SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

Q.23 What is nano technology? Discuss in detail the history and importance of nano technology. (CO1)

Q.24 Discuss in detail the future scope of nano technology. (CO4)

Q.25 Write short note on any two of following:

a) SEM technique (CO3)

b) Properties of nano technology (CO1)

c) Role of nano technology in waste water treatment. (CO2)

Roll No. .....

6th Sem.

Branch :Chemical Engineering

Sub. : Introduction to Nanotechnology

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

Q.1 Nano metre refers to (CO1)

a) 10^{-6}m b) 10^{-9}m

c) 10^{-2}m d) 10^{-10}m

Q.2 Which of the following is synthetic Nanomaterial.(CO1)

a) Quantum dots b) Clay minerals

c) Volcanic ash d) None of these

Q.3 Nanomaterials have high _____. (CO1)

a) Density b) Surface to volume ratio

c) Viscosity d) None of these

Q.4 Which of the following is a Nano catalyst used in waste treatment. (CO2)

a) Iron b) Platinum

c) Titanium dioxide d) None of these

Q.5 The fist talk about Nano technology was given by _____. (CO1)

a) Albert Einstein b) Newton

c) Gordon E. Moore d) Richard Feynman

Q.6 The colour of the Nano gold particle is (CO2)

a) Yellow b) Orange

c) Red d) Variable

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Write one example of Nano clay. (CO1)

Q.8 Define Nanowire. (CO1)

Q.9 Write full form of CNT. (CO1)

Q.10 Write full form of FTIR. (CO3)

Q.11 Define Nanoscience. (CO1)

Q.12 Define Ceramic Nanomaterial. (CO1)

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)

Q.13 Discuss any two industrial applications of nano technology. (CO2)

Q.14 Explain in Brief the challenges of nanotechnology.(CO1)

Q.15 Differenciate between natural and Synthetic nanomaterials. (CO1)

Q.16 Explain in Brief the preparation of nanomaterials using chemical Precipitation Method. (CO3)

Q.17 Explain in Brief X-Ray diffraction technique used for nanomaterials characteristic study. (CO3)

Q.18 Discuss the impact of nano technology on Environment. (CO4)

Q.19 Discuss any two medical applications of Nano technology. (CO2)

Q.20 Write short note on social impact of Nano technology. (CO4)

Q.21 Explain in brief about nanocomposites. (CO1)

Q.22 Discuss in brief the solubility and reactivity properties of nano materials. (CO1)