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***B.Tech. Degree III Semester Examination in  
Marine Engineering December 2016***

**MRE 1303 WORKSHOP TECHNOLOGY  
(2013 scheme)**

Time : 3 Hours

Maximum Marks : 100

(5 × 20 = 100)

- I. (a) Sketch and describe the use of a surface plate and a V-block. (5)  
 (b) Draw the sketches of mortise gauge and marking gauge. Label their parts. (5)  
 Give application of each.  
 (c) Explain the functions of different angles in a single point cutting tool. (10)

**OR**

- II. Explain with suitable sketches. (4×5=20)  
 (a) Orthogonal and oblique cutting method.  
 (b) Chip formation in cutting process.  
 (c) Tool nomenclature.  
 (d) Heat generation and temperature distribution in cutting process.

- III. (a) Explain the different parts of a lathe with a neat sketch (10)  
 (b) What are the different types of drilling machines? Explain anyone with a neat sketch. (10)

**OR**

- IV. (a) What are the different types of quick-return mechanism used in a shaper? Explain any two in detail. (10)  
 (b) Write notes on: (10)  
 (i) Honing.  
 (ii) Lapping.  
 (iii) Grinding.  
 (iv) Jigs and fixtures.

- V. (a) Write short notes on: (10)  
 (i) Feeler gauges.  
 (ii) Dial gauges.  
 (iii) Taper gauges.  
 (iv) Snap gauges.  
 (b) Explain limit, fit and tolerance. (10)

**OR**

- VI. (a) With the help of a neat sketch explain a Vernier Caliper. (10)  
 (b) Explain the principle of inter changeability. (10)

**(P.T.O.)**

- VII. (a) Explain various packing materials. (10)  
(b) With a neat sketch explain the construction details of a steam stop valve. (10)

**OR**

- VIII. (a) What is bedding of bearings? (10)  
(b) Explain different kinds of personal safety devices. (10)

- IX. (a) Explain electric arc welding process and the equipments used. (10)  
(b) What are the major welding defects? Explain any five. (10)

**OR**

- X. (a) Write short note on (i) soldering (ii) brazing (10)  
(b) Describe the functions and characteristics of electrodes. What functions do coating have? (10)