

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**  
**(For Candidates admitted during the academic year 2019 - 2020 & thereafter)**  
**SUBJECT CODE: 19ZL/AC/GZ24**  
**B.Sc. DEGREE EXAMINATION - APRIL 2022**  
**BRANCH V. A – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**  
**SECOND SEMESTER**

**COURSE: ALLIED CORE**

**PAPER : GENERAL ZOOLOGY - II**

**TIME : 3 HOURS**

**MAX. MARKS: 100**

**SECTION - A**

**Answer all the questions**

**(10 x 3 = 30)**

1. Comment on the following terms:
  - a. Amphimixis
  - b. Capacitation
  - c. Telolecithal egg
2. Distinguish between Epitheliochorial and Endotheliochorial placenta.
3. Give an example for each of the following:
  - a. Animal that makes mud construction
  - b. Ectocommensal
  - c. Precocial bird
4. Comment on three main factors that influence parental care.
5. Give the pattern of inheritance for the following:
  - a. Familial Hypercholesterolemia
  - b. Kearns Sayre syndrome
  - c. Skin colour in humans
6. Name the protein whose production is affected in of the following disorders:
  - a. Phenylketonuria
  - b. Alkaptonuria
  - c. Albinism
7. Fill in the blanks:
  - a. Type I hypersensitivity is mediated by \_\_\_\_\_
  - b. \_\_\_\_\_ is an example of Type II hypersensitivity
  - c. CD8 T cell differentiates into \_\_\_\_\_
8. Illustrate phagocytosis.
9. Give examples for the following:
  - a. Plant and Herbivore Coevolution
  - b. Predator and Prey Coevolution
  - c. Aposematic colouration
10. Enumerate the possible reasons for discontinuous distribution.

**SECTION - B**

**Answer any FIVE questions**

**(5 x 6 = 30)**

11. With neat labelled diagrams, describe the process of gastrulation in Rabbit.
12. Discuss briefly any three forms of learning.

13. Explain the types and significance of Genetic Counselling.
14. Elaborate the mechanism of sex determination in humans.
15. What is an autoimmune disorder? Explain with an example.
16. Compare and contrast Batesian mimicry with Mullerian mimicry. Add a note on the evolutionary significance of mimicry.
17. Describe the various barriers and the corresponding modes of dispersal in marine and terrestrial environments.

### SECTION - C

**Answer any TWO questions**

**(2 x 20 = 40)**

18. Illustrate and elaborate the process of Spermatogenesis. Add a note on the structure of a mature sperm.
19. Discuss the abnormal behaviour observed in domestic and zoo animals.
20. Explain the following patterns of inheritance with an example for each:
  - a. X-linked recessive inheritance
  - b. Multiple allelic inheritance
21. Give a detailed account on Humoral Mediated Immunity.

\*\*\*\*\*