

**M. TECH. (NANO TECHNOLOGY) SEM-III (CBCS – 2015 COURSE) :  
WINTER - 2017**

**SUBJECT: SELF STUDY PAPER - I- APPLICATIONS OF NANOTECHNOLOGY  
IN FOOD AND AGRICULTURE**

Day: **Thursday**  
Date: **25/01/2018**

**W-2017-2764**

Time: **11.00 AM TO 02.00 PM**  
Max. Marks: 60

**N.B.:**

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

**SECTION-I**

**Q.1** Discuss the role of Nanotechnology based pest control in crop plants with a suitable example. **(10)**

**OR**

**Q.1** Discuss Nanotechnology based approaches used for food preservation and packaging? **(10)**

**Q.2** Explain how nanosized agrochemicals would be useful in agriculture sector? **(10)**

**OR**

**Q.2** Describe the role of Nanotechnology in food processing. **(10)**

**Q.3** What are FCMs? Describe their role in food sector. **(10)**

**OR**

**Q.3** Write the role of nanomaterial based polymers composite in food industry. **(10)**

**SECTION-II**

**Q.4** Write a brief note on applications of nano Liposomes in the food industry. Give suitable examples. **(10)**

**OR**

**Q.4** Explain in details various types of nanomaterials used in the food sector. **(10)**

**Q.5** Discuss the health hazards of nanomaterials and assess the risk of using this technology in food and agriculture. **(10)**

**OR**

**Q.5** Discuss various risk assessment approaches used by environmental agencies? **(10)**

**Q.6** What are bio-nano sensors? Explain its applications in food and agriculture. **(10)**

**OR**

**Q.6** State the ethical issues associated with the use of Nanotechnology in the food and agriculture sector. **(10)**

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