

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

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

Maximum Marks: 100
Pass Marks: 50

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