

**Eastern University, Sri Lanka**  
**Faculty of Commerce and Management**  
**Final Year First Semester Examination in Bachelor of Business Administration**  
**2018/2019 (August 2020) (Proper / Repeat)**  
**MGT 4033 – Financial Management**

**Note:**

- \* Calculator allowed
- \* PVIF, FVIF, PVIFA, PVIFAD tables allowed

**Answer all Questions**

**Time Allowed: 03 Hours**

1. MCQ: Select the most suitable answer for the following questions (only one answer) in the paper itself
1. A set of possible values that a random variable can assume and their associated probabilities of occurrence are referred to as \_\_\_\_\_.
- a. Probability distribution.
  - b. The standard deviation.
  - c. The expected return.
  - d. Coefficient of variation.
2. Given: risk-free rate of return = 5%; market return = 10%; cost of equity = 15% value of beta ( $\beta$ ) is:
- a. 1.9
  - b. 1.8
  - c. 2.0
  - d. 2.2
3. Clive Rodney Megabucks offers your friend, Melanie, an interesting gamble involving giving her the choice of the contents in one of two sealed, identical-looking boxes. One box has \$20,000 in cash and the second has nothing inside. There is an equal probability that the chosen box contains cash versus nothing. Melanie states that she would not call off the gamble if you offered her a certain \$10,999 instead of her choice of box. However, she would be indifferent if \$11,000 was offered in place of the risky gamble; and she would definitely take \$11,001 to call off the gamble. We would describe Melanie as \_\_\_\_\_ in this instance.
- a. Being risk averse.
  - b. Having a risk preference.
  - c. Being risk indifferent.
  - d. None of the above.
4. What is the beta for an average risk security? What is the beta for a Treasury bill?
- a. 1; 0
  - b. 0; 1
  - c. Greater than 1; 1
  - d. 1; Greater than 1

- 11.
5. Which of the following sources of funds is related to implicit Cost of Capital?
- Equity Share Capital.
  - Debentures.
  - Preference Share Capital.
  - Retained Earnings.
6. Virgo Airlines will pay a \$4 dividend next year on its common stock, which is currently at \$100 per share. What is the market's required return on this investment if the dividend is expected to grow at 5% forever?
- 4 percent.
  - 5 percent.
  - 7 percent.
  - 9 percent.
- 12.
7. A firm has a degree of operating leverage (DOL) of 3.5 at Q units. What does this tell the firm?
- If sales rise by 3.5% at the firm, then EBIT will rise by 1%.
  - If EBIT rises by 3.5% at the firm, then EPS will rise by 1%.
  - If EBIT rises by 1% at the firm, then EPS will rise by 3.5%.
  - If sales rise by 1% at the firm, then EBIT will rise by 3.5%.
- 13.
8. Lower financial leverage is related to the use of additional \_\_\_\_\_.
- Fixed costs.
  - Debt financing.
  - Variable costs.
  - Common equity financing.
- 14.
9. If EOQ = 40 units, order costs are \$2 per order, and carrying costs are \$.20 per unit, what is the optimal usage in units?
- 10 units.
  - 16 units.
  - 40 units.
  - 80 units.
- 15.
10. Which of the following statements is most correct about standard (without quantity discount) inventory management?
- The order point can be expressed as the average lead time multiplied by average demand and then, minus the necessary safety stock.
  - EOQ occurs where carrying costs (TCC) total plus total ordering costs (TOC) is minimized.
  - The JIT system where inventories are reduced to a bare minimum is at odds with the inventory EOQ model.
  - For most firms, inventory management is simply the result of ordering what the manager requests to maximize the output per shift.
- 16.
- 17.

