

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086

(For candidates admitted during the academic year 2023 – 2024)

B. Sc. DEGREE EXAMINATION, APRIL 2024
BRANCH VIA. ADVANCED ZOOLOGY & BIOTECHNOLOGY
SECOND SEMESTER

COURSE : MAJOR CORE
PAPER : DEVELOPMENTAL BIOLOGY
SUBJECT CODE : 23ZL/MC/DB23
TIME : 3 HOURS **MAX. MARKS: 100**

Q. No.	SECTION A Answer all questions (10 x 2 = 20 marks)	CO	KL
1.	Swammerdam and Bonnet proposed the _____ theory.	CO1	K1
2.	Distinguish between cleidoic and non-cleidoic eggs.	CO1	K1
3.	In frog brain, the lateral ventricles of both sides remain freely communicated with the cavity of diencephalon by a broad opening called _____.	CO1	K1
4.	Give any two examples for vital dyes.	CO1	K1
5.	Which tranquilizer creates increased frequency of a human congenital abnormality of limbs?	CO1	K1
6.	Define Cryopreservation.	CO1	K1
7.	State True or False: a) The radial cleavage occurs when the successive cleavage planes cut oblique through the egg, at right angles to one another b) Mammalian egg is microlecithal.	CO1	K1
8.	List the mesodermal derivatives.	CO1	K1
9.	Give any two functions of placenta.	CO1	K1
10.	What are the ethical issues relating to surrogacy?	CO1	K1
Q. No.	SECTION B Answer all questions (10 x 2 = 20 marks)	CO	KL
11.	Comment on Vitellogenesis.	CO2	K2
12.	Define Epigenesis.	CO2	K2
13.	Distinguish between Epiboly and Emboly.	CO2	K2

14.	Illustrate the primitive streak of chick embryo.	CO2	K2
15.	Illustrate the method of cell lineage for blastomere B.	CO2	K2
16.	What are haemocytoblasts?	CO2	K2
17.	Define parthenogenesis.	CO2	K2
18.	Comment on the ethical issues relating to embryonic stem cells.	CO2	K2
19.	How does folic acid deficiency affect embryonic development?	CO2	K2
20.	Comment on superovulation.	CO2	K2
Q. No.	SECTION C Answer any two questions (2 x 10 = 20 marks)	CO	KL
21.	Discuss the theories on egg activation by the sperm.	CO3	K3
22.	Explain the Spemann-Mangold experiment with reference to organizer.	CO3	K3
23.	Develop a foetus through In-vitro fertilization technique	CO3	K3
Q. No.	SECTION D Answer any two questions (2 x 15 = 30 marks)	CO	KL
24.	Discuss the mechanism of Regeneration in Amphibia.	CO4	K4
25.	Compare and contrast blastulation in frog with that of chick.	CO4	K4
26.	Examine the process of Spermatogenesis.	CO4	K4
Q. No.	SECTION E Answer any two questions (2 x 5 = 10 marks)	CO	KL
27.	Discuss the development of eye lens of frog.	CO5	K5
28.	Comment on the hormones involved in insect metamorphosis.	CO5	K5
29.	Assess the various causes for male impotency.	CO5	K5
