

**INDIAN MARITIME UNIVERSITY**  
**(A Central University, Govt. of India)**  
**Supplementary Examination – March/April 2024**  
**Program Name: B. Tech (ME)**  
**Semester -I**  
**Subject Code: UG11T4105**  
**Subject Name: Workshop Technology**  
**Date: 23.04.2024**                      **Max Marks: 70**  
**Duration: 3 Hours**                      **Pass Marks:35**

---

**General Instructions:**

- i) All Sections (A,B & C) are to be attempted***
- ii) Options, if any, are specified in respective section***

**Part- A**

**Attempt all questions                      Marks: 10x1=10**

1. Name the suitable tool used for marking thread cut in lathe machine
  - a) Knurling tool
  - b) Die
  - c) V-Tool
  - d) Turning tool
  
2. \_\_\_\_\_ is Provided in drill for the passage of chips and Cutting Fluid
  - a) Shank
  - b) Flutes
  - c) Tang
  - d) Clearance
  
3. During milling, the cutter manually moves
  - (a) Perpendicular to its axis
  - (b) Parallel to its axis
  - (c) Inclined to its axis
  - (d) None of the Above
  
4. Internal or external tapers on a turret Lathe can be tuned by
  - a) Face turning attachment
  - b) Taper turning attachment
  - c) Sliding attachment

d) Morse taper attachment

5. Which of the following operation can be performed in shaper

- a) Gear cutting
- b) Keyways cutting
- c) Curvilinear contours
- d) All of the above

6. During milling, the cutter manually moves

- a) Perpendicular to its axis
- b) Parallel to its axis
- c) Inclined to its axis
- d) Any of the above

7. In a planer

- a) Both work piece and tool rotate
- b) Both tool and workpiece reciprocate
- c) Tool reciprocates and workpiece is stationary
- d) Workpiece reciprocates and tool is stationary

8. In TIG welding, which type of electrode is used

- a) Non consumable electrode
- b) Cored Electrode
- c) Continuous consumable wire electrode
- d) Stick electrode

9. The grade of the grinding wheel depends upon

- a) The thickness of the material being ground
- b) Speed of the wheel and work
- c) Condition of grinding machine
- d) All of the above

10. Which cutting condition affects the cutting temperature predominantly

- a) Depth of cut
- b) Cutting speed
- c) Feed
- d) None of the above

**Part- B**

**Attempt all questions**

**Marks: 5x2=10**

11. Explain the working principle of a shaping machine
12. Explain in Brief 'TIG' welding
13. What are the objectives of industrial safety?
14. Why cutting fluid is used in Metal cutting?
15. What is the function of lead screw in Lathe Machine?

**Part- C**

**Attempt all questions**

**Marks: 5x10=50**

16.

- a) Describe the welding types in detail.
- b) List out the defects in welding.
- b) What is 'V-Block'?

(4+4+2)

17.

a) Write short note on following

- i) Micrometer
- ii) Caliper
- iii) Try Square
- iv) Feeler gauge
- v) Drill bit

(5X2=10)

18. What are the different Grinding process in machining & explain in detail? and mention the necessary safety measures to be taken during Grinding. (8+2)

19. Write short note on the following

- a) Basic size
- b) Nominal size

- c) Tolerance
- d) Allowance
- e) Fits

(5X2+10)

20. a) How do you specify a Planer Machine?

b) Write down the difference between a Shaper and a Planer. What are the parts involved in the Tool head of a planer? (3+7)

21. Draw a neat sketch of a 'Milling Machine' mentioning different parts and briefly describe them. (10)

22.

a) What is the working principle of a Lathe Machine? Explain with sketch.

b) Describe the following operation done in lathe with diagram: 'Facing', 'Threading' and 'Knurling'.

(5+5)

---