

B. Tech Degree IV Semester Examination in Marine Engineering June 2011

MRE 402 PRODUCTION TECHNOLOGY

Time : 3 Hours

Maximum Marks : 100

- I. a. Explain in detail the properties, types and preparation of molding and core making sands . (10)
- b. Write short notes on: (10)
- (i) Twist drill
(ii) Reamer
(iii) V-block
(iv) Face plate
- OR**
- II. a. Explain the mechanism of chip formation. (3)
- b. Describe any three types of chips with suitable sketches. (7)
- c. With a neat sketch, explain the various force components in orthogonal cutting. (10)
- III. a. Explain bench drilling machine with a neat sketch. (10)
- b. Explain the taper turning methods in a lathe. (10)
- OR**
- IV. a. What are the different quick return mechanisms in shaping machines? (12)
- Explain any one with a neat sketch.
- b. Write short notes on: (8)
- (i) Grinding
(ii) Horning
(iii) Lapping
- V. a. Explain the hole based and shaft based systems of limits and fits. (10)
- b. Write short notes on: (10)
- (i) Feeler gauges
(ii) Dial gauges
(iii) Taper gauges
(iv) Snap gauges
- OR**
- VI. a. With neat sketch explain the different micrometers. (10)
- b. Discuss the importance of interchangeability in the present manufacturing scenario. (10)
- VII. a. With neat sketch explain the constructional details of a steam stop valve. (10)
- b. Explain the marking of engine parts for fittings. (10)
- OR**
- VIII. a. Discuss about the fitting of keys and cotters. (8)
- b. What are the design considerations for a steam control valve? (12)
- Explain one safety valve used in a steam generating unit .
- IX. a. Explain with suitable sketches the basic equipments used to carryout gas welding. (10)
- b. Write short notes on: (10)
- (i) Soldering
(ii) Brazing
- OR**
- X. a. Explain different types of flames used in gas welding. (10)
- b. Write short notes on : (10)
- (i) Welding electrodes
(ii) Spot welding methods.