

4E1234

Roll No. _____

Total No of Pages: **2****4E1234****B. Tech. IV-Sem. (Back) Exam., Oct.-Nov. - 2020****Automobile Engineering****4AE4 – 06 Manufacturing Processes****AE, ME****Time: 2 Hours****Maximum Marks: 82
Min. Passing Marks: 29***Instructions to Candidates:*

Attempt all ten questions from Part A, four questions out of seven questions from Part B and two questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL2. NIL**PART – A****(Answer should be given up to 25 words only)****[10×2=20]****All questions are compulsory**

- Q.1 Classify casting processes.
- Q.2 What is grain fineness number?
- Q.3 List characteristics of rolling process.
- Q.4 Classify metal joining processes.
- Q.5 Describe properties of metal powder.
- Q.6 List different casting defects.
- Q.7 Define advantages of spot welding.
- Q.8 List applications of powder metallurgy
- Q.9 Introduce extrusion process.
- Q.10 What is shearing process?

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PART – B

(Analytical/Problem solving questions)

[4×8=32]

Attempt any four questions

- Q.1 Describe Centrifugal Casting Process with neat sketch. Write its advantages and disadvantages.
- Q.2 Differentiate between hot and cold working process.
- Q.3 Describe Drop forging methods in details with their neat sketch.
- Q.4 Explain Direct Extrusion process, their advantages and disadvantages
- Q.5 Describe the properties of metal powder in details.
- Q.6 Define various welding defects and causes.
- Q.7 Elaborate method of floor mould casting.

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions)

[2×15=30]

Attempt any two questions

- Q.1 Elaborate casting defects types, causes and remedies.
- Q.2 Explain different types of welding joints with their neat sketch.
- Q.3 Describe Press forging. How it differ drop forging? Why heat treatment is necessary for forging?
- Q.4 Write short on the following
- (a) Blanking
 - (b) Piercing
 - (c) Notching
 - (d) Tube drawing
- Q.5 What is powder metallurgy? What are the advantages of powder metallurgy? Explain atomization process in detail.

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