

**BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)**  
**B.Tech.Sem - VII ELECTRICAL ELECTRICAL :SUMMER- 2022**  
**SUBJECT : ROBOTIC TECHNOLOGIES & APPLICATIONS**

Day : Friday  
Date : 3/6/2022

**S-13340-2022**

Time : 02:30 PM-05:30 PM  
Max. Marks : 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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**Q.1** Elucidate the significance of automation in an industry. **(10)**

**OR**

Explicate various industrial applications of robots.

**Q.2** Clarify architecture of robot with pertinent sketch. **(10)**

**OR**

Elucidate laws of robot. Also write down general specifications of robot.

**Q.3** Explicate rigid body kinematics in robots. **(10)**

**OR**

Write a note on inverse kinematics in robots.

**Q.4** Give details of pneumatic manipulator used in robot. **(10)**

**OR**

Compare serial and parallel manipulators used in robot with neat sketches.

**Q.5** Elucidate various type of actuators used in robots. **(10)**

**OR**

Give details of various types of actuators used in robots.

**Q.6** Explicate image acquisition in robot. **(10)**

**OR**

What are various image processing techniques used in robots.

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