

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VIII PRODUCTION :SUMMER- 2022
SUBJECT : INDUSTRIAL ROBOTICS

Day : Thursday
Date : 16-06-2022

S-13492-2022

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

N. B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labelled diagrams **WHEREVER** necessary.
 - 4) Assume suitable data, if necessary.
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Q. 1 Define automation and robotics. Explain robot anatomy in detail. **(10)**

OR

Q. 1 What do you understand by resolution, accuracy and repeatability? Explain. **(10)**

Q. 2 Describe actuators and power transmission system in detail. **(10)**

OR

Q. 2 Describe basic control system concepts and models in detail. **(10)**

Q. 3 What is edge detection, object description and recognition of machine vision? Explain. **(10)**

OR

Q. 3 What are the different types of robot programming languages are used? Explain them in brief. **(10)**

Q. 4 Explain Lagrangian –euler formation in detail. **(10)**

OR

Q. 4 How to find the resultant rotation matrix for eulers angle representation? **(10)**

Q. 5 What is robot learning and robot task planning? Explain. **(10)**

OR

Q. 5 What is the future of robotics? Also explain its social issues. **(10)**

Q. 6 What is the use of robot in assembly and inspections? Explain with suitable examples. **(10)**

OR

Q. 6 Describe 'Interfacing robot with PC' and 'Social issue and economics of robotics' in detail. **(10)**

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