Exam No: _____

GANPAT UNIVERSITY

B. TECH SEM- V (MECHATRONICS ENGINEERING) REGULAR EXAMINATION– NOV-DEC 2016

2ME404 : MANUFACTURING TECHNOLOGY

TIME: 3 HRS **TOTAL MARKS: 60**

Instructions: (1) This Question paper has two sections. Attempt each section in separate answer book.
(2) Figures on right indicate marks.
(3) Be precise and to the point in answering the descriptive questions.

SECTION: I

Q.1	A	Explain various work holding devices of lathe machine.	(05)
	B	Explain apron mechanism with a neat sketch.	(05)
		OR	
Q.1	A	Discuss various lathe operations with neat sketch	(05)
	B	A steel plate 400×800×30 mm is to be shaped along its wider face. The ratio of return stroke time to cutting stroke time is 2:3 and cutting speed 24 m/ min, the feed per cycle is 2 mm. The tool approach and the over travel are 50 mm each. Select a suitable cutting speed and calculate the machining time required for machining the given plate.	(05)
Q.2	A	Define planner & working principle of planner.	(05)
	B	Explain tumbler gear mechanism used in a lathe with neat sketch.	(05)
		OR	
Q.2	A	List out tool holding device & explain.	(05)
	B	Classify the milling machine.	(05)
Q.3	A	Describe following. Up right drilling machine, Radial drilling machine with net sketch.	(05)
	B	Classification of manufacturing process and draw a neat sketch of various manufacturing processes.	(05)

SECTION: II

Q.4	A	Classify Manufacturing process. Write advantages of casting process over the manufacturing process.	(05)
	B	Enlist the types of pattern and explain any three patterns with figure.	(05)
		OR	
Q.4	A	Draw casting terminology and explain all part in briefly with figure.	(05)
	B	Which are the sand properties required for moulding sand. Explain any four in detail.	(05)
Q.5	A	Give the classification of core. Explain any three types of core with figure.	(05)
	B	Explain the working of Squeeze Moulding Machine.	(05)
		OR	
Q.5	A	Differentiate between progressive and directional solidification.	(05)
	B	Enlist and explain any four casting defects with remedies.	(05)
Q.6	A	Write a short note on CO_2 moulding process.	(05)
	B	Explain the function of gating system with figure.	(05)

----------**END OF PAPER**----------