

Exam.Code:0912
Sub. Code: 6730

1058
B.E. (Bio-Technology)
Eighth Semester
Elective – I
BIO-805: Nano Bio-Technology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) What is SEM?
- b) Give an example of a magnetite nanocrystal.
- c) What are solid lipid nanoparticles?
- d) What is cell seeding?
- e) Give an example of a fluid membrane.
- f) What are nanobiosensors?
- g) What are microfluidics?
- h) How do nanorobots aid in biosciences?
- i) How will you image the surface pattern of muscular tissue?
- j) What are engineered nanoporous structures? (10x1)

UNIT – I

- II. What is Atomic Focal Microscopy? How does it help in surface patterning? (10)
- III. How do dendrimers facilitate delivery of hydrophobic drugs? Explain. (10)
- IV. Write in detail about tissue engineering and its role in medical applications. (10)

UNIT – II

- V. What are nanobiosensors? Give examples of electrochemical sensors used in diagnostics. (10)
- VI. What are molecular motors? How is their surface patterning studied? (10)
- VII. Detail the techniques and applications of nanopores. (10)

x-x-x