

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.  
(For candidates admitted during the academic year 2015 - 2016)**

**SUBJECT CODE: 15CM/AC/PF35**

**B.A DEGREE EXAMINATION NOVEMBER 2016**  
**BRANCH IV – ECONOMICS**  
**THIRD SEMESTER**

**COURSE : ALLIED – CORE  
PAPER : PRINCIPLES OF FINANCIAL MANAGEMENT  
TIME : 3 HOURS MAX. MARKS: 100**

## **SECTION – A**

**ANSWER ALL QUESTIONS:** **(10 x 2 = 20)**

1. What are the objectives of Financial Management?
  2. What is meant by time value of money?
  3. Distinguish between permanent working capital and temporary working capital.
  4. What is the significance of Profitability index?
  5. Write short note on cash cycle.
  6. A new capital project costing Rs. 120 lakhs will yield on an average a profit before tax and depreciation of Rs 50 lakhs. Depreciation will be Rs.20 lakhs per annum and the tax rate is 50%.Calculate the payback period.
  7. Calculate operating cycle and number of operating cycles in a year.

Raw materials	3 months
WIP	45 days
Finished goods	1 month
Average debt collection period	2 months
Average payment period	45 days

8. Sales for March, April, May and June is 4,00,000, 5,50,000, 6,00,000 and 8,00,000 respectively. 20 % of the sales is for cash. 40% of the credit sales are paid in the following month of sale and 60% is paid in the 2<sup>nd</sup> month. Show the sales receipts for the month of May.

9. Calculate optimum cash balance under Baumol model from the following particulars.

Annual cash requirement	Rs 1,50,000
Fixed cost per transaction	Rs.150
Opportunity cost	8%

10. Mr. X is interested in doubling his investment of Rs 50,000. How long will it take to double his investment if the rate of interest is 12%. Apply rule of 69.

**SECTION – B****ANSWER ANY FIVE QUESTIONS:****(5 x 8 = 40)**

11. Briefly explain the factors determining working capital?  
 12. What is capital budgeting decision? Why is it significant for a firm?  
 13. A) Marvel ltd provides the following information:

Cash turnover ratio : 6 times

Annual cash out flow is Rs 6,00,000

Accounts payable can be stretched by 10 days

What would be the effect of stretching account payable on the minimum operating cash requirement? Assuming the firm can earn 15% on its investment, what would be the saving on cost? Assume 360 days in a year.

B) The annual requirement of TXM limited is 15 lakhs. The company has marketable securities in lot size of Rs 300,000, 4,00,000 and 5,00,000. Cost of conversion of marketable securities per lot is Rs 1,000. The company earns 8% annual yield on its securities. Prepare a table indicating which lot size will have to be sold by the company.

14. Goodwill Ltd is producing articles mostly by manual labour and is considering to replace it by a new machine. There are two alternative models M and N. Calculate payback period from the following information.

	Machine M	Machine N
Estimated life of the machine	4 yrs	5 yrs
Cost of machine	Rs.9,000	Rs.18,000
Estimates saving in material	Rs.500	Rs.800
Estimated savings in direct wages	Rs.6,000	Rs.8,000
Additional cost of Maintenance	Rs.800	Rs.1,000
Additional cost of supervision	Rs.1,200	Rs.1,800

15. Prepare a cash budget for the months of May , June and July 2016 from the following particulars.

Income & Expenditure forecasts:

Month (2004)	Credit sales Rs.	Credit Purchases Rs.	Wages Rs.	Manufacturing expenses Rs.	Office exp. Rs.	Selling exp. Rs.
March	60,000	36,000	9,000	4,000	2,000	4,000
April	62,000	38,000	8,000	3,000	1,500	5,000
May	64,000	33,000	10,000	4,500	2,500	4,500
June	58,000	35,000	8,500	3,500	2,000	3,500
July	56,000	39,000	9,500	4,000	1,000	4,500
Aug	60,000	34,000	8,000	3,000	1,500	4,000

