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BME-051

DIPLOMA IN MECHANICAL ENGINEERING (DME)

Term-End Examination

June, 2018

00363

BME-051 : MANUFACTURING PROCESSES - I

Time : 2 hours *Maximum Marks : 70*

Note : *Question no. **1** is **compulsory**. Attempt any **four** from the remaining questions.*

1. Choose the correct alternative and write it in your answer-book. *7×2=14*

(a) Cope is defined as the

(i) lower part of the moulding flask

(ii) upper part of the moulding flask

(iii) intermediate part of the moulding flask

(iv) channel in the parting line

(b) In shell-mould casting, the shell is made of

(i) Plastic

(ii) Silica sand

(iii) Wax

(iv) Metal

(c) According to Chvorinov's Rule, which of the following shapes is suggested for a riser ?

(i) Cylindrical

(ii) Spherical

(iii) Conical

(iv) Rectangular

(d) The size of a shaper is given by

(i) stroke length

(ii) motor power

(iii) weight of the machine

(iv) table size

(e) Feed in turning is expressed in

(i) mm/stroke

(ii) mm/revolution

(iii) mm/tooth

(iv) All the above

(f) The most common drill is

(i) step drill

(ii) twist drill

(iii) spot drill

(iv) spade drill

(g) A lathe is specified by

I. Maximum diameter of the workpiece to be machined

II. Maximum distance between headstock and tailstock

III. Length of bed

(i) I is true

(ii) II is true

(iii) II and III are true

(iv) I, II and III are true

2. (a) What are the advantages of casting process ? Enumerate applications of different casting processes. 7

(b) Name any five types of patterns. Briefly explain any two of them with neat diagram. 7

3. (a) What are the four major parts of a carriage ? Briefly explain with the help of diagram. 7

(b) Sketch the tool head of a shaper and write its functions. 7

4. (a) Sketch and explain the working of a slotter. 7

(b) Briefly explain about planer tools. 7

5. (a) Discuss the difference between a gang type and a multiple spindle type drilling machine. 7

(b) Explain any four work holding devices in a drilling machine. 7

6. (a) How does up-milling differ from down-milling ? Explain with the help of neat diagram. 7

(b) Name any five types of milling cutters. Explain the working principle of any one. 7

7. Write short notes on any ***two*** of the following : *2×7=14*

(a) Boring Tools

(b) Straddle Milling

(c) Pattern Allowances

(d) Moulding Tools