



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – MEDICAL LAB TECHNOLOGY

THIRD SEMESTER – NOVEMBER 2019

18PML3ES01 – STEM CELL TECHNOLOGY

Date: 06-11-2019

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART A

(10x2=20 marks)

Answer ALL the Questions:

1. Define hemophilia.
2. What is autologous stem cell transplant?
3. List the elements present in cord blood.
4. Expand DPSCs and NSCs.
5. What is stochastic differentiation of stem cells?
6. Comment on induced pluripotent stem cells.
7. Write any two limitations of stem cell therapy.
8. Mention the process involved in cryopreserving stem cells.
9. What is pancreatic progenitor cell?
10. Write the advantages of cord blood.

Answer any FOUR of the following

PART B

(4x10=40 marks)

11. Explain briefly the religious and scientific debate on the human embryonic stem cells.
12. Write the steps performed prior to storage of stem cells.
13. Outline the role of stem cell transplant in cancer treatment.
14. Elaborate the collection procedure and complications involved in apheresis.
15. Describe the benefits and challenges of adult stem cells.
16. Classify the types of stem cells.

Answer any TWO of the following

PART C

(2x20=40 marks)

17. Give an account on neurodegenerative disorders.
18. Elaborate the epidermal and endodermal stem cells.
19. Discuss the source and collection techniques of stem cells from bone marrow and peripheral blood.
20. Illustrate and explain hematopoiesis.

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