- a) Cash Balance on 1st May 2004 Rs. 8,000.
- b) Plant costing Rs. 16,000 is due for delivery in July; payable 10% on delivery and the balance after 3 months.
- c) Advance tax of Rs. 8,000 each is payable in March and June.
- d) Period of credit allowed (i) by suppliers – 2 months; and (ii) to customers - 1 month.
- e) Lag in payment of manufacturing expenses –  $\frac{1}{2}$  month.
- f) Lag in payment of office & selling expenses – 1 month.
16. A) G's father wishes to give him Rs 1,00,00 on his 20<sup>th</sup> birthday. Today is his 10th birthday. He wants to know about two things.  
 a. How much annual payment is to be made by him into a fund?  
 b. Alternatively how much is to be invested in the fund in lump sum.  
 The fund earns a return of 10% which is compounded annually.
- B) S ltd offers 12% interest on fixed deposits. What is the effective rate of interest if compounding is done quarterly.
17. C ltd is considering in investing in a project . The expected cash flow after depreciation and before tax is as follows :

Year	Project A
0	2,00,000
1	45,000
2	90,000
3	80,000
4	70,000
5	40,000
Additional capital	50,000
Scrap	20,000
Cost of capital	10 %

The project will be depreciated on straight line basis. Calculate IRR and advice the company.

### SECTION – C

**ANSWER ANY TWO QUESTIONS:**

**(2 x 20 = 40)**

18. Benevolent Ltd requires its management to present a statement showing the working capital to finance a level activity of 54,000 units of output for the year. The company is working at 60 % capacity at present and intends to increase it to 80% level of activity. You are required to prepare the working capital requirement for 60% and 80% capacity. The cost structure for 60% level of activity is given below:

	Cost Per Unit
Raw Material	Rs.30
Direct Labour	Rs.20
Overheads (including depreciation of Rs.10 per unit)	Rs.30
Profit	Rs.20
Selling Price	Rs.100

**ADDITIONAL INFORMATION:**

- a. Minimum desired cash balance Rs.50,000
- b. Raw materials are held in stock, on an average, for two months.
- c. Work in progress will approximate to half a month.
- d. Finished goods on an average, for a month.
- e. Suppliers of material extend one and a half month's credit.
- f. Debtors are provided two month's credit.
- g. Cash sales are 20% of total sales.
- h. The time lag of payment of wages is half a month and overheads is one and a half month's credit.
- i. Production is carried out evenly throughout the year.
- j. Allow 10% for contingencies.

19. From the following particulars prepare cash budget for April, May and June

Months	Sales Rs.	Purchases Rs.	Wages Rs.	Selling expenses Rs.
February	1,20,000	80,000	10,000	7,000
March	1,30,000	98,000	12,000	9,000
April	70,000	1,00,000	8,000	5,000
May	1,16,000	1,03,000	10,000	10,000
June	85,000	80,000	8,000	6,000

**Additional Information**

- a. Sales at 10% realized in the month of sales. Balances in the subsequent two months as 70% and 30%.
- b. Purchases : creditors are paid equally in the subsequent two months.
- c. Wages : 20% are paid in arrear in the following month
- d. Income tax 20,000 payable in June
- e. Dividend Rs 12,000 payable in July
- f. Income from investments Rs 2,000 received half yearly in the month of march and September
- g. Opening Cash balance is Rs 40,000.

20. A company is considering a proposal of installing a photo copier. The equipment would involve a cash outlay of 8,00,000 lakhs and an additional working capital of Rs. 50,000. The expected life of the equipment is 5 years without any salvage value. Assume that the company is allowed straight line method of depreciation. The estimated cash flow before depreciation and tax is given below:

Year	1	2	3	4	5
CFBT	3,00,000	4,00,000	3,40,000	2,50,000	2,10,000

Applicable income tax rate is 50% and the company's cost of capital is 12%. Is it advisable to buy the equipment based on Pay back, NPV and ARR techniques of capital budgeting.

21. A) Assume that you have borrowed a 3 year loan of Rs 1,00,000 at 9% from your employer to buy a motorcycle. If your employer requires three equal repayments, then calculate the annual installment and also prepare an amortization table.
- B) B Ltd is creating a sinking fund to redeem its debenture of Rs. 8,50,000 issued on 1.1.2005 and maturing on 31.12.2015. The annual payments will start on 1.1.2005 and the company will make equal annual payments and expects that the fund will earn 15 % per year. Estimate the annual amount to be invested in the fund.
- C) Mohan has rented his apartment to Naveen for 4 years at an annual rent of Rs. 20,000. The tenant has agreed to the condition that the rent would increase by 10% every year. Find the present value of the expected rent if the required rate of return is 14%
- D) A 50 year old Director will retire at the age of 60 and expects to live till 70 years. Assuming 10-% rate of return, calculate the amount he must have at the age of 60 in order to receive Rs 2 lakhs annually from retirement until death.

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