

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.  
(For candidates admitted during the academic year 2004-2005 & thereafter)

SUBJECT CODE : CM/SC/AM34

**B.Com. DEGREE EXAMINATION NOVEMBER 2007**  
COMMERCE  
THIRD SEMESTER

COURSE : **SPECIALISATION – CORE**  
PAPER : **ADVANCED COST AND MANAGEMENT ACCOUNTING**  
TIME : **3 HOURS** **MAX. MARKS : 100**

**SECTION – A**

ANSWER ALL QUESTIONS: ( 10 x 3 = 30 )

1. Mention 2 limitations of payback method.
2. What is zero base budgeting?
3. Explain work certified and retention money.
4. Define internal rate of return. Using internal rate of return how would you decide to accept or reject project?
5. A Ltd operates a 5 ton lorry service between two towns 200 kms apart. The service operates for 25 days in a month and makes one round trip every day. On the upward journey the lorry carries full load, but returns empty. If the expenses of the month are Rs.50,000, what freight should the company charge per tonne km, if it wants a profit of 25% on cost.
6. Standard sales 10,000 units at Rs.5 per unit  
Actual sales 6,000 units at Rs.6 per unit and 3,000 units at Rs.7 per unit  
Calculate sales variances.
7. In process I 1000 units are introduced. The total expenses of the process amounted to Rs.18,200. Normal loss is 10% of input. Scrap value Rs.2 per unit; actual output was 992 units. Prepare process I account.
8. Estimated sales budget for January is 50,000 units. Estimated stock of finished units on January 1 is 6000 and desired stock of January 31 is 8000 units. Each unit of the product requires 2kg of raw material. There is no raw material stock on Jan.1, but the closing stock of raw material is 10000 kgs. Calculate the budgeted purchase of raw material for the month of January.
9. Fixed cost Rs.50,000; Break even sales Rs.2,50,000. Calculate:  
a) sales to earn a profit of Rs.40,000  
b) profit or loss if sales are Rs.2,00,000.

10. From the following data prepare an income statement under absorption costing:  
 Production 1,00,000 units; Sales 80,000 units at Rs.15 per unit  
 Direct material Rs.2,50,000; Direct labour Rs.3,00,000;  
 Factory overheads – Variable Rs.1,00,000; Fixed Rs.2,50,000  
 Selling overheads – Variable Rs.1,00,000; Fixed Rs.2,00,000.

### SECTION – B

ANSWER ANY FIVE QUESTIONS:

( 5 x 8 = 40 )

11. A Ltd gives you the following data for the year 2006:

Units sold	2400
Selling Price per unit	Rs.100
Direct material per unit	Rs.40
Direct labour per unit	Rs.20
Variable overheads	100% of labour
Fixed expenses	Rs.20,000

Calculate:

- Break even sales in units
  - Profit if sales are 3000 units
  - Margin of safety in units
  - In the year 2007 the company expects the material price to reduce to Rs.35 per unit, but fixed expenses are expected to increase to Rs.30,000. How many units should the company sell in 2007, if it expects the same profit it had earned in 2006?
12. From the following data, calculate overhead variances:

	BUDGETED	ACTUAL
	Rs.	Rs.
Overheads	3,75,000	3,77,500
Output per man hour in units	2	1.9
Number of working days	25	27
Man hour per day	5,000	5,500

13. Mr.S owns a fleet of taxis and the following information is available from the records maintained by him:

Number of taxis	10
Cost of each taxi	Rs.54,600
Salary of manager	Rs.700 p.m.
Salary of accountant	Rs.500 p.m.
Salary of cleaner	Rs.200 p.m.
Salary of mechanics	Rs.400 p.m.
Garage rent	Rs.600 p.m.
Insurance premium	5% p.a.
Annual tax	Rs.900 per taxi
Driver's salary	Rs.350 p.m. per taxi
Annual repairs	Rs.1,000 per taxi

Total life of a taxi is about 2,00,000 kms. A taxi runs, in all, 3,000 kms in a month and 30% of this distance has to be run without any passenger. Petrol consumption is one litre for every 10kms. @ Rs.4.41 per litre. Oil and other sundries are Rs.10.50 per 100 kms. Calculate the cost of running a taxi per km.

