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Roll No. :

337456(37)

**B. E. (Fourth Semester) Examination,
April-May 2021**

(New Scheme)

(Mechanical, Production & Automobile Engg. Branch)

MANUFACTURING SCIENCE-I

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory and carries 2 marks. Attempt any two parts from (b), (c) and (d) which carry 7 marks each.

Unit-I

1. (a) What is Gate Ratio?

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- (b) What are the materials from which patterns can made? Explain any five patterns with neat sketch. 7
- (c) Explain hot chamber and cold chamber die casting in detail. 7
- (d) What are the processes of shell moulding? What are its advantages and disadvantages? 7

Unit-II

- 2. (a) Define Welding. 2
- (b) Explain tungsten gas welding with neat sketch. 7
- (c) Explain metal inert gas welding process also give its merits and demerits. 7
- (d) Explain various gas welding equipments in detail. 7

Unit-III

- 3. (a) Define Resistance Welding. 2
- (b) Explain the process spot and seam welding. 7
- (c) Explain Thermit welding with the help of neat sketch. 7

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- (d) State the advantages and limitations of soldering process. 7

Unit-IV

- 4. (a) Define Lathe. 2
- (b) What are different types of Lathe? Explain turret lathe with the help of neat sketch. 7
- (c) Explain principle and working of planer? What are various parts of planer? 7
- (d) Describe quick return mechanism of shaper, also explain its need. 7

Unit-V

- 5. (a) Define Broaching. 2
- (b) What is Milling Machine? Explain the process of up milling and down milling. 7
- (c) Explain twist drill geometry in detail. 7
- (d) Explain different types of reamers with neat sketch. 7