(Following Paper ID and Roll No. to be filled in your Answer Book)

Paper ID : 187751 Roll No. | | | | | | | | | | |

B.Tech.

(SEM. VII) THEORY EXAMINATION, 2015-16

COMPUTER AIDED MANUFACTURING

[Time:3 hours] **[Total Marks:100]**

Section-A

Note: Attempt **all** questions **(10×2=20)**

(a) Write types of automation.

(b) What is DNC, how it differs from CNC system?

(c) Elaborate product development cycle.

(d) Write two G and two M codes used in CNC.

(e) Write two codes for canned cycle used in CNC part programming.

(f) What are different ways of defining line and plane, using geometrical statement of APT language?

(g) What is FMS? Write its importance.

(h) What is cellular manufacturing?

(i) State the advantage of CAPP.

(j) Write the name of Robot programming languages.

Section-B

Note: Attempt any five Questions: **(5x10=50)**

a) Discuss the parameters in detail and neat sketches which are responsible for eliminating and reducing the activities of operator in CNC system.

b) Classify and explain NC system on the basis of Types of conrol and co-ordinate system.

c) State and explain different types of statement used in APT.

d) What are distinct approach of adoptive control system? Explain them.

e) Discuss the principle of variant process planning, also write its advantage.

f) Elaborate various types of sensor used in robot. Enlist various applications and limitations of robot.

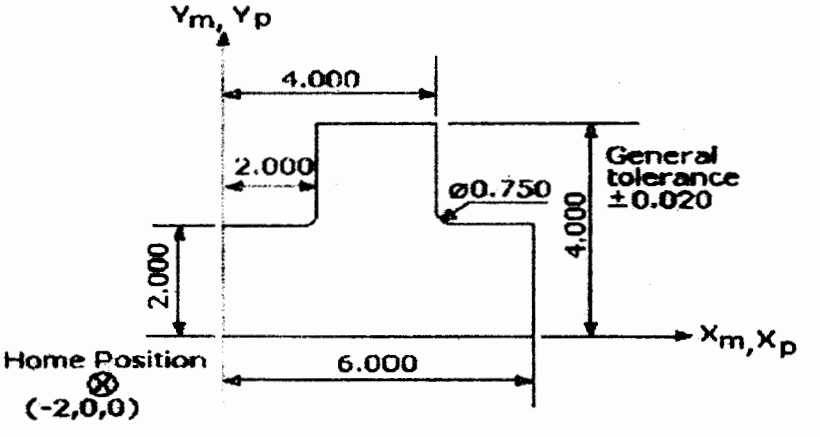
g) What is group technology? Define coding and classification? What is production flow analysis?

h) Define computer aided process planning. Discuss its various types with example.

Section-C

Attempt **any two** questions : **(2×15=30)**

a) Write a NC part program to machine the part program as shown in fig. Assume suitable data for speed and feed rate.



b) What is APT? Write an APT Program to turn a cylindrical component on Lathe, length of component is 600 mm and diameter 100mm, 125 mm and 160mm at equidistant of 200 mm is material of component is mild steel assume other missing data.

c) What is robot? State advantages and limitations of robot, also explain various types of configuration used for robots.

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