

**INDIAN MARITIME UNIVERSITY**  
( A central University, Government of India)

May/June 2018-END SEMESTER EXAMINATION

**B. Tech ( Marine Engineering)**

**Semester: I**

**Workshop Technology (UG11T3106)**

---

**Date: 14-07-2018**

**Time: 3 hrs**

**Maximum Marks: 100**

**Pass Marks : 50**

---

**PART-A**

(Marks 10 × 3=30)

(All questions are compulsory)

1. a) Draw and label the parts of a Try square and mention its uses.
- b) Draw a Spring type external caliper and explain its uses.
- c) Define the term Turret in a lathe .
- d) Explain the advantages of automatic lathe machine over conventional lathe machine.
- e) Draw and mention the standard nomenclature of metal cutting tool.
- f) Define the process of lapping and its uses.
- g) Draw and explain the uses of depth gauge.
- h) Explain the care to be taken for maintaining the precision Measuring instruments.
- i) Define the process of Soldering.
- j) What are the routine maintenance to be carried out on valves.

**PART-B**

(Marks 5×14=70)

(Answer any 5 from the following 7 questions)

2. a) Draw different type of hammers and mention the weight ranges for each type and their uses. (7)  
b) Draw and label the standard nomenclature of a Drill bit. (7)
3. Draw and label the parts of a lathe. Explain the safety precautions to be taken while operating a Lathe machine. (14)
4. a) Explain in detail about the estimation of Machining time. (7)  
b) Draw and explain the various defects occurring in a cutting tool. (7)
5. a) Draw and explain any one type of optical methods of Measurement. (7)  
b) With a neat sketch explain a Vernier Caliper. (7)
6. a) Draw and Explain the process of TIG welding. (7)  
b) Explain the defects in welding with necessary sketches. (7)
7. a) Explain the safety precautions carried out before doing an Hot Work. (7)  
b) Draw and explain the operation of a non return type globe valve. (7)
8. a) Explain the procedure to be followed before dismantling any machine parts for overhauling. (7)  
b) Write Short notes on Risk Assessment. (7)

\*\*\*\*\*