11. Calculate the degree of total leverage (DTL) for a firm that has \$10 million in sales. The firm has EBIT of \$2,000,000 after accounting for \$1,000,000 in fixed costs. The firm has \$3,000,000 in debt that costs 10% annually. The firm also has a 9%, \$1,000,000 preferred stock issue outstanding. The firm pays 40% in taxes.
- a. 1.45                      b. 1.86                      c. 1.94                      d. 2.16
12. Which of the following statement is correct?
- a. If the PI of a project is less than 1, its NPV should be less than 0.  
b. If the NPV of a project is greater than 0, its PI will equal 0.  
c. If the IRR of a project is 0%, its NPV, using a discount rate,  $k$ , greater than 0, will be 0.  
d. If the IRR of a project is greater than the discount rate,  $k$ , its PI will be less than 1 and its NPV will be greater than 0.
13. What is the value of the firm usually based on?
- a. The value of debt and equity.                      c. The value of equity.  
b. The value of debt.                      d. The value of assets plus liabilities.
14. Baumol's Model of Cash Management attempts to:
- a. Minimise the holding cost.                      c. Minimization of total cost.  
b. Minimization of transaction cost.                      d. Minimization of cash balance.
15. Which of the following is not considered by Miller-Orr Model?
- a. Total annual requirement of cash.                      c. Cost of transaction.  
b. Holding cost.                      d. Variability in cash requirement.
16. Which of the following would not be counted after the end of a project?
- a. Change in working capital.                      c. Continuation value.  
b. Release of working capital.                      d. Scrap value.
17. \_\_\_\_\_ refers to the amount invested in various components of current assets
- a. Temporary working capital.                      c. Net working capital.  
b. Gross working capital.                      d. Permanent working capital.

18. What is the tax shield?

- a. The tax shield is a benefit which accrues to companies which are able to channel their profits through tax havens.
- b. The tax shield is the benefit which accrues to firms which are located in special economic zones.
- c. The tax shield is the phenomenon whereby allowable expenses such as interest and depreciation reduce taxable profit.
- d. The tax shield allows initial capital expenditure to be offset against tax, when calculating taxable profit.

19. What is the overall (weighted average) cost of capital in the following situation? The firm has \$10 million in long-term debt, \$2 million in preferred stock, and \$8 million in common equity - all at market values. The before-tax cost for debt, preferred stock, and common equity of capital are 8%, 9%, and 15%, respectively. Assume a 40% tax rate

- a. 6.40 percent.
- b. 6.54 percent.
- c. 9.30 percent.
- d. 10.90 percent.

20. Time consumed in clearing a check through the banking system.

- a. Processing float.
- b. Collection float.
- c. Deposit float.
- d. Availability float.

(20 x 01 Mark = 20)

2.

a. Distinguish between "Yield-to-Maturity" and "Yield-to-Call". (02 Marks)

b. The project department of Bharat Petroleum Corporation Limited (BPCL), which is engaged in the refining, storage and distribution of a wide variety of Petroleum and Petrol-Chemical products, is proposing to construct a new regional office complex to house 500 employees. The cost of the project is estimated at Rs. 21 crore and is expected to be completed in 5 years.

Seven staff members of BPCL comprising one deputy manager, four engineers and two clerks are posted to supervise the construction work. Tea is required for them twice a day. It is available from a nearby restaurant at Rs.2.50 per cup. The monthly charges are reimbursed by BPCL. The staff has to work 6 days a week. On Sundays and holidays, only two persons are on duty. On an average, there are 5 such days in a month. On an average, one person is out of office for official work or on leave and there are 10 guests per day as various agencies are working on the project including architects. Assume there are 30 working days in a month. Three telephone calls have to be made daily (300 days) for ordering tea each call costing Rs. 1.

Some members of the staff have suggested that tea should be prepared in the office instead of purchasing from the restaurant. A tea making machine, model mini-mate is available at Rs. 5,500 plus 10% tax. It can take refill of milk powder, sugar and water requirement for 35 persons at a time after which it requires refilling; the annual maintenance including cost spares with effect from the second year is Rs.750, while Rs.100 per year will be the cost of insurance. The other associates costs are detailed:

- Tea bag cost Rs. 44 per 100 tea bags. Assume 2 tea bags are used in 10% tea cups
- Cost of milk powder, Rs. 68 for 500 grams, 2.5gm being used per cup. 2% is wasted in handling.
- Cost of sugar Rs. 12 per kg; 10gm used per tea cup. Assume average consumption is 10% more as some staff members take more sugar and 2% is wasted in storage and handling.
- Manpower costs, Rs.400 per month to person in the office for the additional work.
- Power consumption one unit per day at the rate of Rs.2.40 per unit.
- Telephone charges Rs.300 per annum
- Networking capital requirement (one month's stock of tea bags, milk powder and sugar Rs. 600

If you are a finance manager of the BPCL, what decision would you take, assuming 35% tax, written down value method with 25% rate of depreciation, cost of capital 14%, and useful life of machine is 5 years with no salvage value and no other asset in this block.

