

B.E. (Mechanical Engineering) Fifth Semester (C.B.S.)  
**Advanced Production Processes**

P. Pages : 2

Time : Three Hours



**NRT/KS/19/3425**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Due credit will be given to neatness and adequate dimensions.
  9. Illustrate your answers whenever necessary with the help of neat sketches.
  10. Use of non programmable calculator is permitted.

1. a) How do you classify the common unconventional machining methods? Give a list of such operations. **7**
- b) What is AJM? Explain its "principle" with the help of a suitable diagram. **7**

**OR**

2. a) What are the main parameters to be considered while selecting a particular unconventional machining process and why? **7**
- b) What is Laser Beam Machining? Explain its principle of operation. Also state its applications. **7**
3. a) Describe with the help of neat sketch, ultrasonic welding process? State its advantages and disadvantages? **7**
- b) Define Gas Welding? Explain oxy-acetalene welding in brief and enlist with neat sketches equipments used for gas welding. **6**

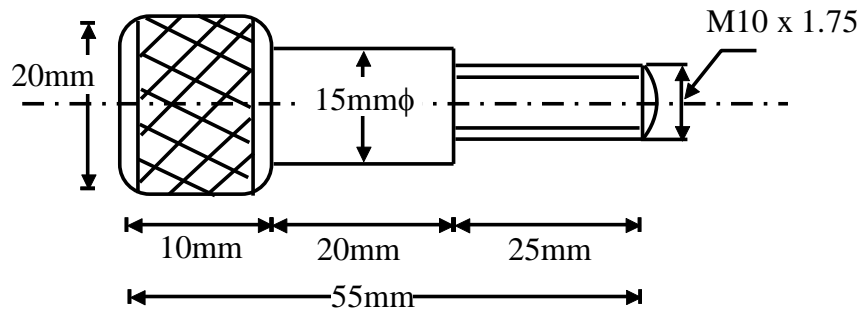
**OR**

4. a) What is oxygen cutting? Explain "kerf" and "drag". **7**
- b) Describe with neat sketch, submerged Arc welding process? State its advantages and limitations. **6**
5. a) What is the difference between a capstan and a Turret lathe? Explain with the help of suitable sketches. **7**
- b) Describe with the help of a neat sketch main parts of a capstan lathe. **6**

**OR**

6. a) Describe a suitable method of feeding the bar stock an capstan and turret Lathe. **7**

- b) Draw the tool layout for component shown in figure below. 6



7. a) How presses are classified according to design of frame? 7

- b) Describe with the help of neat sketch main parts of a power press? 6

**OR**

8. a) Explain with the help of neat sketch various parts of compound die? 7

- b) Explain in reference to shearing operation, (a) clearance (b) application of clearance in designing size of punch and die in blanking and punching operation. 6

9. a) Explain 3 – 2 – 1 principle of location? 7

- b) Explain with the help of neat sketches, various locating devices used to locate the work piece in a Jig or fixture. 6

**OR**

10. a) Classify Fixtures? 7

- b) Explain difference between Jig and Fixture? 6

11. a) What is the purpose of doing the super finishing operations? 3

- b) What is lapping? How it is done? How many types of Lapping operations are there. 5

- c) Describe process of Honing with help of neat sketch? State merits and demerits of Honing? 6

**OR**

12. Write short notes on the following. 14

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|--------------------|--------------------|
| a) Polishing       | b) Buffing         |
| c) Electroplating. | d) Metal Spraying. |

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