QP CODE: 25020940

25020940

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Sixth Semester

B.Sc Biotechnology Model III

CHOICE BASED CORE COURSE - BT6CBT02 - NANOTECHNOLOGY

2017 Admission Onwards

0E799B28

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Who wrote the book 'Engines of creation'?
2. What is NSTI?
3. Give two examples for three dimensional nanomaterials.
4. Define surface plasmon resonance.
5. How the receptor mediated endocytosis is important for plasma membrane?
6. Give example for short interfering RNAs.
7. Define nanoprobe.
8. Define EPR effect.
9. How does siRNA affect gene expression?
10. What are Nanosponges?
11. What are dendrimers?
12. What are the applications of nanogel?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Discuss about the various applications of Nanotechnology in medicine.

14. Explain about nonocomposites.

15. Discuss the essential features required for a nanomaterials to be used in biological systems

16. Explain different types of interactions of drug with nanomaterials.

17. Write a note on the essential requirements needed for a nanoparticle for the targeted delivery.

18. What are different Nanopharmacology targets?

19. Write a note on various antibodies and its targets used in targeted drug delivery.

20. Write a note on application of nanotechnology in diagnosis of AIDS.

21. Differntiate between conventional and Nanobased diagnostic approaches in Cancer. Cite the advantages of nano based diagnostic tools.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Write an essay on the emerging trends of nanotechnology.

23. Write an essay on various Bottom up approaches used in nano synthesis. Discuss about green synthesis and its advantages.

24. Describe mechanism and site of drug action.

25. Write an essay on the application of nanoshells in cancer therapy.

(2×15=30)