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BME-005

B.Tech. MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

Term-End Examination

00298

June, 2015

BME-005 : COMPUTER INTEGRATED MANUFACTURING

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any **five** questions.*

1. (a) What are the different basis of classifying production systems according to the quality and variety of product ? 7

(b) Discuss the scope of CIM in the context of business, production and design. 7

2. (a) What are the Type I and Type II errors in inspection procedure ? 7

(b) Describe the advantages of using CMMs over conventional methods of inspection. 7

3. (a) Discuss the various types of guidance systems. 7

(b) Describe the physical components of a typical industrial robot. 7

4. (a) Enumerate the advantages and limitations of CNC systems. 7

(b) Briefly discuss the tool handling system. 7

5. (a) Describe the need of flexibility in shop floor environment. 7

(b) Describe rank order clustering (ROC) with a suitable example. 7

6. (a) Discuss the advantages and limitations of computer simulation. 7

(b) What are the steps involved in CAPP. Elaborate. 7

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

(b) What are the main functions of a vision system ? 7

8. (a) What are the three types of database structures ? Explain any two of them. 7

(b) Describe the role of information system in an automated factory. 7