Roll No.

Total No. of Pages: 02

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M.Sc. (Biotechnology) (2018 Batch) (Sem.-2) CELL AND DEVELOPMENTAL BIOLOGY

Subject Code: MBT-201 M.Code: 76245

Time: 3 Hrs. Max. Marks: 70

INSTRUCTIONS TO CANDIDATES:

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains SEVEN questions carrying SIX marks each and students have to attempt any FIVE questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Q1. Attempt all parts:

- a) Write down the characteristics of plant cells.
- b) Define cot curve.
- c) Distinguish between heterochromatin and euchromatin.
- d) What are the molecular causes of aging in animals?
- e) Write down the biotechnological significance of stem cells.
- f) What are the hormonal changes during seed maturity?
- g) What is meant by double fertilization?
- h) Name the components of shoot apical meristem.
- i) Define phyllotaxy.
- i) Distinguish between cell aggregation and tissue.

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SECTION-B

- O2. Write a note on nucleosomes.
- Q3. Describe molecular organization of cytoskeleton.
- Q4. Write a note on causes, consequences and significance of senescence.
- Q5. Discuss embryo sac development in plants.
- Q6. How symmetry is established in plants.
- Q7. Write a note on root apical meristem.
- Q8. Write a note on pattern formation in *Drosophila*.

SECTION-C

- Q9. Discuss in detail structure and functions of endoplasmic reticulum.
- Q10. Discuss molecular mechanism of programmed cell death.
- Q11. Write a detailed note on limb development in vertebrates.

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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