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BME-063

DIPLOMA IN MECHANICAL ENGINEERING (DME)

Term-End Examination

December, 2016

00747

BME-063 : CAD / CAM

Time : 2 hours *Maximum Marks : 70*

Note : *Answer any* ***five*** *questions. All questions carry equal marks.*

1. (a) Using block diagrams, explain how design and manufacturing activities are integrated in CAD/CAM. 7

(b) Give different applications of CAM. 7

2. (a) Distinguish between wireframe modelling and solid modelling. 7

(b) Discuss the different types of display devices used in CAD. 7

3. (a) Explain how the output devices represent the data from CAD/CAM for further use. List some of these devices. 7

(b) Using illustrations, explain the important coordinate systems. 7

4. (a) Explain the role of geometric modelling using illustration. 7

(b) What do you understand by the extrusion feature ? 7

5. (a) Explain briefly how Computer Aided Manufacturing differs from conventional manufacturing. 7

(b) List and briefly explain the different elements present in CNC machine tool system. 7

6. (a) Describe the degrees of freedom and coordinates associated with robotics. 7

(b) Briefly explain the sensors, controls and actuators associated with robots. 7

7. (a) Using examples, distinguish between open-loop and closed-loop control systems. 7

(b) What do you understand by the term "Decision Support Systems" ? Explain. 7

8. (a) What are the components of AGVs ? Also give the block diagram representation of Computer-controlled Architecture for AGVs. 7

(b) Describe the role of Management Information System (MIS) in the CAD/CAM environment. 7