

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Second Semester)

Branch – ZOOLOGY

EXPERIMENTAL EMBRYOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The animal pole cytoplasm contains
 - (i) Yellow or green pigments
 - (ii) Black or brown pigments
 - (iii) Brown and green pigments
 - (iv) Brown and yellow pigments
- 2 It is an embryonic tissue which organizes the surrounding tissues to develop an embryo.
 - (i) Promoter
 - (ii) Inducer
 - (iii) Regulator
 - (iv) Organizer
- 3 The transplantation is done between two species belonging to the same genus, it is called
 - (i) Autoplastic transplantation
 - (ii) Heteroplastic transplantation
 - (iii) Homoplastic transplantation
 - (iv) Xenoplastic transplantation
- 4 The first test tube baby was
 - (i) Louise Brown
 - (ii) Patrick Steptoe
 - (iii) Robert Edwards
 - (iv) Mc Brown
- 5 The first event of regeneration is
 - (i) Demolition
 - (ii) Dedifferentiation
 - (iii) Wound closure
 - (iv) Blastema formation

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a State the egg cortex with suitable illustrations.
OR
b Comment on the origin of egg polarity.
- 7 a Explain the structure and properties of organizer.
OR
b Classify the types of differentiation.
- 8 a Illustrate the Roux experiment on embryo with appropriate examples.
OR
b Categorize different types of xenotransplantation.
- 9 a Discuss the role of Rh factor in foetus development.
OR
b Describe the government programs in childcare.
- 10 a Illustrate the physiological changes involved in regeneration.
OR
b Summarize the factors influencing regeneration.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Elucidate the nucleus and its significance of development of embryo.
OR
b Categorize the role of gene in embryo development.
- 12 a Interpret the different experiments of organizers.
OR
b Assess Waddington's experiment on embryonic induction.
- 13 a Analyze the procedure of foetal tissue transplantation.
OR
b Comment on cryopreservation and its importance.
- 14 a Categorize the test tube babies-ethics.
OR
b Differentiate various types of twins and its embryological significance.
- 15 a Classify the types of regeneration in Amphibia.
OR
b Elucidate the goals and mechanism of teratology.

Z-Z-Z

END