

Roll No.

Exam Code : J-21

Subject Code—52870

M.Sc. EXAMINATION

(Main) (Batch 2020 Onwards)

(First Semester)

ZOOLOGY

M-Z-101

Cell Biology

Time : 3 Hours

Maximum Marks : 70

Note : Attempt any *Five* questions. Q. No. **1** is compulsory. All questions carry equal marks.

1. Explain the following :

- (i) Symport
- (ii) Endocytosis
- (iii) Caspases
- (iv) Tandemly repeated genes
- (v) Nucleosome

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(vi) START checkpoint

(vii) Auxins. **7×2=14**

Unit I

2. Write down differences in transport systems and their special functions. **14**

3. Describe the role of kinesin and dynein in cell movements. **14**

Unit II

4. What is Protein Trafficking ? Describe the molecular mechanism of secretory pathway of proteins. **14**

5. Explain the following :

(i) Gap junctions

(ii) Auxin and cell expansion. **7×2=14**

Unit III

6. Define Meiosis. Describe the various phases of meiosis and role in genetic variation. **14**

7. What is Signal Transduction ? Describe the various signalling molecules and their receptors.

14

Unit IV

8. Explain the morphological and functional elements of eukaryotic chromosomes. **14**

9. Define Ageing. Explain morphological, physiological and functional changes during ageing. **14**