



UH-6267

B. E. II (Sem. - III) (Mech.) Examination

May/June - 2012

Mechanical Technology - I

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दृशविवेक निशानीवाणी विगतो उत्तरवडी पर अवश्य कपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
B. E. 2 (Sem. - 3) (Mech.)	<input type="text"/>
Name of the Subject :	<input type="text"/>
Mechanical Technology - 1	<input type="text"/>
Subject Code No. : <input type="text"/> 6 <input type="text"/> 2 <input type="text"/> 6 <input type="text"/> 7	<input type="text"/>
Section No. (1, 2,.....) : <input type="text"/> Nil	
	Student's Signature

- (2) Attempt all questions.
(3) Figure to right indicate full marks.
(4) Assume suitable data if necessary.

1 Answer the following :

20

- (i) State the advantage of adhesive bonding.
(ii) Define following terms :
(a) Reverse polarity.
(b) Tack weld
(iii) State the purpose of coating provided on electrode.
(iv) State the difference between gas welding and cutting torch tip.
(v) Why is draft provided in drop forging ?
(vi) Define following terms :
(a) Rolling
(b) Filter metal
(vii) What is meant by break down passes in rolling ?
(viii) List the various mechanics of metal transfer in MIG welding process.
(ix) Define following terms :
(a) Coining
(b) Embossing
(x) What are the specific advantages of thermit welding process ?

- 2 Explain any three : 15**
- (i) Describe the principle of oxy-fuel gas welding process.
 - (ii) Explain TIG welding process with neat sketch.
 - (iii) Explain resistance spot welding process with neat sketch.
 - (iv) List the various welding defect and explain any one in detail.
- 3 Explain any three : 15**
- (i) What are advantage and disadvantage of cold working of metals ?
 - (ii) Explain 4-high rolling stand arrangement with neat sketch.
 - (iii) Explain the following forging operations.
 - (a) Drawing
 - (b) Upsetting
 - (iv) Explain with sketches difference between direct and indirect extrusion.
- 4 Attempt any four : 20**
- (a) Explain any two different types of patterns.
 - (b) Explain different types of cores.
 - (c) Explain different types of casting defects.
 - (d) Explain Chenevix's method of riser design.
 - (e) Explain Cupola Furnace. (only sketch)
- 5 Attempt any three : 18**
- (a) Explain investment casting process.
 - (b) Explain centrifugal casting process.
 - (c) Explain sand testing.
 - (d) Explain pattern allowances.
- 6 Attempt any three : 12**
- (a) Sketch the cross section of a sand mould which is ready for pouring and label the important parts.
 - (b) Explain elements of the Gating system.
 - (c) Explain advantages and uses of casting.
 - (d) Explain different types of pattern materials.
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