

**B. Tech 7th Semester Exam., 2017**

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**COMPUTER AIDED DESIGN AND  
MANUFACTURING**

Time : 3 hours

Full Marks : 70

**Instructions :**

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **NINE** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. 1 is compulsory.

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1. State True or False (any seven) : 14

- (a) Computer is an electronic device.
- (b) In programmable automation, sequence of operations is fixed.
- (c) Joystick is an input device.
- (d) In high-level language, '0' and '1' are used.
- (e) Primary memory has more space than secondary memory.
- (f) CAM stands for 'computer aided monitoring'.

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- (g) CNC machine has a dedicated computer as compared to NC machine.
- (h) Post-processor statements control machining operation.
- (i) AutoCAD is a design software.
- (j) Adaptive control tries to optimize the machining process by controlling certain process variables like temperature, spindle deflection, etc.

2. Explain CAD/CAM. Why are industries shifting in CAD/CAM? 14

3. Briefly discuss the different types of hardware components of general purpose digital computers. 14

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4. Explain the following terms : 7+7=14

- (a) Geometric modelling
- (b) Automation

5. (a) Discuss the different types of input devices used in CAD.

- (b) Explain the general design process with flow diagram. 7+7=14

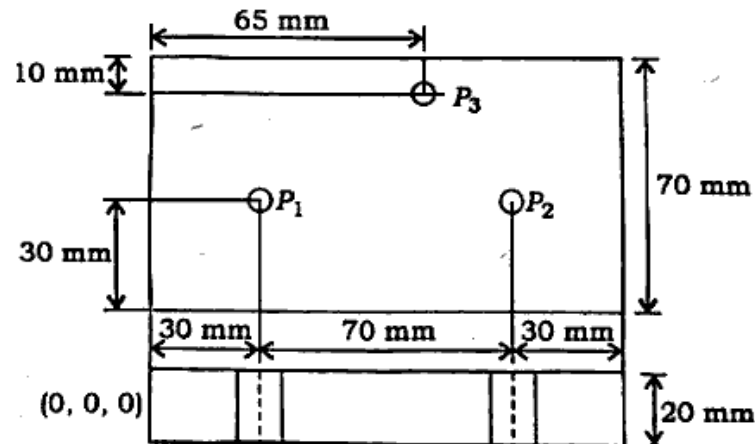
6. Explain direct numerical control system. 14

7. Write short notes on the following : 14

(a) Fixed zero and floating zero

(b) Point-to-point and continuous path NC machines akubihar.com

8. Write an APT program to drill holes in a plate as shown in figure below. Spindle rotates at 500 r.p.m. and required 65 mm feed rate is 0.05 mm to drill the hole : 14



9. Define automated guided vehicle. Explain the different components of automated guided vehicles. 14

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