

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

Each answer should not exceed 600 words.

16. (a) Describe the ultra structure of plant cell with diagram.

Or

- (b) Explain the structure and functions of cell wall.

17. (a) Describe the ultrastructure of chloroplast with diagram.

Or

- (b) Give the ultrastructure and functions of mitochondria.

18. (a) Explain with diagrams the changes that take place in the prophase of meiosis I.

Or

- (b) Explain the various stages of mitosis.

19. (a) Explain the structure of microsporangium.

Or

- (b) Describe the development of monosporic type of female gametophyte.

20. (a) What is endosperm? Give a detailed account on types of endosperm.

Or

- (b) Describe with diagram, the development of embryo in capsella.

Reg. No. : .....

Code No. : 11726 E      Sub. Code : SMBO 22

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Second Semester

Botany — Main

CELL BIOLOGY AND EMBRYOLOGY OF  
ANGIOSPERMS

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

- Endoplasmic reticulum was discovered by him  
(a) Robert Brown      (b) Benda  
(c) Porter              (d) Golgi
- These ribosomes are found in Eukaryotic cells  
(a) 70S                  (b) 80S  
(c) 60S                  (d) 40S
- These are called as "Vehicles of hereditary characters".  
(a) Chromosomes      (b) Nucleus  
(c) Nucleolus          (d) Mitochondria

4. Which one of the following is an example for anucleate cell  
 (a) Paranchyma (b) RBC  
 (c) Meristematic cells (d) Paramoecium
5. These look like bunches of grapes  
 (a) Raphides (b) Sphaeroraphides  
 (c) Cystoliths (d) Starch grains
6. The daughter cells produced by this cell division are identical to mother cells.  
 (a) Mitosis (b) Amitosis  
 (c) Meiosis (d) All the above
7. The oily layer found on the outer side of pollens of insect pollinated plants is \_\_\_\_\_  
 (a) Sporopollenin (b) Ubisch bodies  
 (c) Pollenkitt (d) Tectum
8. Tetra sporic embryo sac development is seen in \_\_\_\_\_  
 (a) Polygonum (b) Peperomia  
 (c) Allium (d) None of these
9. Polyembryony was first discovered by \_\_\_\_\_  
 (a) Leeuwenhoek (b) Nawaschin  
 (c) Maheshwari (d) Dickson
10. The chromosome number in the endosperm of angiosperms is \_\_\_\_\_  
 (a) Haploid (b) Diploid  
 (c) Triploid (d) Polyploid

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).  
 Answer should not exceed 250 words.

11. (a) Write about endoplasmic reticulum.  
 Or  
 (b) Give an account on the structure and functions of ribosomes.
12. (a) Describe the structure of nucleus.  
 Or  
 (b) How will you classify chromosomes based on the position of centromere?
13. (a) Write about Crystolith and Raphides.  
 Or  
 (b) Give the significances of meiosis.
14. (a) Describe about types of ovule.  
 Or  
 (b) Explain the development of male gametophyte with diagram.
15. (a) Describe the structure of dicot embryo.  
 Or  
 (b) Describe double fertilization.