

SEMESTER EXAMINATION, DECEMBER - 2024

Course Name: - B.Tech (CSE)

Paper Name: - Manufacturing Process

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

Semester: - 1st

Paper Code: - NES 105

Max Marks-70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries 3 mark. 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 2 mark. All questions are compulsory.

Section - A

Objective Questions

1. Answer all the following questions.

5x3=15

- Aluminum alloys find use in aircraft industry because of-
(a) High strength (b) low sp. gravity (c) good corrosion resistance (d) good weldability
- "Blanking" is an expression used in-
(a) Sheet metal (b) casting (c) drawing (d) rolling
- Cutting tools are made of-
(a) Tungsten carbide (b) chromium carbide (c) nickel nitride (d) none of these
- Common casting defect caused by trapped air is:
(a) Porosity (b) Shrinkage (c) Hot tear (d) Cold shut
- The process of reducing metal thickness through tension is called:
(a) Cold drawing (b) Extrusion (c) Rolling (d) Forging

Section - B

Short Answer Questions

2. Answer any five of the following questions.

5x7=35

- Define manufacturing, manufacturing process and manufacturing system, also write importance of manufacturing in the industry.
- Classify engineering materials and give examples of each types.
- What are patterns? Explain the classification of patterns?
- What is the difference between hot working & cold working, and hot rolling & cold rolling?
- Name and explain the types of rolling mills with neat sketch.
- Explain the main operations performed on a lathe machine.
- What are the different types of welding joints and welding position?

Section - C

Descriptive Questions

3. Answer any two of the following questions.

2x10=20

- Describe casting with neat sketch and also brief about various types of casting defects.
- Define welding, construction and working principal electric arc welding with neat sketch.
- Explain given mechanical properties: Strength, Ductility, Resilience, Creep, and Fatigue with at least one example.

(MID SEMESTER TEST)
SECTION-D

Semester: Ist

Paper Name: - Manufacturing Process

Duration: 30 Minutes

Paper Code:- NES 105
Max. Marks: 20

- (i) Toughness depends upon the ductility of a material.
a. Yes
b. NO
c. May be
d. Don't know
- (ii) Copper is used for making electrical conductors because it is-
a. ductile
b. resists corrosion
c. has low resistance
d. Cheap
- (iii) Which allowance is not provided on the "pattern" made for a casting?
a. Machining allowance
b. Solidification allowance
c. Draft allowance
d. Shrinkage allowance
- (iv) A "die" is used in-
a. casting process
b. extrusion process
c. forging process
d. all of these
- (v) Typical hot working temperature range for steel is-
a. 650-1050°C
b. 650-723°C
c. 500-910°C
d. none of these
- (vi) Which is NOT a hole-related operation?
a. Boring
b. Knurling
c. Drilling
d. Reaming
- (vii) Arc welding requires:
a. Gas flame
b. Electric current
c. Pressure
d. Laser beam
- (viii) Hot working improves:
a. Strength
b. Ductility
c. Hardness
d. Porosity
- (ix) The molten metal enters the mould cavity through the:
a. Riser
b. Sprue
c. Gate
d. Runner
- (x) Which process is commonly used for shaping metals?
a. Casting
b. Joining
c. Cutting
d. All of the above