

MASTER OF TECHNOLOGY (NANO TECHNOLOGY) (CBCS- 2015 COURSE)
M. Tech. (Nano Technology) Sem-IV :SUMMER- 2022
SUBJECT : SELF-STUDY PAPER-II:NANOBIOELECTRONICS

Day : Wednesday
Date : 15-06-2022

S-14595-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answer to both the sections should be written in **SEPARATE** answer book.
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SECTION-I

Q.1 State the significance of with based nanostructures in the biomedical domain. (10)
Describe any one in detail.

OR

Give an overview of 'Regenerative medicine' and role of Nanotechnology for the same.

Q.2 Explain the working principle and application of a biosensor. (10)

OR

Discuss the suitability of proteins for impedance biosensor.

Q.3 Give an overview about DNA Nanotechnology and its potential role in the biomedical domain. (10)

OR

List various top down routes to semiconductor nanofabrication. Explain any one in detail.

SECTION-II

Q.4 Explain why it is necessary to undertake bio functionalization of nanoparticles for biomedical applications. (10)

OR

Give an overview of 'Protein nanopores'.

Q.5 Discuss the suitability of nanobots for cancer diagnosis and treatment. (10)

OR

Explain the concept of 'Bio-mimetic and its potential applications, giving suitable examples.

Q.6 State the working principle and process parameters adopted for fabrication of a glucose sensor. (10)

OR

Write a brief note on role of Nanotechnology in tissue engineering.

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