



# RAN-1277

## T Y B Sc (Electronics) Examination

### March / April - 2019

### Semester - 6

### GE: Integrated Circuit Technology

सूचना : / Instructions

नीचे दृशविले निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

T Y B Sc (Electronics)

Name of the Subject :

GE: Integrated Circuit Technology

Subject Code No.:

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Seat No.:

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Student's Signature

**Instructions:**

- 1) Figures at extreme right indicate full marks.
- 2) Draw figures to support your answer.

**Q. 1**

**Answer in brief.**

**8**

- A) What is bonding with respect to IC technology?
- B) What is Chip/Die?
- C) What is circuit Probe?
- D) What is Epitaxial growth?
- E) What is Encapsulation?
- F) What is Etching?
- G) What is Metallization?
- H) What is Wafer?

**Q. 2**

- A) Explain the method to make Electrical Grade silicon.
- B) Using diagram explain how to make active component on Wafer.

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**OR**

**Q. 2**

- A) Explain type of contacts in IC technology.
- B) Using Diagram explain how to make passive component on Wafer.

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**7**

- Q. 3** A) Explain in detail Isolation technique and its type. 7  
B) Explain with diagram Ion Beam Implantation. Give its advantage over other method. 7

**OR**

- Q. 3** A) What is Metallization? Explain the metallization process 7  
B) What is Oxidation? Give different ways to oxidize the silicon wafer. 7

- Q. 4** **Short Notes on Any two** 14  
A) Photolithography  
B) Photo Etching Dry and wet  
C) Electron Beam Lithography  
D) Assembly processing and Packaging
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