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NATIONAL INSTITUTE OF TECHNOLOGY GOA

Farmagudi, Ponda, Goa-403401

Programme Name: B.Tech.

End Semester Examinations, November-2023

Course Name: Management
Date: 29-11-2023
Duration: 3 Hours

Course Code: HS 400
Time: 2:00 PM – 5:00 PM
Max. Marks: 100

ANSWER ALL QUESTIONS

SECTION A (10 x 2 =20 Marks)

1. Briefly explain the following concepts in two sentences **[20]**

likhne vala last me karna hai

Table 1. Differentiate between the following

a) Matching concept & accrual basis of accounting
b) Partnership firms & corporations
c) Revenue & Income
d) Economic profit & accounting profit
e) Contingent Investment & Mutually exclusive investment
f) Gross & Net Working capital
g) Cost of capital & Opportunity cost of capital
h) Principles of conservatism and matching principle
i) Drawing account and capital account
j) Nominal interest rate and effective rate of interest

SECTION B (10 x 5 = 50 Marks)

2. You plan to invest $4000 in an individual retirement arrangement today. The scheme offers a 9 per cent annual interest rate, which will be the same for all future years.
   a) How much will you have in the account at the end of 10 years if the interest rate is compounded as follows? *i)* Annually *ii)* Semi-annually *iii)* Monthly
   b) What is the effective interest rate for each compounding frequency in part (**a**)

3. Maya's firm offers its workers an optional two-month unpaid vacation after seven years of service to the firm. Maya just started working for the firm and plans to spend her vacation at an estimated cost of $24,000. To finance her trip, Maya intends to make an annual deposit of $2,500 into a savings account at the end of each of the next seven years. The account pays an 8 per cent yearly interest rate.
   I. Will Maya's account balance be enough to pay for the trip in seven years?
   II. Calculate the account balance after seven years if she increases her annual deposit by $200.

4. Briefly and nicely depicts the hierarchy of the Indian Financial system. Also, write a short note on 'Financial Instruments'

P.T.O.

5. Is your course instructor a manager? Discuss in terms of managerial functions, managerial roles, and skills.

6. Write a short note on the following (A.B.C.). Compare the usefulness of each of these methods while analyzing an enterprise's performance.
(***A***) Trend analysis, (***B***) common size analysis, and (***C***) comparative statement analysis

7. Explain the features of the single, double, and triple columns cash book.

8. Show how the following transactions will affect the assets and liabilities under the modern approach (what should be debited and what should be credited)
(i) Introduced capital ₹50000 in cash and 10000 in goods.
(ii) Sold goods costing ₹25,000 and a profit of 15% of the cost
(iii) Paid salary ₹ 25,000

9. Use Sparks Ltd's balance sheet (As of 31 March 2021) to calculate the following ratios (Table 2).

	Liabilities	₹	Assets	₹	
1	Share capital	200,000	Land & Building	140,000	8
2	Profit &Loss	30,000	Plant & Machinery	350,000	9
3	Account	40,000	Stock	200,000	10
4	General Reserve	~~440,000~~ 420,000	Sundry Debtors	100,000	11
5	12% of debentures	100,000	Bills Receivable	10,000	12
6	Sundry Creditors	50,000	Cash at Bank	40,000	13
7	Bills Payable	**840,000**		**840,000**	

a) $CR = \frac{CA}{CL} = \frac{8+9+10+11+12+13}{6+7}$

b) $QR = \frac{CA - PIA}{CL = 5+6+7} = \frac{CA - IL}{CL}$

c) $\frac{350,000}{CA-CL}$

d) $DE = \frac{TD}{Equity} = \frac{5+6+7}{1+2+4}$

f)

a) Current Ratio b) Quick Ratio c) Inventory to working capital
d) Debt-equity ratio f) Current asset to fixed asset ratio

10. Discuss in detail about the length of the operating cycle of a firm
11. What are the dangers of excessive and inadequate working capital?

SECTION C (3x 10 =30 Marks)

12. A Company has estimated that it will employ total assets of ₹ 1000,000, and 40 per cent of the assets are financed by borrowed capital at an interest cost of 6 per cent per year. The direct cost for the year is estimated at ₹ 600,000, and all other operating expenses are estimated at ₹100,000. The goods will be sold to customers at 80% of the total assets. The tax rate is assumed to be 35 per cent. Calculate: ***i)*** net profit margin, ***ii)*** return on assets, ***iii)*** assets turnover over and ***iv)*** return on owner's equity.

Sales = 80% 10,00,000 = 8,00,000

TC = 40% 10,00,000 = 4,00,000 %6 = 24000

\+ 6,00,000 + 1,00,000

NPBT = 8,00,000 − (1,00,000 + 6,00,000 + 24000) 724000

= 76,000

TAX = (76,000) × 35% = 26,600

NPAT = 76,000 − 26,600 = 49,400

A: $\frac{49,400}{8,00,000}$ = 6.15

ii) ROA = $\frac{49,400}{10,00,000}$

iii) ATR = $\frac{8,00,000}{10,00,000}$

iv) = $\frac{49,000}{6,00,000}$

P.T.O.

13. One of your company's products returned due to lousy quality in production or packaging. Your company decided to redesign both products and packaging, and you have been appointed as a manager for the same (List of activities, their estimated time, and immediate predecessors of each activity are given in Table 3). You, as a manager, asked to submit a report to your board regarding i) a network to visualize the activities, ii) to identify all the paths and their duration, iii) to estimate the critical path, iv) to estimate the earliest start and finish time for each activity

Table 3. Schedule

Activity	Description	Completion Time (Weeks)	Immediate Predecessors
A	Redesign Product	6	----
B	Redesign Packaging	2	---
C	Order and Receive components for Redesigned product	3	A
D	Order and Receive material for redesigned packaging	2	B
E	Assemble products	4	C
F	Make up packaging	1	D
G	Package redesigned products	1	E, F
H	Test market redesigned product	6	G
I	Revise redesigned product	3	H
J	Revise redesigned packaging	1	H
K	Present results to the board	1	I, J

14. The question has two components: (a) IPR-NPV conflict and (b) an A.R.R. concept with equal weights. Please address both the questions in this section to claim full marks.

a) Equipment A costs ₹ 75,000, and the net cash flow of ₹20,000 per year for six years. Substitute equipment B would cost ₹ 50,000 and generate a net cash flow of ₹ 14,000 per year for six years. The required rate of return for both equipment is 11 per cent. Calculate the IRR and N.P.V. for the equipment. Which equipment should be accepted and why?

b) A project costs ₹ 500,000 and has a scrap value of ₹ 100,000. Its stream of income before depreciation and taxes during the first year through five years is ₹ 100,000, ₹120,000, ₹140,000, ₹160,000 and ₹200,000. Assume a 30 per cent tax rate and depreciation on a straight-line basis. Calculate the accounting rate of the project.

$\frac{1}{1.11} \times \frac{(1.11)^6 - 1}{0.11 \times (1.11)^6}$

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$\frac{1}{1.11}\left[1 + \frac{1}{1.11}\right.$ $\left(\frac{1}{1.11}\right)^5$

$\frac{1}{1.11} \frac{\left(1 - \left(\frac{1}{1.11}\right)^6\right)}{1 - \frac{1}{1.11}}$