



Reg. No. :

Question Paper Code : 50858

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017
Third/Fourth Semester
Mechatronics Engineering
ME6352 – MANUFACTURING TECHNOLOGY
(Common to Aeronautical Engineering/Automobile Engineering)
(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A (10×2=20 Marks)

1. What are the disadvantages of casting process ?
2. Define the term micro porosity in casting process.
3. What do you understand by arc blow ?
4. What is the use of filler rod in welding ?
5. Distinguish between capstan and turret lathe.
6. What is meant by machining centre in CNC ?
7. What are the applications of thermo moulding ?
8. Distinguish thermosetting plastics and thermoplastics.
9. List out various forging defects.
10. State the principle of wire drawing.

PART – B (5×13=65 Marks)

11. a) Discuss the following process :
 - i) Sand casting. (7)
 - ii) Die casting. (6)(OR)
- b) Explain the following :
 - i) Centrifugal casting. (6)
 - ii) Investment moulding process. (7)

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12. a) Enumerate the principle of operation, advantages and limitations of laser beam welding. (13)
- (OR)
- b) i) Explain the mechanism of metal transfer in MIG welding. (7)
- ii) Sketch and explain the process of thermit welding. (6)
13. a) i) Enumerate with neat sketches any three operations that can be performed on lathe. (6)
- ii) Describe with neat sketch the principle of ultrasonic machining. (7)
- (OR)
- b) Explain the different methods of indexing commonly used in a milling machine. (13)
14. a) Explain the working principle of the following processes.
- i) Compression moulding. (6)
- ii) Injection moulding. (7)
- (OR)
- b) i) Describe with neat sketch the principle of ultrasonic welding of plastics. (8)
- ii) Describe the process of rotational moulding as used for producing plastic components. (5)
15. a) Enumerate the principle steps involved in powder metallurgy process with neat sketch. (13)
- (OR)
- b) Write the principle and applications of following processes
- i) Rolling. (4)
- ii) Spinning. (4)
- iii) Forging. (5)

PART – C

(1×15=15 Marks)

16. a) Explain the process of powder metallurgy for producing an self lubricating gear used in transmission system of an automobile. (13)
- (OR)
- b) Describe the welding defects in manufacturing with examples. (7)