SEMESTER END EXAMINATION, APRIL- MAY, 2025

Course Name: - B.Tech (CE/ECE/EE/ME) **Sem: - II**

Paper Name: - Manufacturing Process **Paper Code: - NES 205**

Time - 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer. **Max Marks-70**

Additional 30 Minutes for Mid-Test.

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries **3 marks. All questions are compulsory**.
- Section B- Answer any **5 out of 7** given questions. Each question carries **7 marks**.
- Section C- Answer any **2 out of 3** given questions. Each question carries **10 marks**.
- Section D- Each question carries **02 mark. All questions are compulsory.**

Section – A
Objective Questions

1. Answer all the following questions. **5x3 =15**

i) Brass is an alloy of-
(a) copper and zinc (b) tin and zinc
(c) copper and tin (d) copper and Al

ii) Advantage of cold working is-
(a) better dimensional accuracy (b) better surface finish
(c) higher strength (d) all of these.

iii) What is 'swing' of a centre lathe?
(a) It is the length of the bed
(b) It denotes the diameter of the job being machined
(c) It is the length of cross slide movement
(d) None of these.

iv) Which type of job motion is there in drilling operation?
(a) rotary (b) translating (c) fixed (d) none of the mentioned

v) In how many groups cutting tools can be divided?
(a) 2 (b) 3 (c) 4 (d) none of the mentioned

Section – B
Short Answer Questions

2. Answer any five of the following questions. **5x7=35**

i. Define manufacturing, manufacturing process and manufacturing system and explain its importance in engineering.
ii. Briefly classify engineering materials with examples.
iii. What is moulding sand? Also brief its types based on their composition & properties.
iv. Briefly describe the working principle of a Cupola furnace.
v. Compare hot working and cold working processes.
vi. List different operations performed on a lathe.
vii. What are the safety and hazards in manufacturing?

Section – C
Descriptive Questions

3. Answer any two of the following question. **2x10=20**

i) Describe the construction and working of a lathe machine with neat sketch.
ii) Explain casting defects, their causes, and methods of prevention with examples.
iii) Brief at least eight mechanical properties of engineering materials.

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Mid-Test

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Time - 30 minutes. **Max Marks-20**

All questions are compulsory. **2×10=20**

1. Plastic components are manufactured by-
   (a) forging process (b) moulding process (c) drawing process (d) none of these.
2. What is galvanising?
   (a) Tin plating (b) Coating with zinc
   (c) Coating with a corrosion resistant material (d) None of the above.
3. Aluminium alloys find use in aircraft industry because of-
   (a) high strength (b) low sp. gravity (c) good corrosion resistance (d) good weldability
4. "Blanking" is an expression used in-
   (a) sheet metal work (b) casting process (c) drawing (d) rolling
5. Which gases are used in gas welding process?
   (a) Oxygen and hydrogen (b) Acetylene and oxygen (c) Acetylene and LPG (d) Helium and oxygen
6. In which operation, motion of job is rotary and motion of cutting tool is forward translating?
   (a) turning (b) planning (c) milling (d) all the mentioned
7. The following is taper turning method on lathe
   (a) Tail stock set-over method (b) By swiveling the compound rest
   (c) Using a broad nose tool (d) All of the above
8. Which of the following operations we can't perform on drilling machines?
   (a) reaming (b) tapping (c) lapping (d) none of the mentioned
9. The job reciprocates in
   (a) Shaping machine (b) Planning machine (c) slotting machine (d) All of the above
10. Heavy cuts can be made during machining in
    (a) Shaping machine (b) Planning machine (c) Slotting machine (d) None of these

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