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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – May 2019

Course: B. Tech in Mechanical Engineering

Sem: IV

Subject Name: Manufacturing Processes I

Subject Code: BTMEC401

Max Marks: 60

Date: 14-05-2019

Duration: 3 Hr.

Instructions to the Students:

1. Solve **ANY FIVE** questions out of the following.
2. The level question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level/CO)	Marks
Q. 1 Solve Any Two of the following.		
A) What is meant by Manufacturing Processes? How will you select any suitable manufacturing process for the products?	K1 and K4/CO1	6
B) What is the requirement of shrinkage allowances? Explain the defects in the casting processes.	K1 and K2/CO1	6
C) Describe any suitable metal casting process for manufacturing the pump casing.	K6/CO1	6
Q.2 Solve the following.		
A) How will you roll any sheet material? Explain one rolling process in detail.	K3/CO2	6
B) Differentiate between open die and closed die forging with its suitability and applications	K4 and K5/CO2	6
Q. 3 Solve Any One of the following.		
A) What do you understand by extrusion and drawing processes? Explain one of the both in detail.	K2 and K4/CO2	12
B) Define formability. Elaborate the sheet metal forming processing with various characteristics and types of shearing dies?	K1 and K2/CO2	12
Q.4 Write a short note on any Two of the following.		
A) Arc welding and Oxy-fuel gas welding processes	K1 and	6
B) Friction welding and resistance welding	K2/CO3	6
C) Soldering techniques and Mechanical fastening		6

Q. 5 Solve Any One of the following.

- A) What are the types of lathe machines? Explain the various operations performed lathe machines with developments, attachment and accessories. **K3 and 12**
K4/CO4
- B) What is the need of drill machine and boring machines? Explain the various types of drilling machines with reaming and tapping processes **K3 and 12**
K4/CO4

Q. 6 Solve Any One of the following.

- A) What is the need of milling machines? Comment on the face and end milling machines with its suitable applications and processes capabilities. **K6/CO5 12**
- B) If you would like to fabricate gears for the gear box of any vehicle, which suitable manufacturing method will you select? Explain any two suitable gear manufacturing processes. **K6/CO6 12**

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