

SECTION B

Attempt all questions.

(5*4=20 marks)

Q.1 Define plant layout and also discuss its different types with example.

Q.2 Explain the Laser beam machining process with neat and clean figure.

Q.3 Explain all types of pattern required for casting process.

Q.4 Discuss the procedure of powder metallurgy process.

SECTION C

Attempt all questions.

(10*2=20 marks)

Q.5 (a) In a sand casting of a rectangular slab, the thickness of the solidified layer after 2 minutes is known to be 3 cm. Based on solidification rule, calculate the solidified thickness after 4 minutes?

(Given: for slab, $L \gg t$ and $B \gg t$)

(b) During straight turning of 24 mm diameter steel bar at 300 rpm with an HSS tool, a tool life of 9 minutes was obtained. When the same bar was turned at 250 rpm, the tool life increased to 48.5 min. What will be the tool life at a speed of 280 rpm?

Q.6 (a) Explain types of rolling stand used in rolling process.

(b) Define forging process and also explain types of forging process



Department of Mechanical Engineering
UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY, CSJMU KANPUR
Subject Name: Workshop Concept (TCA-s 102) (ECE)
End Semester Examination

Semester -II

Year - 1st year

Time: 3:00 Hrs.

Marks: 50

SECTION A

(10*1=10 marks)

✓ Attempt all questions.

1. In the EBW process the temperature of filament is?
a. 2500°C b. 2600°C c. 2300°C d. 2400°C
2. Which type of material can be machined using AJM?
A) Glass B) Ceramics C) cast iron D) All of the above
3. Resistance of a material against any external force is termed as-
a. Stiffness b. malleability c. strength d. hardness
4. Which pattern is suitable for mass production?
A) Multi-piece pattern B) Match plate pattern C) Loose piece pattern D) Gated pattern
5. Which one of the following processes results in the best accuracy of the hole made?
A) Drilling B) Reaming C) Boring D) Broaching
6. LBM process can be used for
A) Conductors B) Insulators C) Metals D) All of the above.
7. The plastic deformation of metal takes place when the stress induced in the metal, due to the applied forces, reached the
(a) Yield point (b) Proportional limit (c) Fatigue strength (d) Ultimate strength
8. Which of the following is true for extrusion process?
(a) Extrusion is a single pass process (b) Amount of reduction in extrusion is large
(c) Brittle material can also be very easily produced (d) All of the above
9. Which of the following statement is true about cold working?
A. Strain hardening is relieved B. No oxidation occur
C. Only limited amount of reduction can be done D. Cost of machining is high
10. tool life is affected mainly with
A) Feed B) Cutting speed C) Depth of cut D) Coolant



UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY
KANPUR

Mid Semester Examination
Department of Mechanical Engineering
Subject Name: Workshop Practice (ECE 1st year)
Subject code: TCA-S102

Marks 30

Time 1:30 Hrs.

✓ Attempt all sections.

SECTION-A

(1*9= 9 marks)

✓ Attempt all questions.

1. The flame suitable for welding of ferrous metals, Cu and Al alloys is -
a. Oxidising flame b. Carburising flame c. Neutral flame d. None of the above
2. The type of chip produced when cutting cast iron is
A) Continuous B) Discontinuous C) With built up edge D) None of the above
3. Which of the following is not true for gas welding?
a. Heat affected zone and distortion are less as compare to arc welding
b. It is suitable for thin sheets
c. It is slower than arc welding
d. There are safety problems in storing and handling the gases
4. In lathe, the carriage and tail stock are guided on
A) Same guide ways B) Different guide ways C) Not guided on guide ways D) None of the above
5. The unit of a lathe which houses the lathe spindle and control levers for speed selection is called
A) Head stock B) Tail stock C) Feed box D) Carriage
6. Which of the following is not a part of carriage of the centre lathe?
(a) Tool post (b) Apron (c) Compound rest (d) Gear box controls
7. When the tool of centre lathe moves perpendicular to the axis of rotation
(a) it produces a cylindrical surface (b) it produces a flat surface
(c) it produces a tapered surface (d) none of these
8. What is a disadvantage of automatic control system?
a. It reduces effects of non-linearities
c. It has a tendency to over-correct errors
b. It reduces effects of distortions
d. none of the above
9. The vacuum in case of Electron Beam machining is of the order of
a. 10^{-6} mm of mercury
b. 10^{-5} mm of mercury
c. 10^{-7} mm of mercury
d. 10^{-9} mm of mercury

SECTION-B

✓ Attempt all questions.

(7*3=21 marks)

Q.2 Discuss lathe machine with neat and clean figure and its different types of operation.

Q.3 Explain the Oxy acetylene gas welding with neat & clean figure.

Q.4 Discuss different types of welding defects with figure.