c) Anaphase                                d) Metaphase.
5. The Meiotic division take place in
- a) Meristematic cells                    b) Conductive cells  
c) Reproductive cells                    d) Vegetative cells
6. The S' in the 80S ribosomes Stands for.....
- a) Sedimentary coefficient              b) Sulphur - labeled.  
c) Svedberg's unit.                      d) Supersonic
7. The term chromosome was coined by \_\_\_\_\_
- a) Sutton                                    b) Boveri  
c) Waldeyer                                d) Hoffmeister
8. Wheat is example of \_\_\_\_\_
- a) Hexaploid                                b) Triploid  
c) Tetraploid                                d) Monoploid.
9. Chromosome is located at some away from centre is.....
- a) Meta centric                            b) sub metacentric  
c) Acrocentric                              d) Telo centric
10. Turner's syndrome is example of \_\_\_\_\_
- a) Monosomy                                b) Nulisomy  
c) Trisomy                                    d) Tetrasomy