21718

17557

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : *(1)* ***All*** *questions are* ***compulsory****.*

(2) Answer ***each*** *next main question on a* ***new*** *page.*

(3) Illustrate your answers with neat sketches ***wherever*** *necessary.*

(4) Figures to the ***right*** *indicate* ***full*** *marks.*

(5) Assume suitable data, if ***necessary****.*

(6) Use of Non-programmable Electronic Pocket Calculator is ***permissible****.*

(7) Mobile Phone, Pager and any other Electronic Communication devices are ***not permissible*** *in Examination Hall.*

(8) Use of Steam tables, logarithmic, Mollier's chart is ***permitted****.*

Marks

1. Attempt **any five** : **(5×4=20)**

a) Define costing. State its objectives.

b) Define material costing and its elements.

c) What is depreciation ? State its causes.

d) List any four functions of estimation department.

e) Explain importance of mensuration.

f) Find the time required to drill 4 holes in a cast iron flange each of 20 mm depth, if the hole diameter is 20 mm. Assume cutting speed as 21.8 m/min and feed as 0.2 mm/rev.

g) Explain different types of welded joint.

2. Attempt **any two** : **(2×8=16)**

a) Define

i) Direct labour cost

ii) Material cost

iii) Indirect material cost

iv) Factory overhead charges.

P.T.O.

Marks

b) The elevation of a workpiece is shown in Fig No. 1. Calculate the number of rivets as per the dimensions shown, can be manufactured from 4 kg of mild steel. Assume that there is no wastage of material. Density of m.s. is 8g/cc.

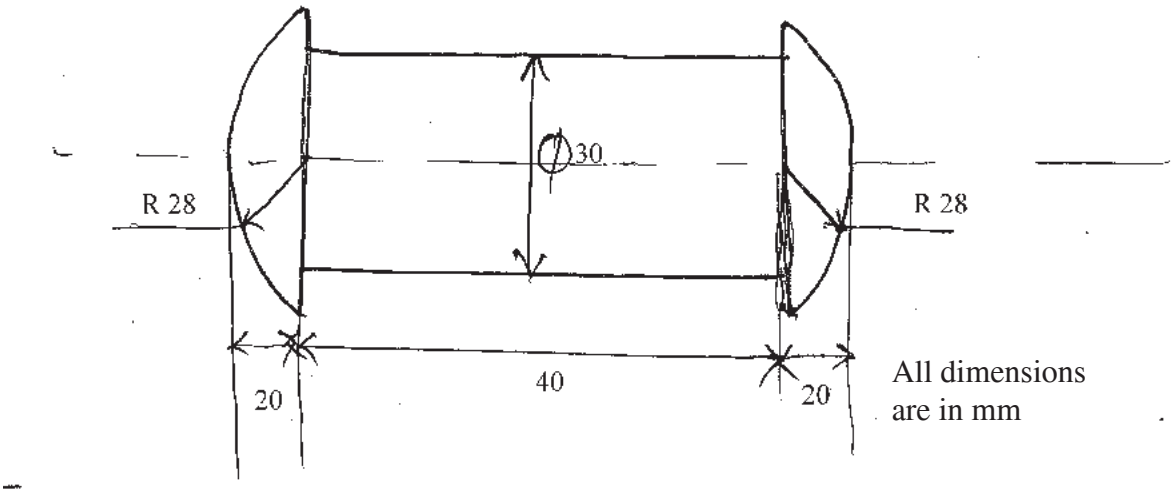

Fig. No. 1

c) Explain depreciation and obsolescence.

3. Solve **any four** of the following : **(4×4=16)**

a) Differentiate between costing and estimating.

b) What is valuation of material issued from store ?

c) State different methods of calculating depreciation.

d) What are the qualifications for estimator and list the qualities of estimator.

e) Explain estimating procedure ?

f) List the constituents of estimation.

4. Attempt **any two** : **(2×8=16)**

a) Explain how machining time in 1) Drilling and 2) Turning operation is determined.

b) Explain the factors affecting welding cost and welding cost estimation.

c) Describe procedure of sheet metal shop estimation. State importance and effect of blank layout on estimation.

5. Attempt **any four** : **(4×4=16)**

a) List elements of cost and state the importance of material cost in it.

b) Find the time required for one complete cut on a piece of work 350 mm long and 50 mm in diameter. The cutting speed is 35 meters per minute and the feed is 0.5 mm per revolution.

Marks

c) Describe the procedure to calculate gas welding cost ?

d) What is capacity of power presses ?

e) State the factors for sheet metal shop estimation.

f) What is erection costing ? List the cost elements in the estimation for erection costing ?

6. Attempt **any four** : **(4×4=16)**

a) Explain how erection cost is estimated ?

b) State the difference between hand forging and machine forging.

c) Explain with simple sketches :

i) upsetting

ii) drawing down

iii) drifting

iv) punching.

d) Explain the procedure for estimation of forging time.

e) Explain material and overhead costing.

f) State characteristics of process cost accounting.
