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**St Aloysius College (Autonomous)
Mangaluru**

**Semester IV – P.G. Examination - M.Com.(Finance and Analytics)
September - 2020**

INTERNATIONAL FINANCIAL MANAGEMENT

Time: 3 Hours

Max. Marks: 70

SECTION - A

Answer any **FIVE** of the following:

(5x4=20)

1. A foreign exchange dealer has assumed the following information for a particular currency. The quoted price CAD1 = Euro 0.7400, CAD 1 = \$ 0.8000 and USD 1 = Euro 0.9200. On the basis of above information, is triangular arbitrage possible? If yes, calculate the profit by considering USD 1,00,000.
2. What is country risk? Discuss the various types of country risks that the MNC's are exposed to.
3. What is cross rate? From the following calculate INR per CAD.
 - i) INR per USD = 55.00/55.20
 - ii) CAD per USD = 0.76/0.78
4. Briefly discuss the various techniques to eliminate economic exposure.
5. Explain the different types of accounts maintained under balance of payments with its components.
6. Write any four purposes of setting up IMF under Bretton-Woods system.
7. It is given that Dollar 6 month T Bills 7%, risk free 6 months Japanese bond = 6.5%. Spot exchange rate 1 Yen = \$0.008. What is the 6 month forward exchange rate?

SECTION - B

Answer any **FOUR** of the following:

(4x10=40)

8. The 6-month interest rate for Canadian dollar is 9% p.a., the 6 months interest rate for US dollar is 6.75 p.a. The quotation for Canadian dollar spot is 0.9100/USD and 6 month forward rate is 0.9025/USD. Answer the following questions:
 - a) What is interest rate parity?
 - b) Is interest rate parity holding good in the above case?
 - c) Is there any arbitrage possibility in the above case? Discuss.
 - d) If large number of operators decide to arbitrage, what will be the impact on exchange rate and interest rate?
9. Explain the special issues in International Working Capital Management.
10. Explain the factors affecting exchange rates.
11. Companies A and B has been offered the following rates per annum on a \$20 million five year loan.

	Fixed	Floating
Company A	13%	L+0.3%
Company B	14.5%	L+0.5%

Company A requires a floating rate loan. Company B requires fixed rate loan. Design a swap that will net a bank acting as intermediary 0.2% per annum, that will appear equally attractive to both the companies.

12. Following information is available:

Items	Outflows in millions of USD	Inflows in millions of USD
Trade in goods	55,383	38,285
Services	11,865	15,720
Statistical error	--	323
Unilateral transfer	34	12,672
Foreign investment	7,123	12,240
External assistant	2,183	3,074
External commercial borrowings	2,874	3,207
Investment income	5,490	1,931
Banking capital	8,532	11,259
Rupee debt service	711	--
Other capital transactions	2,510	4,018

Find out: i) the balance of trade ii) balance of current account iii) balance of capital account and iv) overall balance of payment.

13. What are the advantages and limitations of the flexible exchange rate system and the fixed exchange rate system?

SECTION – C (Compulsory)

(1x10=10)

14. DC corporation is a US based software consultant specialized in financial software for several fortune 500 companies. It has offices in India, UK, Europe and Australia. In 2019, DC corporation required £ 1,00,000 in 180 days and has 4 options before it. i) Forward market hedge ii) Money market hedge iii) Option hedge iv) No hedge. The company's analyst has developed the following information which was used to assess the alternatives available. The spot rate of £ is \$ 1.50 and 180 day forward rate is \$ 1.48. Interest rates in the countries were as follows:

Particulars	UK	US
180 day deposit rate	4.5% p.a.	4.5% p.a.
180 day borrowing rate	5.1% p.a.	5.1% p.a.

The company has the following additional information available to it. A call option on £ that expires in 180 days has an exercise price of \$ 1.49, has a premium of \$ 0.03.

The future spot rate in 180 days is expected to be as given below:

Possible outcome	Probability
\$ 1.44	20%
\$ 1.46	60%
\$ 1.53	20%

An analysis of hedging techniques have to be made to advice DC corporation. As required to advice the best alternative to DC corporation.

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Semester IV – P.G. Examination – M.Com. (Finance and Analytics)
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COST ANALYSIS FOR MANAGERIAL DECISIONS

Time: 3 hrs.

