(c) Define pattern.

(d) Explain moulding sand and its types.

(e) What is the difference between wood and timber ?

(f) Explain the balanced core with sketch.

(g) What is the use of mandrel in lathes ?

(h) State the function of flux coating on the electrode.

(i) State any *two* advantages of cold working over hot working.

(j) Define NC. **1×10=10**

Roll No. ..... **Total Pages : 04**

Sep-21-00011

B. Tech. EXAMINATION, 2021

Semester I (CBCS)

WORKSHOP TECHNOLOGY

ME-103

Time : 2 Hours *Maximum Marks : 40*

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D. Q. No. **9** is compulsory.

Section A

1. How does cast iron differ from steel ? Also write short notes on the following : **10**

(a) Grey Cast Iron

(b) White Cast Iron

(c) Mottled Cast Iron

(d) Malleable Cast Iron.

2. How the grain structure of the metal is affected during rolling ? Is the pressure of the roll over the metal surface in contact uniform throughout ? If not, how does it vary. **10**

Section B

3. Explain the casting process with a neat and clean sketch. Discuss about various casting defects and what are the main factors which are responsible for producing defects in casting ? **10**

4. Sketch the various wood working joints and explain the following carpentry processes : **10**

(a) Marking

(b) Sawing

(c) Planning

(d) Chiseling

(e) Grooving.

Section C

5. Explain various types of lathe machines and its parts with a neat and clean sketch. **10**

6. Define arc welding. Discuss with the help of a neat sketch, the principle of arc welding and write a short note on the following : **10**

(a) Arc crater

(b) Arc blow

(c) Flux.

Section D

7. Explain the vernier calliper and micrometer with a neat sketch along with their least count and uses. **10**

8. What is NC machine tool ? What are the advantages and disadvantages of NC over the CNC machine tool ? Also discuss the limitation of NC machine. **10**

(Compulsory Question)

9. (a) Define Engineering material.

(b) Enlist the properties of alloy steel.