Enrolment No. _____

AHMEDABAD UNIVERSITY
AMRUT MODY SCHOOL OF MANAGEMENT
UNDERGRADUATE PROGRAMMES
2023-2024 WINTER SEMESTER
END-SEMESTER EXAMINATION
FAC331 – CORPORATE FINANCE

Date: 21-04-2024 **Total Marks: 60**
Time: 8:00 am – 10:30 am **No. of printed pages: 3**

Instructions:

- All questions are compulsory.
- Show all relevant calculations.
- Figures in brackets indicate marks.
- **SHARING OF CALCULATORS IS STRICTLY PROHIBITED.**

Q. 1

A) Suppose shares of MI Ltd and KKR Ltd were selling at 100 two years ago. MI's price fell in the first year by 17 percent and rose by 18.8 percent in the second year. The reverse was the case for KKR's share price; it increased by 18.8 percent and then decreased by 17 percent. Would they have the same price after two years? Why or why not? (3)

B) Zen Ltd.'s share is currently selling for Rs. 142.50. It has 1,80,000 outstanding shares. The company has a net income of Rs. 32,45,000. The company is considering paying a dividend of Rs. 22.50 per share at the end of the current financial year. The capitalisation rate is 18 percent.

Using the MM approach, you are required to answer the following questions:

(i) What will be the price of share at the end of the year (a) the company pays dividend, (b) if it does not pay dividend? (2)

(ii) How many new shares will be issued by the company if it incurs an expenditure of Rs. 47,00,000 on new investment and (a) pays dividend or (b) does not pay dividend? What will be the value of the firm? (2)

(iii) What will be the value of the firm if (a) dividend is paid; (b) if dividend is not paid? (2)

C) Your friend Misa is a mechanical engineer. She is looking for some good investment options. But she is worried about the safety of her funds. She has reached out to you for better understanding. Explain her the concept of risk. She would also like to know if risk can be measured and how she can calculate risk of a security. (3)

Q. 2 CSK Buildcon Ltd. need to acquire the use of a specialised crane for their upcoming infrastructure projects. Such cranes are made as per the order as they are based on client requirements. The company has reached out to you as a project finance consultant. Guide the company with reference to some key deceion points.

A) They are considering buying or leasing the crane. The crane costs Rs.42.42 lakhs and has an expected useful life of 6 years. The crane will fetch a salvage of Rs.3.2 lakhs at the end of its useful life and is considered for a straight-line method of depreciation. CSK has reached out to Leasewell Finance which suggested the lease rent of Rs. 8 lakh per year to be paid in advance each year for 6 years. CSK Buildcon Ltd can raise debt at 16 percent, payable in equal annual installments, each installment due at the beginning of the year. The company is in the 50 percent tax bracket. Should it lease or buy the crane? Why? (7)

B) Advice them what type of lease they should go for. Explain to them the key differences between a financial lease and an operating lease. What type of lease should they go for the crane, as mentioned in the case above? (4)

Q. 3

A) Chem Labs supplies chemicals and dyes to various units in and around Surat. Every month, the onsite delivery of chemicals and dyes is 2,000 units (drums). The unit sale price is Rs 100. The cost per unit is Rs 50. It uses a tempo that can carry a maximum of 80 units. The total distance covered in one trip is 400 kms. The cost of diesel in Surat is Rs 95.5 per liter. The average mileage is 8 kms per litre. (9)

Due to increased demand for industrial use dyes, Chem Labs has an opportunity to make and deliver 2,500 units per month. To cater to the increased demand, the company is contemplating buying a mini truck with a capacity to carry 165 units. The required mini truck is available from Force Motors for Rs 11,00,000. The tempo being currently used has a book value of Rs 6,00,000. It can be sold for Rs 5,00,000. The annual salary of the tempo driver is Rs 10,000 per month. If the mini truck is acquired, Chem Labs would have to increase his monthly salary to Rs 14,000. The average mileage of the truck would be 5 kms per liter. The annual maintenance cost of the mini truck would be Rs 8,500 compared to Rs 6,200 maintenance cost of the tempo. As per the IT Act, vehicles are depreciated at 30%. The tempo has a remaining useful life of 5 years. The mini truck could serve the needs of Chem Labs for the next 5 years.

