

**B.Tech. – VIEP – MECHANICAL ENGINEERING
(BTMEVI)**

Term-End Examination

00843

June, 2018

BIMEE-009 : COMPUTER AIDED MANUFACTURING

Time : 3 hours

Maximum Marks : 70

*Note : Answer any **five** questions. All questions carry equal marks. Standard symbols have usual meaning.*

1. (a) List the various components of Flexible Manufacturing System (FMS). Explain the function of each component in brief.
- (b) With the help of example, distinguish between accuracy and repeatability related to the performance by a robot. 7+7

2. (a) Explain the operation of NC-machine tool system with neat sketch.
- (b) Differentiate between the open loop control system and closed loop control system with suitable examples. 7+7

3. (a) Write the advantages and disadvantages of computer aided manufacturing over traditional manufacturing.
- (b) Discuss the reasons that lead to the development of numerical control system. How can the accuracy of machining be improved in the NC system ? 7+7
4. (a) What is the purpose of feedback ? Discuss the functions of translators, computers and interpolators in NC systems.
- (b) What is adaptive control system ? Discuss its applications, advantages and limitations. 7+7
5. (a) What type of data are required for developing CAPP systems ? List advantages.
- (b) How do you implement the CAD/CAM in a job shop company ? Explain. 7+7
6. Classify the different types of DC motors and explain about the working and construction of any one type. 14

7. (a) What are the functions of drivers ?
Elaborate different types of drivers used for
NC machine tools.
- (b) Describe the construction of a stepper
motor. Comment on its robustness. 7+7
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