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No. of Printed Pages : 1

Sl. No.

**M.Sc. I Semester Degree Examination, April/May - 2024**

**ZOOLOGY**

**DSC 4 : Stem Cell Biology And Regenerative Medicine**

**(NEP)**

Time : 3 Hours

Maximum Marks : 70

**Note :** Answer **any five** of the following questions with question No. **1 (Q.1) Compulsory**. Each question carries **equal** marks.

1. Write short notes on the following.
  - (a) Types of stem cells 5
  - (b) Paracrine mechanism 5
  - (c) Stem cell renewal 4
  
2. Discuss the molecular basis and significance of pluripotency. 14
  
3. Describe the methods and applications of stem cells in gene therapy. 14
  
4. Explain in detail the isolation and properties of embryonic stem cells. 14
  
5. Give a detailed account on ethical concerns in stem cell research. 14
  
6. Discuss about recent advances and challenges in production of pluripotent stem cells. 14
  
7. Write a short note on the following.
  - (a) Hematopoietic stem cells 5
  - (b) Adult stem cells 5
  - (c) Stem cell banking 4
  
8. Write a short note on the following.
  - (a) HLA typing 5
  - (b) Endothelial progenitor cells 5
  - (c) Therapy for liver disease 4

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