(18 Marks)

**(Total 20 Marks)**

Q3.

- a. List out the assumptions of Baumol's model
- b. What factors affect credit investigation and analysis? Discuss the steps needed to carry investigation of individual accounts?
- c. Rahul and Co Ltd. has decided to diversify its production and wants to invest its surplus on the most profitable project. It has under consideration only two projects such as "Y". The cost of project "X" is Rs. 100 lakhs and that of "Y" is Rs. 150 lakhs. Both projects are estimated to have a life of 8 years only and at the end of this period "X" will have a salvage value of Rs. 4 lakhs and "Y" Rs. 14 lakhs. The running costs of "X" will be Rs. 35 lakhs per year and that of "Y" Rs. 20 lakhs per year. In either case the company expects a rate of return of 10%. The company's tax rate is 50%. Depreciation is charged on straight line basis. Which project should the company take up?

(Total 12)

Q4.

- a. Distinguish between "Ordinary Annuity" and an "Annuity Due" with an example.
- b. A life insurance company has offered you a new "cash grower" policy that will be fully paid up when you turn 45. At that time, it will have a cash surrender value of \$18,000. When you turn 65, the policy will have a cash surrender value of \$37,728. What annual rate of interest is the insurance company promising you on your investment?
- c. You are a business owner and you want to buy an office building for your company. The building costs \$200,000. You have \$50,000 for a down payment and the bank will lend you the balance at a 6% annual interest rate. Build the amortization schedule for 10 year term.

(Total 12)

Q5.

- a. Gale Supply estimates that its customers' payments are in the mail for 3 days, and once they are processed in 2 days. After the payments are deposited in the firm's bank, the funds are made available to the firm by the bank in 2.5 days. The firm estimates its total annual sales to be received at a constant rate, from credit customers to be \$87 million. Assume a 365-day year.
  - (i) State the meaning of 'Mail Float', 'Processing Float', 'Availability Float' and 'Collection Float' and calculate the collection float.
  - (ii) What is the current annual dollar cost of Gale Supply's collection float?

- b. James Consol Company currently pays a dividend of \$1.60 per share on its common stock. The company expects to increase the dividend at a 20 percent annual rate for the first four years and at a 13 percent rate for the next four years, and then grow the dividend at a 7 percent rate thereafter. This phased-growth pattern is in keeping with the expected life cycle of earnings. You require a 16 percent return to invest in this stock. What value should you place on a share of this stock?

(10 Marks)

(Total 20 Marks)

**EQUATIONS:**

$$EOQ = \sqrt{\frac{2AO}{c}}$$

$$FV = P_0 (1 + i)^n$$

$$\text{Present Value of Annuity Due} = P + P \left[ \frac{1 - (1 + r)^{-(n-1)}}{r} \right]$$

$$\text{Future Value of Annuity Due} = (1 + r) \times P \left[ \frac{(1 + r)^n - 1}{r} \right]$$

$$\text{Future Value Annuity} = \text{PMT} \times ((1+i)^n - 1) / i$$

$$\text{Present Value of Annuity} = \text{PMT} \times \frac{1 - \frac{1}{(1+i)^n}}{i}$$

$$B_0 = \sum_{t=1}^n \frac{INT_t}{(1+k_d)^t} + \frac{B_n}{(1+k_d)^n}$$

$$B_0 = \frac{INT}{k_d}$$

$$P_0 = \sum_{t=1}^n \frac{PDIV_t}{(1+k_p)^t} + \frac{P_n}{(1+k_p)^n}$$

$$P_0 = \frac{DIV_1 + P_1}{1+k_e}$$

$$P_0 = \frac{DIV_1}{k_e - g}$$

$$P_0 = \sum_{t=1}^n \frac{DIV_t}{(1+k_e)^t} + \frac{P_n}{(1+k_e)^n}$$

$$P_n = \frac{DIV_n (1+g_n)}{k_e - g_n}$$