

**B.E. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2013**  
**PRINTING TECHNOLOGY BRANCH**  
**SIXTH SEMESTER**  
**PT 9353 COST ESTIMATION FOR PRINTING**  
**(REGULATIONS 2008)**

22

Time: 3 hr

Max Mark: 100

Answer ALL Questions  
**Part – A (10 x 2 = 20 Mark)**

1. What is known as 'Committed fixed cost'?
2. Define 'budgetary control'?
3. What is price estimating?
4. Differentiate between fixed cost, variable cost and semi-variable cost.
5. The net weight of a reel of paper of 62 cm width is 175 kg. Calculate the length of paper wrapped around the reel assuming that the paper has a GSM of 80.
6. Calculate the weight of paste required in kg for pasting of endpapers of 5000 books of A5 size to the inside of the hard covers. The coverage power of paste used is 100 m<sup>2</sup> / kg.
7. Define "Discretionary fixed cost"?
8. 24 pages can be typeset in 8 hour shift and CMHR is Rs.145. The text area per page is 200 cm<sup>2</sup>. Factor for the features of the job is 1.0. What is the basic rate and rate of typesetting?
9. What is meant by "Time value of money"?
10. A person receives an annuity of Rs.5000 for four years. If the rate of interest is 10 percent, find the present value of Rs.5000 annuity?

**Part – B (5 x 16 = 80 Mark)**

11. (i) The accounts of a manufacturing company provides the following information for the six months ending 31<sup>st</sup> December, 2012 (10)

|                                  |   |           |
|----------------------------------|---|-----------|
| Material cost                    | - | Rs.200000 |
| Wages                            | - | Rs.150000 |
| Factory overheads                | - | Rs.250000 |
| Establishment & General expenses | - | Rs.20000  |

Prepare the cost sheet of the machine and calculate the price which the company should quote for the manufacture of a machine requiring materials valued Rs.1500, wages Rs.1000 so that the price may yield a profit of 20% on the selling price.
- (ii) What are the different types of budgets? Explain them in detail. (6)
12. (a) (i) Explain briefly, the procedure for selling, estimating, pricing and quoting for a typical print job. (12)
- (ii) What does the Estimator needs to know for successful estimating? (4)
- (or)
- (b) (i) List out the different estimating methods and discuss any three of its type. (12)
- (ii) List out the difference between sales forecast and budget. (4)

P.T.O

13. (a) Cream wove paper of 60 gsm of size 51 x 76 (D/crown) cm required for 10,000 copies of the book of 396 text pages of crown octavo. The book thickness is 1.8 cm. The wrapper is printed in process color on board of 200 gsm. Calculate the cost of

(i) Paper and board assuming the cost/kg of paper as Rs.45/- and cost/kg of board as Rs.68/

(ii) Ink for text and wrapper assuming the cost/kg of ink for text as Rs.230, and for wrapper is Rs.350/-

(or)

(b) (i) Estimate the quantity of ink required in kilogram for 25,000 copies of a sheet of labels, 20 labels to view per sheet with each label having a print area 179 x 194 mm printed on one side of a high gloss coated paper. The process of printing is offset and the labels are printed in four color halftone picture. (8)

(ii) Calculate the quantity of black ink required for 30,000 copies of a 32 page booklet of A5 size each page with a print area of 200 cm<sup>2</sup>. There are 8 pages printed in black ink from halftone pictures and 24 pages in type matter in black. The booklet is printed by offset process on a coated art paper. (8)

14. (a) Calculate the CMHR of a sheetfed offset machine for the following specification:

The capital cost of the machine is Rs.14, 00,000/-. One printer, two helpers and a supervisor (50%) are working at the monthly salary of Rs.5000, Rs.3000 (each) and Rs.8000 respectively. The fixed direct cost of all the machine is Rs.40, 50,000 and fixed indirect cost of all the machine is Rs.8, 00,000. Power consumption is 150 units per month @ Rs.2.50/unit and consumables per year is Rs.3000. Capacity utilization is 65%.

(or)

(b) (i) Calculate the depreciation value by straight line method and written down value method, considering the capital cost of the machine to be Rs.25, 00,000 and depreciation at 15%. The expected useful life of the machine is 7 years approx. (8)

(ii) Estimate the cloth required in meters for 2,500 hard case full cloth bound books having a trimmed size 210 x 297 mm with a spine thickness of 15 mm. Cloth is available in rolls of 80 cm width and 30 meter length (8)

15. (a) (i) Ram is borrowing Rs.50,000 to buy a table top laminating machine. If he pays equal installments for 25 years and 4 percent interest on outstanding balance, what is the amount of installments? What shall be the amount of installment if quarterly payments are required to be made? (12)

(ii) XYZ Bank pays 12 percent and compound interest quarterly. If Rs.1000 is deposited initially, how much shall it grow at the end of 5 years? (4)

(or)

(b) (i) The budget of AB Ltd. Includes the following data for the forthcoming financial year.

|                       |   |                                     |
|-----------------------|---|-------------------------------------|
| Fixed expenses        | : | Rs.3,00,000                         |
| Contribution per unit | : | Product X – Rs.6.00                 |
|                       |   | Product Y – Rs.2.50                 |
|                       |   | Product Z – Rs.4.00                 |
| Sales forecast        | : | Product X – 24,000 units @Rs.12.50  |
|                       |   | Product Y – 1,00,000 units @Rs.7.00 |
|                       |   | Product Z – 50,000 units @ Rs.10.00 |

Calculate the composite P/V ratio and Composite B.E.P. (12)

(ii) Total sales is Rs.2,50,000; Variable costs is Rs.1,00,000; Fixed costs is 75,000. Calculate the margin of safety. (4)