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**Question Paper Code: 52138**

M.E.DEGREE EXAMINATION, NOV 2016

Elective

CAD / CAM

15PCD518 – INDUSTRIAL ROBOTICS AND EXPERT SYSTEMS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) Explain various parts of robots with neat sketch. (20)  
Or  
(b) Explain Robot trajectory planning with example. (20)
2. (a) Sketch the pneumatic circuits to control different motions of cylindrical and Cartesian coordinate's robot. (20)  
Or  
(b) Explain the various drive system used with an industrial robot and compare their features, merits and demerits. (20)
3. (a) What is robot vision? What are the types of vision sensor used to take the image of an object? (20)  
Or  
(b) With an aid of sketch describe briefly a strain gauge type wrist force/torque sensor. (20)
4. (a) Briefly explain the safety sensors and safety monitoring of robots in detail. (20)

Or

(b) Discuss robot application for assembly and inspection. (20)

5. (a) Briefly explain the robot programming languages in detail. (20)

Or

(b) Explain the various types of motion interpolations. (20)

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