Max Marks: 70

SECTION - A

Answer any **FIVE** of the following.

(5x4=20)

1. Distinguish between relevant cost and irrelevant cost.
2. Write a note on Transfer Pricing.
3. List out the features of marginal costing.
4. Write a note on Break-Even Analysis.
5. Define standard costing. What are its benefits?
6. What is Activity based cost system? What are the steps involved in it?
7. Determine the amount of fixed expenses from the following particulars with the help of marginal costing equation:
Sales ₹ 2,40,000; Direct Materials ₹ 80,000; Direct Labour ₹ 50,000;
Variable o/h ₹ 20,000 and profit ₹ 50,000.

SECTION - B

Answer any **FOUR** of the following.

(4x10=40)

8. Explain the major steps involved in the installation of costing system in an organisation.
9. Discuss the significance of pricing decision to an organisation? Explain the major pricing strategies.
10. Describe the pre-requisites for the successful implementation of TQM in an organisation.
11. Two businesses AB Ltd and CD Ltd sell the same type of product in the same type of market. Their budgeted profit and loss accounts for the current year ending March 31 are as follows:

Particulars		AB Ltd		CD Ltd
Sales		₹ 1,50,000		₹ 1,50,000
Less: Variable costs	₹ 1,20,000		₹ 1,00,000	
Fixed cost	₹ 15,000	₹ 1,35,000	₹ 35,000	₹ 1,35,000
Net budgeted profit		₹ 15,000		₹ 15,000

You are required to:

- i) Calculate the break-even point of each business.
- ii) State which business is likely to earn greater profit in conditions of
a) heavy demand for the product b) low demand for the product

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12. Calculate the material variances, Labour variances and overhead variances from the following data:

Standards:

Material quantity	: 1 kg per unit
Material price	: ₹ 1.40 per kg
Direct labour hours	: 1.5 per unit
Labour rate	: ₹ 3.00 per hour
Overheads	: ₹ 1.30 per standard direct labour hour
Capacity	: 5000 units

Actuals:

Materials purchased	: 10,000 kgs
Materials price	: ₹ 1.50 per kg
Material used	: 5,400 kgs
Direct Labour Hours	: 8,000 hours
Labour rate	: ₹ 3.15
Units produced	: 5,000
Overheads	: ₹ 8,800

13. A company has production capacity specialising in jobs for the aircraft components market. The traditional costing system has two direct- cost categories, namely direct materials and direct manufacturing labour and a single direct cost pool i.e. manufacturing overhead allocated on the basis of direct labour hours. The indirect cost allocation rate would have been ₹ 115 direct manufacturing labour hour.

The company has now decided to replace the single indirect cost pool with five indirect cost pools, representing five activity areas each with its own supervising and budget responsibility. The relevant data are as follows:

Activity area	Cost driver used as an allocation base	Cost allocation rate
Material handling	Parts	₹ 0.40
Lathe work	Turns	0.20
Milling	Machine-hours	20.00
Grinding	Parts	0.80
Testing	Units tested	15.00

Two representative jobs processed under the new system of the facility at the most recent period had the following features:

You are required to

Particulars	Job 101	Job 102
Direct material cost per job	₹ 9,700	₹ 59,900
Direct manufacturing labour cost per job	750	11,250
Direct manufacturing labour hours per job	25	375
Parts per job	500	2,000
Turns per job	20,000	60,000
Machine-hours per job	150	1,050
Units per job	10	200

- Compute the per unit manufacturing costs of each job under the Traditional job costing system.
- Compute the per unit manufacturing costs of each job under the activity based costing system.

SECTION - C (Compulsory)

(1x10=10)

14. The income statement of a company for the preceding year is presented below. Except as noted the cost/ revenue relationship for the coming year is expected to follow the same pattern as in the preceding year. Income statement for the year ending march 31 is as follows:

Sales (2,00,000 units @ ₹ 2.5 per unit)	₹ 5,00,000
Variable costs ₹ 3,00,000	
Fixed costs ₹ 1,00,000	₹ 4,00,000
Pre- tax profit	1,00,000
Less: Tax	35,000
Profit after tax	65,000

- What is the break-even point in amount and units?
- Suppose that a plant expansion will add ₹ 50,000 to fixed costs and increases capacity by 60%. How many units would have to be sold after the addition to break-even?
- At what level of sales will the company be able to maintain its present Pre-tax profit position even after expansion?
- The company's management feels that it should earn at least ₹ 10,000 (pre-tax per annum) on the new investment. What sales volume is required to enable the company to maintain existing profits and earn the minimum required return on new investment?
- Suppose the plant operates at full capacity after the expansion what profit will be earned?

