

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)  
**End Semester Examination June/July 2019**  
**B.Tech (Marine Engineering)**  
**Semester-I**  
**Workshop Technology (UG11T3106)**

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**Date:20-07-2019**  
**Time: 3 Hrs.**

**Maximum Marks: 100**  
**Pass Marks: 50**

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PART-A

(10X3=30 marks)

**All are Compulsory Questions**

1.
  - a. Explain in brief MIG welding
  - b. What are the precautions to be taken during arc welding
  - c. Explain purpose of cutting fluid in metal cutting
  - d. What is Shaper? List out applications performed by shaper
  - e. What is use of ball peen hammer, diamond cut chisel ,and marking gauge at work shop ?
  - f. What are the different chucks used in lathe machine?
  - g. What is lapping? What items are subjected to lapping?
  - h. While measuring clearance by filler gauge ,discuss the "Go gauge " and "Non Go gauge "
  - i. How valve stem being packed to prevent leakage through stem.
  - j. What is risk assessment?

PART-B

(5X14=70 marks)

**Answer any five of the following**

2. (7+7=14)
  - a. What are the different files used at workshop? Describe with sketch.
  - b. What are the uses of following tools :-  
  
Calipers (outside and inside ),Straight edge ,Try square, Bench Vice, Scrappers, Reamers .

**3.** (7+7=14)

- a. Sketch and label the parts of a centre lathe.
- b. Describe the taper turning operation using lathe machine.

**4.** (7+7=14)

- a. Discuss the principal of metal cutting .What are the different types of chips formed during cutting process ?
- b. Sketch and label different angles of a single point cutting tool used in lathe machine.

**5.** (7+ 7 =14 )

- a. Describe honing. What all safety precaution to be taken during grinding, while using grinding wheel at work shop ?
- b. Sketch and describe a Vernier caliper? How it can be used as a depth gauge also ?

**6.** (7+7=14)

- a. What are the different equipment used in arc welding process? Discuss different type of electrode used arc welding process ? What are the materials of the coating of a coated electrode ?
- b. With a neat sketch explain welding defects and causes for the defects. (Any three)

**7.** (7+7 =14 )

- a ) Sketch and label the parts of a Gate Valve.
- b ) Explain use of keys and cotters in engineering

**8.** (7+7=14)

- a ) Define the term factory as per factory act.What are the important provision of Factory act 1948 ?
- b) Write short note on MIG and Plasma Arc welding