

**17557****21415**

3 Hours/100 Marks

Seat No.

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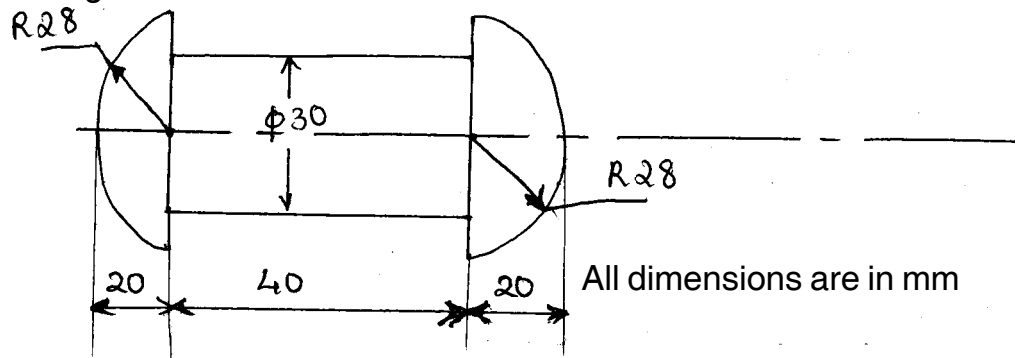
- Instructions :** (1) **All** questions are **compulsory**.
(2) **Illustrate** your answers with **neat** sketches **wherever** necessary.
(3) Figures to the **right** indicate **full** marks.
(4) Assume **suitable** data, if **necessary**.
(5) **Use** of Non-programmable Electronic Pocket Calculator is **permissible**.

MARKS**1. Attempt any 5 :****20**

- List the major cost saving areas in cost control.
- Explain the two methods under salvaging.
- Differentiate between depreciation and obsolescence giving suitable example.
- List some functions of estimation department.
- Explain the shaping and planning operations giving their time estimate determination method/formula.
- List the various cost elements in the estimation of welding and gas cutting operations.
- Explain the preparation of blank layouts for sheet material production.

2. Solve any 2 :**16**

- The elevation of a workpiece is shown in Figure No. 1. Calculate the number of rivets as per the dimensions shown in Fig. No. 1, which can be manufactured from 4 kg of mild steel. Assume that there is no wastage of material density of M.S. is 8 g/cc.

**Figure No. 1**

- Differentiate between time/day rate system and straight piece work rate system. Explain combination of day rate and piece work rate system with suitable example.
- Explain the important operations and processes carried out in a sheet metal shop.

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3. Solve **any 4** : **16**
- a) Explain machine hour basis method.
 - b) Differentiate between estimation and costing.
 - c) Explain the various forging operations to appropriately shape a material by forging.
 - d) Explain the surface and cylindrical grinding operations giving their time estimate determination method/formula.
 - e) List the constituents of estimation.
 - f) What is erection costing ? List the cost elements in the estimation for erection costing.
4. Solve **any 2** : **16**
- a) What is welding and gas cutting operation ? Explain the various cost elements in the estimation of welding and gas cutting operation.
 - b) Explain a general estimation procedures for a forging operation with respect to the following :
 - a) Estimation of net weight of forged component
 - b) Estimation of losses.
 - c) Estimation of time.
 - c) Explain the procedure for estimation of time taken by a machinist on a lathe for a turning operation. For calculation of wages, list some other important time considerations along with the above.
5. Solve **any 4** : **16**
- a) What is direct labour cost and indirect labour cost ? Explain with examples.
 - b) List qualifications for estimator also list the qualities of estimator.
 - c) What are direct expenses and indirect expenses ? Explain with examples.
 - d) What is depreciation ? Write its causes.
 - e) What is valuation of material issued from store ? Differentiate between average price method and fixed price method.
 - f) Write the procedure of job order costing.
6. Solve **any 4** : **16**
- a) Explain in brief ; importance of mensuration.
 - b) Write characteristics of process cost accounting.
 - c) Explain material and overhead costing.
 - d) Explain in brief machining time calculation for turning operation.
 - e) List the major causes of obsolescence and surplus.
 - f) Write procedure of sheet metal shop estimation.
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