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**Semester IV – P.G. Examination - M.Com.(Finance and Analytics)
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FINANCIAL DERIVATIVES

Time: 3 Hours

Max. Marks: 70

SECTION - A

Answer any **FIVE** of the following:

(5x4=20)

1. Distinguish between forwards and futures.
2. List the factors affecting option prices.
3. Explain a credit linked note.
4. Explain cross hedging.
5. Consider a six month gold futures contract with current spot price of ₹ 2,800 per gram. The storage cost is expected to incur for about ₹ 15 per gram at the end of six month period. Determine the value of a futures contract if annual continuously compounded risk-free rate of return is 8%. Assume that contract size is 100 grams.
6. On Monday morning Mr. Suhas takes long position in ten pound futures contract at \$ 1.30/₹ that matures on Thursday. The very next day the futures price rises to ₹ 1.40 and thereafter falls to \$ 1.35 on Wednesday and \$ 1.32 on Thursday closing. What will be the investor's gain or loss in these three days? The size of each contract is £ 62,500.
7. Assume that the current spot rate of USD is ₹ 67 and which is expected to rise to ₹ 69 or fall to ₹ 65 after a year. The risk free rate of interest is 8% in India and 6% in the USA. Find the current value of call option assuming the strike price of ₹ 68.

SECTION - B

Answer any **FOUR** of the following:

(4x10=40)

8. Suppose an investor forecasts that the market will be bullish in near future and hence creates a bull spread by way of buying a call option on Indian Oil Corporation with an exercise price of ₹ 375 for ₹ 2 and selling a call option on it involving and exercise price of ₹ 370 for ₹ 3 per stock. Find out how much profit or loss the investor makes if on maturity, the spot rates are expected to be ₹ 360, ₹ 372 and ₹ 390 per stock. Also find out break even price and give diagrammatic representation of the strategy. (The contract size is on Indian Oil Corporation is 1,500)
9. The current stock price of RIL is ₹ 1,500. A European call option with an exercise price of ₹ 1,400 will expire in 90 days. The annual yield on 90 days Treasury bill is 8% continuously compounded. The standard deviation of annual returns on RIL is 60%. Determine the value of call option.

Contd...2

10. Ranbaxy Ltd and Sun Pharma Ltd require ₹ 10 million for five years term and have been offered the following interest rates

Company	Fixed	Floating
Ranbaxy Ltd	12%	MIBOR + 1.25%
Sun Pharma Ltd	15%	MIBOR + 1.75%

Ranbaxy Ltd is interested in floating and Sun Pharma Ltd in fixed rate loan. How do you design an interest rate swap which is equally attractive to both the firms? The swap is arranged through a swap dealer who charges 0.4%.

11. Assume that call and put options are available on the shares of Lupin at strike price of ₹ 1,150 for call premium of ₹ 6 and put premium of ₹ 8 per stock with lot size of 400 shares. Create a bottom straddle and top straddle and calculate the gain/loss on the strategies if spot rates of the stock on maturity are ₹1,100, ₹1,150 and ₹1,200 per stock. Also show the diagrammatic representation of the strategy.
12. Discuss the origin and types of credit derivatives.
13. Write notes on:
- Derivatives trading in India
 - Comparative advantage argument for swaps.

SECTION – C (Compulsory)

(1x10=10)

14. Mr. Gupta took a long position in five futures contracts on rice at an exercise price of ₹ 50 per kg. The initial margin on this contract is 10% and maintenance margin is 85% of the initial margin. The size of each future contract is 1000 kg. The futures prices for the first ten days of the contract are given below.

Day	Settlement Price (₹ per kg)
1	52.50
2	51.25
3	51.00
4	51.80
5	51.40
6	51.10
7	49.75
8	50.30
9	50.50
10	50.25

Prepare margin account assuming that all margin calls are honoured immediately and money in excess of the initial margin is withdrawn immediately.

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CORPORATE LAW, ETHICS AND GOVERNANCE

Time: 3 hrs.

