



BT MRE – IV – 08 – 035

B. Tech Degree IV Semester Examination in Marine Engineering, November 2008

MRE 402 PRODUCTION TECHNOLOGY

Time : 3 Hours

Maximum Marks : 100

- I. (a) Write short notes on :
- | | | |
|-----------------|-----------------|------|
| (i) Twist drill | (ii) Reamer | |
| (iii) V-block | (iv) Face plate | (10) |
- (b) Explain in details the selection of pattern materials in foundry. (10)
- OR**
- II. Explain with suitable sketches : (4 x 5 = 20)
- | | |
|---|--|
| (i) Orthogonal and oblique cutting methods | |
| (ii) Chip formation in cutting process | |
| (iii) Tool nomenclature | |
| (iv) 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 *any one* with a neat sketch. (10)
- OR**
- IV. (a) What are the different quick return mechanisms used in shaping machines? Explain *any one* with a neat sketch. (12)
- (b) Explain the different types of jigs and fixtures. (8)
- V. (a) Explain the hole based and shaft based systems of limits and fits. (10)
- (b) Write short notes on :
- | | | |
|--------------------|------------------|------|
| (i) Feeler gauges | (ii) Dial gauges | |
| (iii) Taper gauges | (iv) Snap gauges | (10) |
- OR**
- VI. (a) With a neat sketch, explain the different types of micrometers. (10)
- (b) Discuss the importance of interchangeability in the present manufacturing scenario. (10)
- VII. (a) With a 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? Explain *any one* safety valve used in a steam generating units. (12)
- IX. (a) What are the different resistance welding techniques? Explain spot welding methods in detail. (10)
- (b) Write short notes on :
- | | | |
|---------------|--------------|------|
| (i) Soldering | (ii) Brazing | (10) |
|---------------|--------------|------|
- OR**
- X. (a) Explain the electric arc welding process in detail with typical applications. (10)
- (b) Explain the principle of gas welding. What are the types of flames used in gas welding? (10)