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BME-005

B.Tech. MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

00180

Term-End Examination

June, 2014

BME-005 : COMPUTER INTEGRATED MANUFACTURING

Time : 3 hours *Maximum Marks : 70*

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

1. (a) Explain the basic operations of automated storage/retrieval system (AS/RS) with real life examples. 7

(b) Describe the steps through which electronic data transfer takes place in general from manufacturer to supplier in Indian context.

2. (a) Describe six elements of CNC system. 7

(b) Discuss the importance of program input device and list any three of them. What is the purpose of feedback system in a CNC system ? 7

3. (a) What do you mean by FMS ? Describe the advantages of FMS over conventional manufacturing system. 7

(b) Discuss the method of part family formation. What is order clustering ? 7

4. (a) Briefly describe "Knowledge based process planning." 7

(b) Write the process of material requirement planning and discuss the format of MRP output. 7

5. (a) Explain the advantages and disadvantages of generative process planning. 7

(b) What are the steps involved in construction of discrete event simulation model ? Discuss in brief about the various terminologies used in discrete system. 7

6. (a) What is sensor ? What are the two types of sensors and how do they differ from each other ? 7

(b) What are the different components of a sensing system ? Explain their functions. 7

7. (a) What are vision systems ? Give some examples of vision system. 7

(b) What are the functions of a vision system ? Write the advantages of using a vision system. 7

8. (a) Describe the role of information system in automated factory. 7

(b) What are different opportunities for standardisation of factories ? 7