

**3E1414**

Roll No. : \_\_\_\_\_

Total Printed Pages : **2****3E1414****B.Tech. (Sem. III) (Main/Back) Examination, January - 2012****Automobile Engg.****3AE4 Manufacturing Processes (Common for ME/PI)**Time : **3 Hours**][Total Marks : **80**[Min. Passing Marks : **24****Instructions to Candidates :**

*Attempt any five questions selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing 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**UNIT - I**

1 What is pattern ? How do we classify pattern ? What do you understand by pattern allowance ? Classify pattern allowance.

**OR**

1 Explain designing of casting. Explain casting defects with the help of diagram.

**UNIT - II**

2 Explain basic principle of arc welding process. What is electrode and what are its characteristics ?

**OR**

2 Explain resistance welding in detail, also give its advantages and disadvantages.

**UNIT - III**

3 Explain hot working and cold working process. Compare and classify them.

**OR**

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- 3 Give short notes on :
- (i) Upset forging.
  - (ii) Extrusion process.
  - (iii) Blanking.
  - (iv) Die Forging.

#### UNIT - IV

- 4 Write short notes on :
- (i) Sintering.
  - (ii) Impregnation.
  - (iii) Infiltration.
  - (iv) Isostatic Compaction.

OR

- 4 Write short notes on :
- (i) Virtual prototyping.
  - (ii) Rapid tooling.
  - (iii) Subtractive process.
  - (iv) Stereolithography process.

#### UNIT - V

- 5 Write short notes on :
- (i) Laminating.
  - (ii) Thermoforming.
  - (iii) Calendering.
  - (iv) Transfer moulding.

OR

- 5 Explain Injection moulding and blow moulding processes for making plastic products.

