

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE - RAIGAD - 402 103
Summer Semester Examination, May 2018**

Branch: M. Tech (Electronics Engineering)

Semester: II

**Subject with Subject Code: NANO ELECTRONICS
[MTEEC202]**

Marks: 60

Date: 16 / 05 / 2018

Time: 3 Hrs.

Instructions: 1) All questions carry equal marks.
2) Answer any five of the following questions.

- Q. No.1** a) What are the different film deposition methods? Explain Pulsed Laser Deposition method.
b) List the mechanical and vibrational properties of Carbon nano tube.
- Q. No.2** a) Discuss the application of Nano tubes as data processing devices.
b) Illustrate the design structure for Ferro electric FET.
- Q. No.3** a) Discuss the properties of high permittivity dielectrics.
b) With the block diagram explain the functional principle of smart card.
- Q. No.4** a) Draw and explain the MRAM cell architecture.
b) Describe the read and writing schemes for a ferro electric memory cell.
- Q. No.5** a) Discuss the use of phase change material for storage.
b) With the neat diagrams illustrate holographic data storage.
- Q. No.6** a) What are the basic elements of a photonic network? Explain briefly their structure.
b) What are the pre requisites for Organic LED? Discuss.

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