

9. (a) Explain the difference between Jigs and fixtures.  
6

(b) Explain principle of location in Jigs and fixtures.  
7

**OR**

10. (a) Explain various types of locating devices with neat sketch.  
7

(b) Classify Jigs ? Explain various types of Jig bushes with neat sketch.  
6

11. (a) Explain the operation principle of Buffing and Electroplating process. Also state its advantages, disadvantages and applications.  
8

(b) Write short notes on :

(i) Honing

(ii) Lapping.  
6

**OR**

12. (a) Explain the application of LASER in surface modification.  
8

(b) Explain the principle of super finishing processes.  
6

**Faculty of Engineering & Technology**

**Fifth Semester B.E. (Mechanical Engg.)**

**(C.B.S.) Examination**

**ADVANCED PRODUCTION PROCESSES**

Time : Three Hours]

[Maximum Marks : 80

**INSTRUCTIONS TO CANDIDATES**

(1) All questions carry marks as indicated.

(2) Solve **SIX** questions as follows :

Question No. **1** **OR** Question No. **2**

Question No. **3** **OR** Question No. **4**

Question No. **5** **OR** Question No. **6**

Question No. **7** **OR** Question No. **8**

Question No. **9** **OR** Question No. **10**

Question No. **11** **OR** Question No. **12**.

(3) Due credit will be given to neatness and adequate dimensions.

(4) Illustrate the answers with necessary figures/ drawings wherever necessary.

(5) Assume suitable data wherever necessary.

1. (a) Explain the electrochemical machining process. State its application. 6
- (b) What is E.D.M. ? Explain its principle with diagram. List main advantages and disadvantages. 7

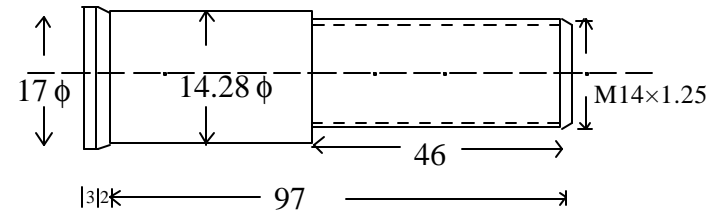
**OR**

2. (a) What is Abrasive Jet Machining (AJM) process ? Explain its principle of operation along with its application. 7
  - (b) Explain the principle of ultrasonic machining with the help of neat sketch. Also states its advantages. 6
3. (a) Explain plasma arc welding process. Discuss its advantages, disadvantages and application. 7
  - (b) State the difference between TIG and MIG with neat sketch. 6

**OR**

4. (a) Describe the laser beam welding process along with advantages, limitations and application. 6
  - (b) Explain with neat sketch electron beam welding process. Also state its application, advantages and limitations. 7
5. (a) State the difference between Capstan and Turret Lathe. 5

- (b) Draw the tool layout for component shown in Figure. 9



**OR**

6. (a) Draw a neat sketch of Capstan Lathe and label its part. Also state its working. 6
  - (b) Write short notes on :
    - (i) Micro machining
    - (ii) Nano fabrication. 8
7. (a) Explain with neat sketch principle of metal cutting in sheet metal. Also explain clearance. 7
  - (b) Explain in brief various sheet metal operations. 6

**OR**

8. (a) Explain important parameters in drawing die design. 6
- (b) Explain with neat sketch working of progressive die and compound die. 7