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RAN-2103000206030024

T. Y. B. Sc. (Sem. - VI) Examination April - 2023

Generic Elective for Electronics : GE/IDS

IC Technology

સૂચના : / Instructions

(1) **નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.**
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:

☛ **T. Y. B. Sc. (Sem. - VI)**

Name of the Subject :

☛ **Generic Elective for Electronics : GE/IDS - IC Technology**

Subject Code No.: 2103000206030024

Seat No.: ☐☐☐☐☐☐

Student's Signature

(2) Q. 1 is compulsory.
(3) Figure at extreme right indicates full marks.

Q. 1. **Answer in brief.** **8**

1. What is bonding with respect to IC technology?
2. What is Chip/Die?
3. What is circuit Probe?
4. What is Epitaxial growth?
5. What is Encapsulation?
6. What is Etching?
7. What is Metallization?
8. What is Wafer?

Q. 2. a. Give the method to make Electrical Grade silicon. **7**

b. Using diagram Make active component on Wafer. **7**

OR

a. Explain type of contacts in IC technology. **7**

b. Using Diagram explain Passive component on Wafer. **7**

Q. 3 a. Explain in detail Electron beam. **7**

b. Explain with diagram Ion Beam Implantation. Give its advantage over other method. **7**

OR

a. What is Metallization ? Explain the process. **7**

b. What is Oxidation ? Give different ways to oxidize the silicon wafer. **7**

Q. 4. **Short Notes on. (Any TWO)** **14**

1. Photolithography
2. Photo Etching Dry and wet
3. Isolation technique
4. Assembly processing and Packaging
