

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
End Semester Examination Dec 2019/Jan 2020
B.Tech (Marine Engineering)
Semester -I
UG11T3106- Workshop Technology

Date: 21.12.2019

Max Marks: 70

Time: 3 Hours

Pass Marks: 35

PART-A

(10X2=20 marks)

(All are Compulsory Questions)

1. List out any four metal cutting operations performed on lathe.
2. Explain working principle of milling machine
3. Describe any two characteristics of tool material
4. Explain soldering and brazing operations
5. Explain purpose of flux used during welding
6. Draw and explain use of surface plate and scriber
7. Explain lapping process
8. Explain use of dial gauge and feeler gauge in workshop
9. Write function of pressure reducing valve and pressure relief valve
10. List out sources of accidents in the workshop/engine room

PART-B

(5X10=50 marks)

(Answer any five of the following)

11. (5+5=10 marks)
 - a. With suitable sketch explain use of die and die stock.
 - b. Explain use of bench vice and 'V' block in workshop
12. (5+5=10 marks)
 - a. With a neat sketch explain working of sensitive drilling machine
 - b. Draw a labelled sketch of turret lathe
13. (5+5=10 marks)
 - a. With suitable sketch describe orthogonal and oblique cutting
 - b. Describe purpose and desirable properties of cutting fluids.
14. (5+5=10 marks)
 - a. Describe honing and thread grinding operations.
 - b. What are limit gauges? Draw gauges used to check diameters
15. (5+5=10 marks)
 - a. Draw a neat sketch explaining types of flames and temperature range used in gas welding.
 - b. Draw labelled sketches of any five types of weld joints.
16. (5+5=10 marks)
 - a. With a neat sketch explain working of spring loaded pressure relief valve/safety valve
 - b. Explain procedure for bedding in of bearings
17. (5+5=10 marks)
 - a. What are the safeties provided on the lathe and grinder
 - b. With a neat sketch explain TIG welding process