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BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - II Robotics & Automation Engineering : WINTER- 2022
SUBJECT : FUNDAMENTALS OF ROBOTICS
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Day : Tuesday

Date : 29-11-2022

W-24126-2022

Time : 10:00 AM-01:00 PM

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagram **WHEREVER** necessary.

Q.1 What is history of Robots? Describe basic components of robotics system in detail. (10)

OR

Q.1 Describe with suitable sketch robot with six degree of freedoms in detail. (10)

Q.2 What do you understand by mechanical grippers? Explain different types of mechanical grippers in detail. (10)

OR

Q.2 a) Describe selection of grippers based on the application. (05)

b) What is general specifications of robot? (05)

Q.3 What are the types of pneumatic actuator used in robotics? Explain them in detail. (10)

OR

Q.3 Describe A. C. servo motors and Reversible A. C. motors in detail. (10)

Q.4 How sensors are classified? Explain tactile sensors in detail. (10)

OR

Q.4 Which non - contact sensors used in robotics? Explain them in brief. (10)

Q.5 a) Differentiate between point to point control and continuous path control. (05)

b) Explain control actions with its construction. (05)

OR

Q.5 Explain the following terms with diagrams: (10)

i) Encoder

ii) Resolver

Q.6 How robot are working in under water and gives a suitable applications. (10)

OR

Q.6 How robot is used in industry for material handling. What is the benefits of it? (10)

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