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**BT-1/DX-8018**

**ME-103E: Manufacturing Process**

Time : 3 Hours

Maximum Marks : 100

**Note:** Attempt Five questions in all, selecting at least one question from each unit

**UNIT-I**

Q-1 (a) What do you mean by manufacturing process? How do you classify the various manufacturing process?

14

(b) What is 'Safety'? Why is it necessary and how it pay?

6

Q-2 Discuss the composition and application of the following:

20

(i) Mild Steel.

(ii) Medium carbon steel.

(iii) High speed steel.

(iv) High carbon steel.

**UNIT-II**

Q-3 Write a note on the following:

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(i) Cope and drag pattern.

(ii) Shrinkage and draft allowance.

(iii) Hot tears.

(iv) Pin hole porosity.

(v) Follow up board pattern.

Q-4 Explain with the help of neat sketch the following elements of gating system:

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(i) Runner.

(ii) Riser.

(iii) Gates.

(iv) Pouring Basin.

### UNIT-III

- Q-5 (a) What is forming process? How it is done? What are its merits and demerits? 8
- (b) Write short notes on 12
- (i) Punching and blanking.
- (ii) Shearing and piercing.
- Q-6 (a) Define extrusion process. Compare direct extrusion and indirect extrusion with illustration. What is impact extrusion? Give its product applications. 14
- (b) Discuss the difference Hot and Cold working process. 6

### UNIT-IV

- Q-7 How do you classify welding process? Explain the MIG welding. What is the difference between TIG and MIG welding? 20
- Q-8 (a) What are the desirable characteristics of a coolant? Give their uses. 6
- (b) What are the various types of chips with neat sketch? 9
- (c) Write a short note on tool wear. 5