The applicable tax rate is 35 percent. Assume that loss on sale of the existing machine can be claimed as a short-term capital loss in the current year itself. The company's current debt-equity ratio stands at 1. While the debt suppliers expect a pre-tax return of 14%, equity shareholders expect a return of 18.5%.

Mr. Lalit, the CEO of Chem Labs, has asked the CFO, Ms. Vama, to examine the financial viability of the proposal to replace the tempo with the mini truck and make appropriate recommendation in this regard.

B) The management of Chem Labs has a technical background. It is difficult for them to understand financial statements and their purpose. For the above project, it is not clear why it is important to evaluate capital budgeting projects on the basis of after-tax cash incremental flows. Why not use accounting data instead of cash flow? You as a financial consultant to the firm, please explain them. (4)

C) Parshuram Electronics Ltd. is considering expanding its capacity to manufacture medical diagnostic equipment. They are contemplating between two equipments from two different manufacturers. The firm follows the straight-line method of depreciation, (7)

and the same is for tax purposes. The firm falls under a 35% tax rate. The investors' required rate of return is 13.5%. It is difficult for the company to choose one as their useful lives are different. Suggest the company which of these two proposals should be chosen.

	Proposal I	Proposal II
Purchase price of equipment	Rs. 9,55,000	Rs. 15,40,000
Salvage Value in the terminal year	Rs. 1,00,000	Rs. 1,80,000
Useful Life (years)	5	6
Incremental Revenue p.a.	Rs. 4,50,000	Rs. 7,50,000
Incremental Costs (incl. dep) p.a.	Rs. 2,60,000	Rs. 3,10,000

Q. 4

A) Diamond Industries Ltd. is considering two mutually exclusive projects for expanding its capacity. The company uses the risk-adjusted discount rate method for project evaluation. The project manager has submitted a report detailing Certain CFAT and certainty equivalent coefficients for both the projects as follows: (5)

	PROJECT X		PROJECT Y	
YEAR	CERTAIN CFAT	C.E. COEFF.	CERTAIN CFAT	C.E. COEFF.
0	-65,000	1	-95,000	1
1	23,500	0.90	42,000	0.90
2	27,600	0.80	32,000	0.75
3	25,000	0.75	31,000	0.65
4	24,000	0.55	22,600	0.50

Which projects should be accepted by the company if its weighted average cost of capital is 11.5%, cost of equity is 14.25%. The risk-adjusted discount rates for both projects are 15.6% and 18.5%, respectively.

B) What is the decision tree approach? Discuss its application in capital budgeting. Describe the decision tree approach with the help of a hypothetical example. (5)

C) A firm is considering two investment projects, Project P requires a net cash outlay of 50,000; Q requires 60,000. Both projects have an estimated life of three years. The net cash inflows have been estimated as: For Project P, year 1, a 0.40 chance of 20,000 and a 0.6O chance of 30,000: year 2 a 0.30 chance of 24,000 and a 0.70 chance of 32,000; year 3, a 0.50 chance of 20,200 and a 0.50 chance of 26,200: For Project Q. vear 1, a 0.30 chance of 25,000 and a 0.70 chance of 29,000; year 2, a 0.20 chance of 31,000 and a 0.80 chance of 34,000; year 3, a 0.40 chance of 22,000 and 0.60 chance of 24,000. Assume a 11.5 percent discount rate and suggest which project should be accepted and why? (5)

D) Explain what the certainty-equivalent approach is and its relevance. Does it suffer from any limitation? (2)

***** **ALL THE BEST** *****