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## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

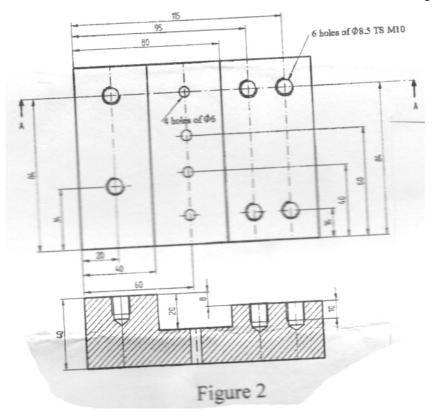
## Fifth Semester, B.E. - Industrial and Production Engineering Semester End Examination; Dec - 2017/Jan - 2018 Computer aided design and manufacturing

Time: 3 hrs Max. Marks: 100

*Note*: i) Answer *FIVE* full questions, selecting *ONE* full question from each unit. ii) Assume suitably missing data if any.

	UNIT - I	
l a.	With a block diagram, explain the influence of computer in manufacturing environment.	12
b.	List out the advantages of CAD.	4
c.	Discuss in detail disadvantages of CAM.	4
2 a.	With a block diagram, explain the product cycle in computerized manufacturing environment.	10
b.	Discuss the advantages and disadvantages of CAD.	6
c.	Discuss input, output devices used in CAD.	4
	UNIT - II	
3 a.	Explain the functions of a graphics package.	10
b.	With respect to construction geometry, explain the editing of geometry and also list the	
	common editing features available on a CAD system.	10
4 a.	Explain the IGES and STEP methodology.	10
b.	Discuss the requirements of product data exchange between dissimilar CAD/CAM systems	10
	with suitable examples.	10
	UNIT - III	
5 a.	With neat sketch, explain the different types of N.C. modes.	10
b.	With neat sketch, explain the tool presetting.	10
5 a.	With neat sketch, explain working procedure of automatic tool changer (ATC) with single	
	gripper.	10
b.	Explain the major categories of CNC turning centres.	10
	UNIT - IV	
7 a.	With a block diagram, explain the steps involved in the development of a proven part	
	program in NC machinery.	10
b.	Write a CNC programme for the following component considering suitable parameters.	10

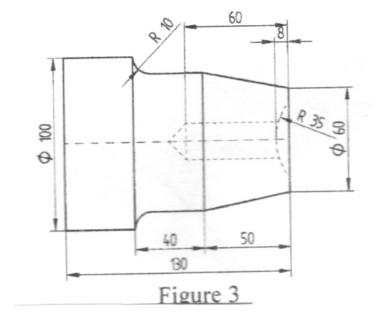
Page No... 2 P15IP54



8 a. Discuss in details the steps involved in the development of a part program.

12

b. Write a CNC program for the following component considering suitable parameters.



UNIT - V

- 9 a. Discuss in details, different types of FMS layout configurations.
  - b. Explain the three phase in a shop floor control system.
- 10 a. With a neat sketch, explain the different types of Robot configuration.
  - b. Explain the application and benefit of F.M.S

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