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BME-055

DIPLOMA IN MECHANICAL ENGINEERING (DME)

Term-End Examination

00102 **December, 2016**

BME-055 : COMPUTER INTEGRATED MANUFACTURING

Time : 2 hours *Maximum Marks : 70*

Note : *Attempt any **seven** questions. All questions carry equal marks.*

1. (a) Briefly explain the evolution of CIM. *5*

   (b) Give the definition of CIM and explain the same using CIM wheel. *5*

2. Discuss the scope of CIM in the context of business, production and design. *3+3+4*

3. Using a flow chart, show the flow of operations in CIM. *10*

4. (a) Briefly explain the five controls which are part of manufacturing control. *5*

   (b) With a chart, explain the components of integrated computer system in CIM. *5*

5. (a) What are Type-I and Type-II errors ? How are they caused by manual inspection ? 5

(b) What is feedback process control ? Explain. 5

6. (a) Enumerate the applications where CMMs become an important device. 5

(b) List the components present in a CMM and indicate their functions. 5

7. (a) Briefly describe the control systems for AGVs. 5

(b) What are the design features of AGVs ? 5

8. (a) Give the classification of robots on the basis of physical configuration. 5

(b) List down some applications for industrial robots. 5

9. (a) What are the basic operations of an automated storage/retrieval system ? 5

(b) What are the objectives for installing an automated storage system in a factory ? 5

10. (a) Compare any ten attributes of flexible and conventional manufacturing systems. 5

(b) Give any five objectives of machine loading studies. 5