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C-16S-M-502

5895

BOARD DIPLOMA EXAMINATION, (C-16S)

NOVEMBER - 2019

DME - V SEMESTER EXAMINATION

INDUSTRIAL ENGINEERING & ESTIMATING & COSTING

Time : 3 Hours] [Total Marks : 80

PART - A

3×10=30

Instructions : *(1) Answer ALL questions.*
(2) Each question carries THREE marks.
(3) Answer should be brief and straight to the point.

1 What are the basic steps followed in method study?

2 List out various types of allowances used in standard time calculation.

3 What are objectives of quality control?

4 What is sampling inspection?

5 Write any three components of estimation.

6 What do you understand by depreciation?

7 Write the formula for finding volume of
(a) Cylinder (b) Frustum of cone.

8 What do you mean by cutting speed and write its formula.

9 What are the various gas welding techniques?

10 What is foundry?

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PART - B

10×5=50

Instructions :
(1) Answer any FIVE questions.
(2) Each question carries TEN marks.
(3) Answer should be comprehensive and criterion for valuation is the content but not the length of the answer.

11 Explain the method study procedure in detail.

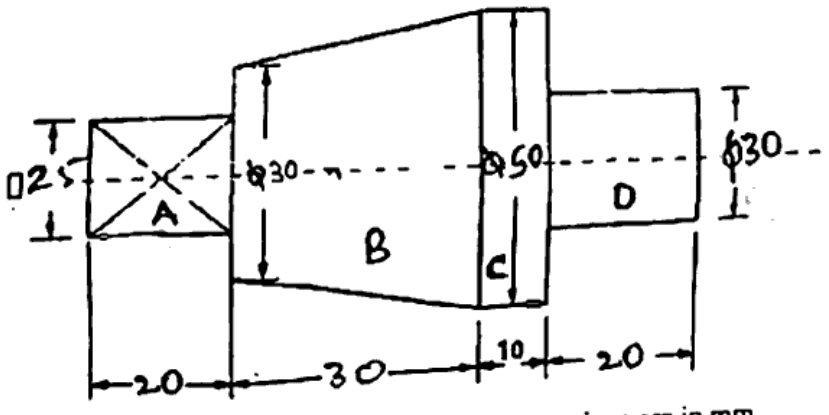
12 What is work measurement? Explain the steps followed in work measurement in detail.

13 Distinguish between inspection and statistical quality control.

14 Explain the various components of estimating in detail.

15 A small firm is producing 100 pens per day. The direct material cost is Rs. 160, direct labour cost is Rs. 200 and factory overheads are Rs. 250. If selling overheads is 40% of factory cost, what is the selling price of each pen to realize a profit of 14.6% of the selling price ?

16 The density of material for the part shown in figure is 8.5 gm/cc. Calculate the weight of the work piece and also the cost, if rate of material is Rs. 30/kg.



All dimensions are in mm

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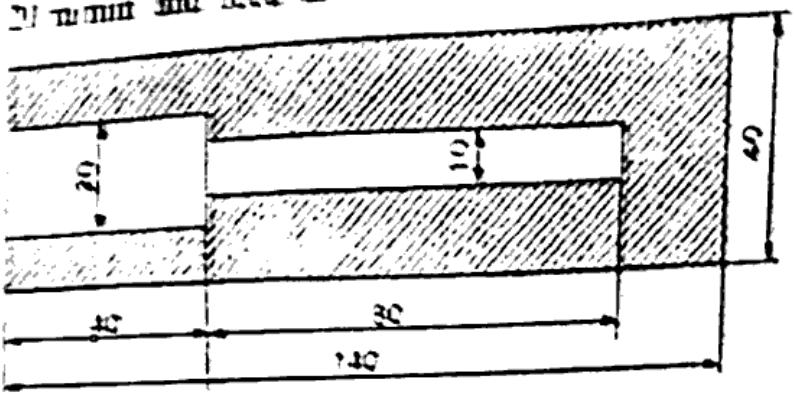
Calculate the time required for drilling a component as shown in the figure. All dimensions are in mm. Cutting speed is assumed as 20 m/min and feed as 0.02 cm/rev.



15 Two 1 m long M.S. plates of 10 mm thick are to be welded by a lap joint with the help of 6 mm electrode. Assume the following data. Calculate the cost of welding. http://www.sbtetonline.com

(a) Current used = 250 amperes

(b) Voltage = 30V

(c) Welding speed = 10 m/hr

(d) Electrode used = 0.5 kg/m of welding

(e) Labour charges = Rs. 15/hr

(f) Power charges = Rs. 1/- per kwh

(g) Cost of electrodes = Rs. 15/- kg

(h) Machine efficiency = 60%

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