

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-600 086
(For candidates admitted during the academic year 2009-10)

SUBJECT CODE: BY/PE/ST23

M. Sc. DEGREE EXAMINATION, APRIL 2010
BIOTECHNOLOGY
SECOND SEMESTER

COURSE : ELECTIVE
PAPER : STEM CELL TECHNOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION - A

ANSWER ALL THE QUESTIONS

(20 x 1 = 20)

Define / Explain the following:

1. Metamorphosis
2. Apoptosis
3. Pluripotency
4. Gap junction
5. Signal transduction
6. Hypoxic
7. Cadherins
8. ICSI
9. Dolly
10. Autocrine response
11. Trophoblast
12. Aging
13. Transdifferentiation
14. Stem cell
15. Sex determination
16. Extracellular matrix
17. Morulla
18. Holoblastic cleavage
19. Cdk
20. RTK

SECTION – B

ANSWER ANY FOUR QUESTIONS IN ABOUT 600 WORDS

(4x 10 = 40)

21. Explain the steps involved in human fertilization process.
22. Explain about Extracellular matrix interaction.
23. What is *invitro* fertilization process?
24. Explain about the properties of stem cell.
25. Explain about the transdifferentiation of genes in ES cells.
26. Explain about cell junctions.

SECTION – C

ANSWER ANY TWO QUESTIONS IN ABOUT 1500 WORDS

(2x 20 = 40)

27. Explain about cell cycle.
28. Explain about the different types of stem cell present in humans.
29. Explain about regenerative therapy.
30. Explain about blastulation and gastrulation of humans.
