

Code : 100105

(2)

B.Tech 1st Semester Exam., 2018 (New)

WORKSHOP MANUFACTURING PRACTICES

Time : 3 hours

Full Marks : 70

Instructions :

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **NINE** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. 1 is compulsory.

1. Choose the correct option (any seven) : $2 \times 7 = 14$

- (a) The casting method adopted for ornaments and toys of non-ferrous alloys, is
 - (i) permanent mould casting
 - (ii) slush casting
 - (iii) die casting
 - (iv) centrifugal casting

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- (b) In a cold chamber die casting machine
 - (i) melting pot is separate from the machine
 - (ii) melting pot is an integral part of the machine
 - (iii) melting pot may have any location
 - (iv) low temperature and pressure is used
- (c) Structural sections such as rails, angles, I-beams are made by
 - (i) hot rolling
 - (ii) hot drawing
 - (iii) hot piercing
 - (iv) hot extrusion
- (d) Cutting and forming operations can be performed in a single operation in a
 - (i) simple die
 - (ii) progressive die
 - (iii) compound die
 - (iv) combination die

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- (e) The teeth of hacksaw blade are bent
 - (i) towards right
 - (ii) towards left
 - (iii) alternately towards right and left and every third or fourth left straight
 - (iv) may be bent in any direction
- (f) A casting defect which occurs near the ingates as rough lumps on the surface of a casting is known as
 - (i) shift
 - (ii) sand wash
 - (iii) swell
 - (iv) scab
- (g) The cold chisels are made from
 - (i) cast iron
 - (ii) mild steel
 - (iii) high-speed steel
 - (iv) cast tool steel

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- (h) To prevent the body of the blade from jamming in the saw cut, the teeth of blade are
 - (i) strengthened
 - (ii) sharpened
 - (iii) set
 - (iv) All of the above
- (i) A ring gauge is used to
 - (i) check the diameter of shafts or studs
 - (ii) test the accuracy of holes
 - (iii) check the clearance between two mating surfaces
 - (iv) All of the above
- (j) The metal is subjected to mechanical working for
 - (i) refining grain size
 - (ii) reducing original block into desired shape
 - (iii) controlling the direction of flow lines
 - (iv) All of the above

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(5)

2. (a) List out any six carpentry processes. Sketch and describe a V-block. 7
- (b) Draw the neat sketches of the following : 7
- (i) Mortise and tenon joint
- (ii) Dovetail joint <http://www.akubihar.com>
3. (a) Explain any five types of files used in fitting with neat sketches. 5
- (b) Name the various types of vices used in fitting shop. 5
- (c) Define the following : 4
- (i) Drilling
- (ii) Boring
4. (a) List any six forging defects. 6
- (b) Distinguish between blanking and punching. 4
- (c) Explain any two stakes used in sheet metal work with sketches. 4

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(7)

- 9 (a) What is a core? List out the different types of cores. 6
- (b) What are the advantages of green sand mould? 8

(6)

- 5 (a) What are the different work-holding devices used in drilling machine? Discuss any three of them with neat sketches. 8
- (b) Sketch the twist drill and label the parts. 6
- 6 (a) What are the advantages and disadvantages of hot working over cold working? 7
- (b) Discuss, in detail, how plunge-operated hot-chamber die casting machine works. 7
- 7 (a) List any four properties of moulding sand and explain them. 8
- (b) State the function of runner and risers. 6
8. (a) List out various fastening methods those are used in sheet metal and explain any two of them. 7
- (b) What is the difference between hem and seam? 7

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