(6 Pages) Reg. No. : .....

Code No. : 20368 E **Sub. Code : AMBO 51**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Botany — Core

CELL BIOLOGY AND EMBRYOLOGY OF ANGIOSPERMS

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. These ribosomes are found in prokaryotic cells

(a) 80S

(b) 70S

(c) 50S

(d) 40S

2. How many daughter cells are produced in mitosis?

(a) 2 (b) 4

(c) 8 (d) 16

3. Which one of the following is called as protein factories of the cell?

(a) Mitochondria (b) Ribosome

(c) Chloroplast (d) Nucleus

4. Endoplasmic reticulum was discovered by

(a) Benda (b) Golgi

(c) Robert Hook (d) Porter

5. The innermost layer of the anther is called as

(a) Epidermis (b) Middle layer

(c) Endothecium (d) Tapetum

6. The lower three nuclei present in the embryosac is called

(a) polar nuclei (b) synergids

(c) egg nucleus (d) antipodals

7. The entry of pollen tube into the ovule through the integuments is called

(a) Polygamy (b) Chalazogamy

(c) Porogamy (d) Mesogamy

8. Nuclear and cellular endosperm is seen in a

(a) Monocot plant

(b) Dicot plant

(c) (a) and (b)

(d) Gymnosperms

9. Occurrence of more than one embryo within a seed is called

(a) Apromixis

(b) Apospory

(c) Polymbryony

(d) Parthenocarpy

10. Polymbryony was first discovered by

(a) Leeuwenhoek (b) Bentham

(c) Griffith (d) Linnaeus

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Tabulate the differences between prokaryotic and eukaryotic cell.

Or

(b) Write the significance of mitosis.

12. (a) Explain the structure of ribosomes.

Or

(b) Explain the structure of golgi complex.

13. (a) With suitable diagram explain the structure of microsporangium.

Or

(b) Write short notes on megasporogenesis.

14. (a) Explain double fertilization.

Or

(b) Write short notes on post fertilization changes.

15. (a) Write short notes on apomixis.

Or

(b) Write short notes on parthenogenesis.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).
Each answer should not exceed 600 words.

16. (a) Describe meiosis.

Or

(b) Describe the structure of prokaryotic cell with suitable diagram.

17. (a) Describe the structure and functions of mitochondria.

Or

(b) Describe the structure and functions of nucleus.

18. (a) Describe the different types of ovules.

Or

(b) Describe the polygonum type of embryo sac development.

19. (a) Discuss about the development of dicot embryo.

Or

(b) Describe the types of endosperm.

20. (a) Write an essay on polyembryony.

Or

(b) Write short notes on :

(i) Parthenocarpy

(ii) Apospory.

———————