

Code :R7410305

R7

IV B.Tech I Semester(R07) Supplementary Examinations, May/June 2011
ROBOTICS

(Mechanical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Explain the relation between CAD/CAM and robotics.
(b) Discuss the classification of robotics by co-ordinate system.
2. Explain various types of locomotion devices used in robot.
3. How are homogeneous transformations applied to rotation and translation? Explain.
4. With an example of your choice, explain manipulator forward kinematics.
5. Discuss the applications of Newton-Euler formulations in manipulator dynamics.
6. (a) How is trajectory planning done in robotics?
(b) Discuss the methods adopted for avoidance of obstacles.
7. Discuss some feedback components used in robots.
8. Explain the applications of a robot in a layout for spray painting.