Max Marks: 70

SECTION - A

Answer any FIVE of the following.

(5x4=20)

1. Explain the meaning of 'Separate legal entity'?
2. Write a note on the Doctrine of Indoor Management.
3. Explain the process of Registration of stock brokers and sub-brokers.
4. What are the ethics in marketing and consumer protection?
5. Describe Insider trading and its role in Corporate scandals.
6. What is Corporate Governance? Explain briefly the issues in Indian corporate Governance.
7. Write a note on corporate philanthropy in India.

SECTION - B

Answer any FOUR of the following.

(4x10=40)

8. Explain the procedure for the alteration of Memorandum of Association.
9. What is Ethical dilemma? Explain the various factors influencing ethical dilemma.
10. Explain in detail the constitution and management of SEBI. Discuss the functions of the Board.
11. Explain the nature of Business ethics. What is the need and benefits of business ethics?
12. What are the initiatives for corporate governance reforms in India? Explain the committees and codes on corporate governance in India.
13. Explain the various CSR models.

SECTION - C (Compulsory)

(1x10=10)

14. What is Corporate Social Responsibility? Explain its need and the issues and CSR mechanism in India.

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PORTFOLIO THEORY AND MANAGEMENT

Time: 3 hrs.

Max Marks: 70

SECTION - A

Answer any FIVE of the following.

(5x4=20)

1. Enumerate the key steps involved in portfolio management process.
2. Compare and contrast various forms of market efficiencies.
3. Explain the concept of alpha and beta. State their significance in portfolio management.
4. How does efficient frontier change, when the possibility of lending and borrowing at a risk free rate is introduced?
5. Distinguish between Security Market Line (SML) and Capital Market Line (CML).
6. State the objectives of personal financial planning?
7. Compare the markowitz and single index model.

SECTION - B

Answer any FOUR of the following.

(4x10=40)

8. Critically examine the Capital Asset Pricing Model.
9. Describe the rules of investment success spelt out by John Templeton
10. a) The following information is available for a bond:

Face value : ₹ 100
Coupon rate : 9 percent payable annually
Years to maturity : 5
Current market price : ₹ 105

- i. What is the duration of the bond?
- ii. Compute yield to maturity

b) The Equity stock of Rax Limited is currently selling for ₹ 30 per share. The dividend expected next year is ₹ 2.00. The investors required rate of return on this stock is 15 percent. If the constant growth model applies to Rax Limited, what is the expected growth rate?

11. Given below is information on market rate of return and data from two companies A and B.

Year	Market Index (%)	Return on Company A (%)	Return on Company B (%)
2017	12	13	9
2018	11	11.5	9.8
2019	9	10.5	9.5

- a) Determine average return and standard deviation for each.
 b) Compute covariance for each stock and market.
 c) Compute β for stock A and stock B.
12. The wise advisors are following five stocks and need to issue a recommendation (Buy, Hold or Sell) to their clients. The CAPM is assumed to hold:

Security	Expected return (%)	β
X	9%	0.40
Y	15%	0.75
Z	18%	1
W	26%	1.25
V	23%	2

- a) Calculate the required (equilibrium) return as per SML for each security assuming a risk free rate of 6% and market return of 18%.
- b) Which of the above securities are undervalued, fairly priced or over priced? Why?
- c) Draw SML and state which of the above securities plot on the SML, above the line and below the line.
- d) Assume you are investment consultant at wise advisors. What would be your recommendation (in terms of buy, Hold and sell).
13. An investor has gathered the following information about mutual funds.

Mutual Fund	Return (%)	Risk (σ) %	β
X	20	6	0.80
Y	22	6.25	1.10
Z	16	3.75	1

Return on Treasury bill (Zero beta portfolio) is 5% and return on market index is 16%. Evaluate these mutual funds, using

1. Sharpe's measure
2. Treynor's measure
3. Jensen's measure
4. Fama's measure

SECTION - C (Compulsory)

(1x10=10)

14. Construct an optimal portfolio assuming no short sales from the following data.

Security	A	B	C	D	E	F
Avg Return (%)	20	18	16	12	10	15
β	0.75	1.3	1.3	0.75	0.6	1.8
σ_{ei}^2	25	16	9	16	9	36

Market return is assumed to be 20% and Treasury Bill rate is 7%.
