

CBCS Scheme

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15NT45

Fourth Semester B.E. Degree Examination, June/July 2017 Application of Nano Technology

Time: 3 hrs.

Max. Marks: 80

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. What are Photo voltaics? Explain about the limitations of Conventional photo voltaics and Applications of nano technology in photovoltaics. (08 Marks)
- b. What are Nano batteries? Explain their advantages and nano technology applications. (08 Marks)

OR

- 2 a. Explain about construction and working of CIGS solar cells. (06 Marks)
- b. Explain about the applications of nano technology in hydrogen fuel cells. (10 Marks)

Module-2

- 3 a. Write a short note on applications of nano technology to energy production and energy transmission system development. (08 Marks)
- b. Describe about Oligodynamic effect and mechanism of oligodynamic action of nano particles. (08 Marks)

OR

- 4 a. Explain about nano technology assisted heterogeneous photo catalysis. (06 Marks)
- b. Write a note on sensors for helmets. (05 Marks)
- c. Explain about applications of nano technology for smart equipment. (05 Marks)

Module-3

- 5 a. Describe about nano scale carriers and micro fabricated system vessels. (08 Marks)
- b. Write a short note on Zoonotic diseases. (04 Marks)
- c. What is Nano food? Explain the importance of nano food. (04 Marks)

OR

- 6 a. Explain about the applications of nano lingo cellulosic materials and halloy sites. (08 Marks)
- b. What are Biosensors? Explain about types of biosensors. (08 Marks)

Module-4

- 7 a. Explain about Self cleaning coatings and anti – stain coatings. (10 Marks)
- b. Write a short note on : i) Nano material modified steel ii) Nano technology for forming of high strength steel iii) Gluing and detaching components. (06 Marks)

OR

- 8 a. Explain in detail about UV – protection , Corrosion and Moisture resistance of buildings using nano materials and their products. (10 Marks)
- b. Discuss about anti – fogging , anti – icing and anti – microbial coatings. (06 Marks)

Important Note: 1. On completion your answers compulsorily have to be reviewed once from on the examination hall. 2. Any scribble or correction in the answers will be treated as malpractice. 3. Any scribble or correction in the questions will be treated as malpractice.