OCT./BE/Insem.-64
B.E. (Electronics Engineering)
Robotics and Automation
(2012 Pattern) (Semester - I) (Elective - II)

Time : 1 Hour]   *[Max. Marks : 30*

Instructions to the candidates:
1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
2) *Figures to the right indicate full marks.*
3) *Assume suitable data, if necessary.*

Q1) a) With the help of proper diagram explain relation of automation with productivity. **[5]**

   b) Write applications of automation. Explain one application in detail. **[5]**

OR

Q2) a) What is automation? What are different types of automation? Compare all types of automation. **[5]**

   b) With the help of neat diagram explain structure of NC systems. **[5]**

Q3) a) What are Laws of robotics? **[5]**

   b) Differentiate between following terms : **[5]**
      i) Reach & stroke
      ii) Prismatic and revolute joint

OR

Q4) a) Explain how robots can be classified based on the types of joints with the help of neat sketches. **[6]**

   b) Define following terms : **[4]**
      i) Reach & stroke
      ii) Work envelop

Q5) a) What are different criteria for classification of robotics? Which are different societies working in the field of robotics? How do they classify robotics? **[5]**

   b) What are different applications of robotics? Explain any two in detail. **[5]**

OR

Q6) a) Explain the working principle of proximity rod tactile sensor with neat sketch. **[5]**

   b) Explain the concept of end effectors, tool frame, tool point with the help of neat diagram. **[5]**

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