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BME-055

DIPLOMA IN MECHANICAL ENGINEERING (DME)

Term-End Examination

00430

June, 2016

BME-055 : COMPUTER INTEGRATED MANUFACTURING

Time : 2 hours *Maximum Marks : 70*

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

1. (a) What are the different bases of classifying production systems according to the quality and variety of the product ? *5*

(b) Draw the SME CIM wheel and explain its concept. *5*

2. (a) What are the potential benefits of CIM ? *5*

(b) Compare CAD, CAM and CIM. *5*

3. (a) Briefly explain the functioning of intelligent warehouse. *5*

(b) Describe the steps through which electronic data transfer takes place from manufacturer to supplier. 5

4. (a) Enumerate the steps involved in automation of an inspection procedure in an industry. 5

(b) List the factors which could cause errors in an automated inspection system. 5

5. (a) Differentiate between on-line/in-process and on-line/post-process inspection methods. 5

(b) Briefly explain the components present in a three-dimensional coordinate measuring machine. 5

6. (a) Explain the four ways of operating and controlling CMM. 5

(b) List the advantages of using CMMs over conventional inspection methods. 5

7. (a) List and explain the four main components of an AGV. 5

(b) Discuss any five types of AGVs giving the salient feature of any one of them. 5

8. (a) Write down any four decisions influencing the flow path design. 5

(b) Briefly explain how the number of AGVs needed in a system are decided. 5

9. (a) Explain how robots are useful in material handling application. 5

(b) Briefly explain about the components of AS/RS. 5

10. (a) What do you understand by FMS ? What are the components of FMS ? 5

(b) Define dispatching and name the different types of dispatching rules. 5