14. A certain chemical process yields 75% of material introduced as main product, 20% as by product and 5% being lost. In the process one unit of main product requires double the material required for a unit of by-product. Further one unit of main product needs 1 ½ times the time needed for 1 unit of by product. Overheads are absorbed in the ratio of 3:1. During a week 1,000 units of Raw Material at a cost of Rs.17,000, were introduced. Labour totaled Rs.5,300. Overheads came to Rs.2,700. Factory scrap realized Rs.300. Ascertain the cost of two products.
15. A firm of building contractors began to trade on 1<sup>st</sup> April, 1997. The following was the expenditure on the contract for Rs.3,00,000:  
Materials issued to contract Rs.51,000; Plant used for contract Rs.15,000; Wages incurred Rs.81,000; Other expenses incurred Rs.5,000.  
Cash received on account to 31<sup>st</sup> March, 1998, amounted to Rs.1,28,000 being 80% of the work certified. Of the plant and materials charged to the contract, plant which cost, Rs.3,000 and materials which cost Rs.2,500 were lost. On 31<sup>st</sup> March, 1998 plant which cost Rs.2,000 was returned to store, the cost of work done but uncertified was Rs.1,000 and materials costing Rs.2,300 were in hand on site.  
Charge 15% depreciation on plant, and take to the profit and loss account 2/3 of the profit received. Prepare the contract Account and Contractee's Account.
16. From the following information relating to 1998 and conditions expected to prevail in 1999, prepare a budget for 1999.
- |      |                    |                             |
|------|--------------------|-----------------------------|
| 1998 | ACTUALS:           | Rs.                         |
|      | Sales              | 1,00,000 (40,000 units)     |
|      | Raw materials      | 53,000                      |
|      | Wages              | 11,000                      |
|      | Variable overheads | 16,000                      |
|      | Fixed overheads    | 10,000                      |
| 1999 | PROSPECTS:         |                             |
|      | Sales              | 1,50,000 (60,000 units)     |
|      | Raw materials      | 5% increase in wage rates   |
|      | Wages              | 5% increase in productivity |
17. The product of a manufacturing concern passes through two processes A and B and then to finished stock. It is ascertained that in each process normally 5% of the total weight is lost and 10% is scrap which from processes A and B realizes Rs.80 per ton and Rs.200 per ton respectively.  
The following are the figures relating to both the processes:
- |                                     | PROCESS A | PROCESS B |
|-------------------------------------|-----------|-----------|
| Materials in tons                   | 1,000     | 70        |
| Cost of materials per ton in rupees | 125       | 200       |
| Wages in rupees                     | 28,000    | 10,000    |

Manufacturing expenses in rupees	8,000	5,250
Output in tons	830	780

Prepare Process Cost Accounts showing cost per ton of each process. There was no stock to work-in-progress in any process.

### SECTION – C

ANSWER ANY TWO QUESTIONS:

( 2 x 15 = 30 )

18. From the following data, calculate: a) Equivalent production, b) Cost per unit of equivalent production; and c) Prepare the Process A account.

No. of units introduced in the Process	A	4,000
No. of units completed and transferred in Process B	B	3,200
No. of units in process at the end of the period		800

Stage of completion:

Material	80%
Labour	70%
Overheads	70%

Normal process loss at the end of the process	200 units
Value of scrap	Rs.1 per unit
Value of raw materials	Rs.7,480
Wages	Rs.10,680
Overheads	Rs.7,120

19. Trishul Industries turns out only one article, the prime cost standards for which have been established as follows:

#### PER COMPLETED PIECE

Material – 5 kgs @ Rs.4.20	Rs.21
Labour – 3 hours @ Rs.3	Rs.9

The production schedule for the month of July, 1998 required completion of 5,000 pieces. However, 5,120 pieces were actually completed. Purchases for the month of July, 1998 amounted to 30,000 kgs. of material at the total invoice price of Rs.1,35,000. Production records for the month of July, 1998 showed the following actual results.

Material requisitioned and used	25,700 kgs.
Direct labour – 15,150 hours	Rs.48,480

Calculate appropriate material and labour variances.

20. The following particulars are extracted from the records of a company:

#### PER UNIT

	PRODUCT A	PRODUCT B
Sales price (Rs.)	100	110
Consumption of materials (kg)	5	4
Material cost (Rs.)	24	14
Direct wages (Rs.)	2	3
Machine hours used	2	3
Variable overheads	4	6

Comment on the profitability of each product (both use the same raw material) when:

- i) Total sales potential in units is limited.
- ii) Total sales potential in value is limited.
- iii) Raw material is in short supply.
- iv) Production capacity (in terms of machine hours) is the limiting factor.

If the firm has only 8500 machine hours and the maximum sale demand is 2000 units of each product, calculate the most profitable sales mix and the profit of that mix if the fixed costs is Rs.85,000.

21. X Ltd is considering the purchase of a machine which requires an investment of Rs.5,20,000, the machine is expected to have a life of 5 years and an estimated scrap value of Rs.20,000 at the end of its life. The machine will be depreciated under straight line method. Tax rate is 50%. The machine is expected to bring in the following profits before depreciation and tax.

YEAR	PBDT (Rs.)	PV of Re.1 @ 10%
1	1,40,000	0.91
2	2,00,000	0.83
3	2,40,000	0.75
4	1,80,000	0.68
5	1,20,000	0.62

Calculate:

- a) Pay back period
- b) Return on average investment
- c) Net present value (Cost of capital 10%)

