

SEM	SET	PAPER CODE	TITLE OF THE PAPER
IV	2013	12PBT4117	EMERGING TRENDS IN BIOTECHNOLOGY

SECTION – A**Answer all the questions:****20 x 1 = 20****Choose the correct answer:**

- The first commercialized recombinant product is _____.
 - Insulin
 - Somatotrophin
 - Interferon
 - Tissue plasminogen activator
- The enzyme employed in the biosensors designed to measure blood glucose level is _____.
 - Hexokinase
 - glucose oxidase
 - glucose synthase
 - glucose reductase
- Which is not a Biopolymer used for the synthesis of nanocomposites?
 - Starch
 - Cellulose
 - Polylactic acid
 - Polystyrene
- Method or technique used for isolation of stem cell is _____.
 - FACS
 - ELIZA
 - RIA
 - Zooblotting
- This is NOT the sources of embryonic stem cells
 - Aborted foetus
 - Cord blood cells
 - Bone marrow stem cells
 - Unused embryos from IVF procedures

Fill in the blanks:

6. _____ cells used in the hybridoma technology are HGPRT.
7. VNTRs are used to identify _____ disorders.
8. 1nm = _____ meter.
9. Hematopoietic stem cells are _____ potent.
10. Cord blood banks stores _____.

State True or False:

11. Semi synthetic antibiotics are chemically / structurally modified natural antibiotics.
12. In sandwich ELISA antibody is sandwiched between two antigens.
13. Alkylsiloxane forms self assembled monolayers on gold surfaces.
14. Delay or lack of stem cells renewal and differentiation results in aging.
15. Embryonic stem cells isolation and manipulation is legitimate and practiced in India.

Answer in one or two sentences:

16. Pharmacogenomics.
17. Positional cloning.
18. Nanobiotechnology.
19. Stem cell niches.
20. Stem cells.

SECTION – B

Answer all the questions:

5 x 4 = 20

21. a. With a suitable diagrams explain the production of any pharmaceutical products from genetically modified cells.

OR

- b. Explain the principle, types and applications of ELIZA.
22. a. Brief the different types of biosensors and their applications.

OR

- b. Write down the types and limitations of tissue transplantation.
23. a. Describe the process of nanoparticles synthesis using microbes.

OR

- b. Illustrate the DNA based nanostructures and applications.
24. a. Detail the properties and potencies of stem cells.

OR

- b. Write short notes on hematopoietic stem cells.
25. a. Describe the restrictions and ethical issues related to human embryonic stem cell research.

OR

- b. What are the future prospects of stem cells research?

SECTION – C

Answer any FOUR questions:

4 x 15 = 60

26. Narrate the production and applications of DNA vaccines.
27. Give an account on the principle and fabrication of DNA microarray.
28. Illustrate the applications and future prospects of nanotechnology.
29. Explain the methods of stem cells isolation and identification.
30. Write a short notes on the potentials of stem cell based therapy.
