Hall Ticket No | | | | | | | | | | |

Question Paper Code: AME006

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Supplementary) - June, 2018

Regulation: IARE – R16

Production Technology

Time: 3 Hours **(ME)** **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Sketch and explain loose piece pattern and sweep pattern. **[7M]**
   (b) Explain shell moulding with a neat sketch. **[7M]**
2. (a) With the help of cooling curves discuss the solidification process of pure metals and alloys. **[7M]**
   (b) Discuss the different types of pattern allowances to be provided in designing a pattern for casting. **[7M]**

UNIT – II

3. (a) With the help of neat sketch explain principle of arc welding. **[7M]**
   (b) Discuss the principle of resistance welding. **[7M]**
4. (a) Explain the features of neutral, reducing and oxidizing flames. **[7M]**
   (b) With a help of neat sketch explain pressure gas welding. **[7M]**

UNIT – III

5. (a) Explain Metal Inert Gas(MIG) welding with a neat sketch. **[7M]**
   (b) Bring out the details of friction welding. **[7M]**
6. (a) With a neat sketch explain the sequence operations involved in friction welding process. **[7M]**
   (b) Explain the different types of welding defects and mention the causes and remedial action to eliminate the defects. **[7M]**

UNIT – IV

7. (a) Define forming process, differentiate between cold working and hot working process. **[7M]**
   (b) With the help of neat sketch explain the forces acting on rolling process and also explain the distribution pressure in an rolling process. **[7M]**

8. (a) Sketch and explain spinning and stamping. **[7M]**

   (b) Explain tube drawing and piercing with diagram. **[7M]**

UNIT – V

9. (a) Distinguish between forward extrusion and backward extrusion. **[7M]**

   (b) Sketch and explain impact extrusion and cold extrusion. **[7M]**

10. (a) With help of neat sketch explain different types of forging operations. **[7M]**

    (b) Discuss the different types of forging defects in forging operations. **[7M]**

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