

ME-701(C)/ AU-701(B)  
B.E. VII Semester  
Examination, Dccember:2013  
Industrial Robotics  
Time : Three hour  
Maximum Marks : 70  
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Note: Attempt any live questions. All questions carry equal marks. Draw neat sketches wherever required.

- 1 . a) Define "Robot". Discuss the basic structure of robot in detail.  
b) Describe the classification of robot.
2. a) Discuss various types of motions in robot.  
b) State various drive systems used in robot. Discuss various characteristics of Electric motors.
3. a) Explain important design considerations for robot grippers.  
b) Discuss various types of end-effectors used in robot for different tasks.
4. Explain the following:
  - i) Vision sensor, [www.rgpvonline.in](http://www.rgpvonline.in)
  - ii) Voice sensor.
  - iii) Proximity sensor.  
b) Write a short note on " Image processing and object recognition" in robot.
5. a) Describe various types of progranuning methods used in robot.  
b) State the features of any three selected robot languages.
6. a) Explain piezoelectric sensor, state its properties and applications.  
b) Explain various safety basis involve in robots.
7. a) Discuss acceptance rule for industrial robots.  
b) Define the term "Encoder" and "Compliance".
8. Write short technical note on following ( Any two)
  - a) Work cycle time analysis for robot .
  - b) Economic considerations for robot.
  - c) Current and future applications of robot.
  - d) Robotic sottwares. [www.rgpvonline.in](http://www.rgpvonline.in)