

(FOR THE CANDIDATES ADMITTED

23UZY507

DURING THE ACADEMIC YEAR 2023

ONLY)

REG.NO.

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2025

B.Sc.ZOOLOGY(AIDED)

TIME : 3 HOURS

SEMESTER:V

MAXIMUM MARKS: 75

PART – III

23UZY507-DEVELOPMENTAL BIOLOGY

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. Name the chemical substance which is present on the surface of the Sperm_____.
a. Fertilizin b. Anti fertilizen c. Amylase d. Lipid
2. Name the solid mass of Blastomere _____.
a. Gastrula b. Morula c. Blastula d. Blastopore
3. Choose the number of somites present in the 24 hours chick embryo.
a. 4 pairs of somites b. 14 pairs of somites c. 24 pairs of somites d. None
4. Name the periodical shedding of cuticle by larva and pupa_____.
a. regeneration b. ecdysis c. neoteny d. thyroxine
5. The process of determining the sex of an embryo_____.
a. embryonic sexing b. embryo transfer c. regeneration d. moulting

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. Define parthenogenesis.
7. Explain the fate map.
8. Define flexures
9. Relate neoteny.
10. Expand GIFT .

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Interpret the scope of developmental biology.
(OR)
b) Describe the different phases of spermatogenesis.
12. a).Compare the meridional plane and vertical plane.
(OR)
b).Interpret the process of exogastrulation.

13. a). Interpret in detail the 48 hours of chick embryo.

(OR)

- b). Examine the functions of umbilical cord.

14. a) List the properties and structure of organizer.

(OR)

- b) Outline the types of regeneration.

15. a). Discuss the nuclear transfer method of cloning.

(OR)

- b) Defend the applications of stem cells.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4 (Or) K5)

16. a). Outline the stages of oogenesis.

(OR)

- b). Explain the Pre-formation theory.

17. a). Interpret the holoblastic cleavage.

(OR)

- b). Discuss the mechanism of embolic movement

18. a). Outline the steps involved in the development of heart.

(OR)

- b). Explain in detail chorion and allantois.

19. a). Classify the placenta based on the foetal membranes

(OR)

- b). Outline the changes which takes place in amphibian metamorphosis.

20. a). Summarise the embryonic stem cell culture with its applications.

(OR)

- b). Interpret the procedure involved in an in-vitro fertilization.
