

D-180228**B. Tech. EXAMINATION, 2018**

Semester I(CBS) & II(CBS)

WORKSHOP TECHNOLOGY (GP. B)

ME-103

Time : 2 Hours

Maximum Marks : 40

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt Five questions in all. Q. No. 8 is compulsory. Each question is of equal marks. Assume missing data suitably, if any.

1. (a) Classify engineering materials. How will you select the suitable engineering materials for a particular application ?
- (b) What are alloy steels ? How are alloy steels classified ? Discuss in brief the effects of alloying elements on steel.

2. (a) Define metal forming. Explain types of extrusion, working principle and applications with neat sketches.
- (b) Differentiate between :
- (i) Wire and Tube Drawing
- (ii) Hot Working and Cold Working.
3. (a) Define Pattern. What is the difference between pattern and casting ? What are the common allowances provided on patterns and why ?
- (b) Define the following :
- (i) Core prints
- (ii) Mould or Cavity
- (iii) Core Boxes
- (iv) Shrinkage allowance
- (v) Chaplets
- (vi) Chills.
4. (a) Explain the various lathe operations. Define taper turning operation on Lathe Machine. How is it carried out ?
- (b) Define Drilling and Milling Operations. How you will specify following machines (i) Drilling (ii) Millings ? How grinding wheel is specified ?

5. (a) What do you mean by arc welding ? How arc is established ? Explain arc welding process with neat sketch.

(b) State difference between soldering and brazing. Also state the applications of these processes.

6. (a) What are Common Fitting Tools ? Explain with neat sketches.

(b) Explain the following processes :

(i) Sawing

(ii) Chipping

(iii) Thread Cutting.

7. (a) What do you mean by numerical control ? Explain its types and advantages of numerical control.

(b) What is Computer Numerical Control ? Explain steps in computer numerical control. State advantages of computer numerical control over numerical control.

8. Short answer type questions :

(a) How mould is made with the help of core ?

(b) What are Carpentry Tools ? What are common types of joints in wood ?

(c) How milling operation is performed on milling machine ?

(d) What are Common Pattern Materials ?

(e) How shaper machine is specified ?

(f) What are various types of Flames ?

(g) What are the equipments used in arc welding ?

(h) Define resistance welding.

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