Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Marine Engg.) (2013 Onwards) (Sem.–3)

WORKSHOP TECHNOLOGY

Subject Code : BTMR-301

M.Code : 72185

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Answer briefly :

a) What is the main difference between the hand hammers used in a smithy shop and a fitting shop?

b) Differentiate between soldering and brazing.

c) List various jointing materials and their specific applications.

d) How is a thread gauge different from a feeler gauge?

e) Briefly discuss the chip formation along with the cutting forces.

f) Compare honing and lapping process.

g) List the methods of protection and safety measures employed in a workshop.

h) Define a taper turning process. How is it performed on a lathe?

i) What personal protection equipments are used in welding?

j) What considerations are taken in the fitting of cotters?

SECTION-B

2. Describe various types of measuring tools used in carpentry shop with neat sketches.

3. Explain the types of guards and safety devices used for safety measures in a workshop. State factory act regulations.

4. Discuss the marking of engine parts for fitting.

5. State the principle of electric arc welding. List the equipments required in general for electric arc welding. Compare the merits and demerits of using A.C and D.C for arc welding.

6. List various method of mechanical measurement. Describe the optical methods of measurement in detail.

SECTION-C

7. Describe in detail the construction and operation of centre lathe. Specify the processes which can be performed on a centre lathe along with the necessary arrangements.

8. Explain the fundamental cutting process along with the geometry of cutting process. Discuss the effect of cutting speed and feed on the cutting process. Also, discuss the geometrical control of cutting edge turning.

9. Write short note on the following :

   a) Principles of jigs and fixtures standardization

   b) Bedding of bearings

   c) Lapping process by hand and machines

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.