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St Aloysius College (Autonomous)
Mangaluru
Semester IV– P.G. Examination – M.Com
April – 2019
INTERNATIONAL FINANCIAL MANAGEMENT

Time: 3 hrs. Max Marks: 70

SECTION – A

Answer any FIVE questions out of seven questions. **(5x4=20)**

1. Explain the functions of International Monetary Fund.
2. Assess the importance of Balance of Payment.
3. Distinguish between fixed and flexible exchange rate system.
4. Differentiate the following:
   i) American quote and European quote
   ii) Spot market and Forward market
5. A French trader imports goods from London.
   The following market rates prevail.
   E/$=1.18/1.19, £/$=0.69/0.70
   Find the E/£ exchange rate

6. Explain the translation methods.
7. Explain the objectives of international working capital.

SECTION – B

Answer any FOUR questions out of six questions. **(4x10=40)**

8. Explain the scope and functions of International Monetary Fund.
9. The following data are given:
   i. An Indian company imports cloth worth ₹50,000 from Nepal.
   ii. A US exporter sells to India a process equipment for ₹1,50,000.
   iii. Mohan, an Indian citizen goes to Srilanka for vacation. He spent ₹10,000 on services received and bought souvenirs for ₹15,000.
   iv. Karim a Bangladesh immigrant, sent ₹10,000 to his family in Bangladesh.
   v. ABC Company of India decides to invest ₹6,00,000 in Mauritius to establish a business unit.

   Prepare a BOP statement for India.
10. Appraise the foreign exchange market in India.
11. Explain the IRP theory of exchange rate.
12. Examine the strategies to hedge economic exposure.
13. Discuss the techniques to optimize cash flows.

SECTION – C

(Compulsory) **(1x10=10)**

14. Spot rate=₹66.0030/$, 6 months forward rate=₹67.0010/$

    Rupee interest rate = 10%
    Dollar interest rate = 8%
    Given the above data, is there an arbitrage possibility? If yes show the gain.

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St Aloysius College (Autonomous)

Mangaluru

Semester IV – P.G. Examination – M.Com.

April - 2019

CORPORATE LAW,ETHICS AND GOVERNANCE

Time: 3 hrs. Max Marks: 70

SECTION - A

Answer any FIVE of the following. (5x4=20)

1. What do you mean by lifting the 'Corporate Veil'?
2. Briefly explain the functions of Securities and Exchange Board of India.
3. Discuss the source of ethical standards.
4. What do you mean by Corporate Scandals?
5. List out the benefits of good Corporate Governance.
6. Write a short note on CSR Mechanisms.
7. Comment on the ethical issues in Accounting and Finance.

SECTION – B

Answer any FOUR of the following. (4x10=40)

8. Enumerate the legal compliances and stages in the formation of Joint Stock Company.
9. Discuss the establishment and management of SEBI.
10. Describe the factors influencing ethical behaviour at work place.
11. Discuss the measures to mitigate unethical business practices.
12. Critically evaluate initiative for Corporate Governance reforms in India.
13. Explain the Various models of Corporate Social Responsibility.

SECTION – C (Compulsory) (1x10=10)

14. Case analysis.

Mr. Virshitha M.D Natural Beverages Ltd, was looking at the "AD Punchline" created by his product manager Jatin Shah. He was taken aback by the claim that their new product "NATU-RAS" energy drink is " The best fitness plan for your health-real fruit and no sugar".

Jatin shah, the product manager, was little uneasy when asked by his M.D as to how we can claim " Best health plan drink" when they know that there are preservatives and permissive food colours. Jatin defended by saying that all shampoo and hair oil advertisements also make similar hyper claims as a mode of communicating superiority of their respective brands.

i) Discuss how in this case the question of ethics in advertising has been linked to persuasive product communication for "NATU-RAS".

ii) What ethical advice you will give to Mr. Virshitha to develop a persuasive advertisement, without compromising on the ethical aspects of advertising.

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Mangaluru

Semester IV – P.G. Examination – M.Com.

April - 2019

COST AND MANAGEMENT ACCOUNTING

Time: 3 hrs. Max Marks: 70

SECTION - A

Answer any FIVE of the following: (5x4=20)

1. The following figures for the month of May 2016 were extracted from the records of a factory.

Particulars	Cost
Opening stock of finished goods (5000 units)	₹ 50,000
Raw materials consumed	₹ 3,00,000
Direct wages	₹ 1,00,000
Factory overhead	100% of direct wages
Administrative overhead	₹ 1/- unit
Selling & distribution over head	10% of sales
Sales (45,000 units)	₹6,75,000
Closing stock of finished goods	10,000 units

Prepare a cost sheet for the month of May 2016, assuming that sales are made on the basis of first-in-first out method.

2. The P/V ratio of X Ltd is 40% and margin of safety is 30%. You are required to work the B.E.P sales and net profit if the sales value is ₹1,50,000.

3. The standard material to manufacture one unit of product X is 20 kg and standard price per kg ₹3. In the month of November 2015, 400 units of product X were produced by using 7800 kg of material at a cost of ₹24,960. Calculate material variance.

4. Examine the steps involved in installing a cost system in a manufacturing unit.

5. How does strategic management accounting satisfies the various needs of management for arriving at appropriate business decisions?

6. Explain the concept of transfer pricing.

7. How does TQM facilitate the value addition in an organization?

Contd...2

SECTION – B

Answer any FOUR of the following: (4x10=40)

8. A product is completed in 3 consecutive processes. During a particular month the input to Process I of the basic raw material was 5,000 units at ₹2 per unit. Other information for the month was as follows –

	Process - I	Process - II	Process III
Output (units)	4,700	4,300	4,050
Normal loss as % of output	5	10	5
Scrap value per units (₹)	1	5	6
Direct wages (₹)	3,000	5,000	8,000
Sundry expenses (₹)	9,750	9,910	15,560

Overhead ₹32,000 total, chargeable as percentage of direct wages.

There is no opening or closing work-in-progress stocks. Compile three process accounts and finished stock account with details of abnormal loss and gain, wherever applicable.

9. Reliance Ltd. Manufactures and sells television valves. Due to competition the company proposes to reduce its selling price. If the present level of profit is to be maintained, indicate the number of units to be sold if proposed reduction in selling price is 10% and 15%. The following additional information is available.

	₹	₹
Present sales (3,000 units)		3,00,000
Variable cost (3,000 units)	1,80,000	
Fixed cost	70,000	2,50,000
Net profit		50,000

10. Explain the changing role of standard costing system in today's business.

11. State the main types of information which will be required by a manager to implement the balanced score card approach in performance measurement.

12. "Marginal costing is a technique of value to management". Discuss.

Contd...3

13. X Ltd producing flour covers in roll of standard size measuring 3 meters wide and 30 metres long by feeding raw-materials to continuous process machine. The standard mixture fixed for a batch of 900 sq metres of floor cover is as follows –

2,000 kg of material A at ₹ 1 per kg

800 kg of material B at ₹ 1.50 per kg.

20 gallons of material C at ₹ 30 per gallon.

During the period, 1,505 standard size rolls were produced from material issued for 150 batches. The actual usage and the cost of material were –

3,00,500 kg of material A at ₹ 1.10 per kg

1,19,600 kg of material B at ₹ 1.65 per kg

3,000 gallon of material C at ₹ 29.50 per gallon.

Present the figures to management showing the breakup of material cost variance arising during the period.

SECTION – C (Compulsory) **(1x10=10)**

14. Relevant data relating to company are –

	Products			
	P	Q	R	Total
Production and sales	60,000	40,000	16,000	
Raw materials usage in units	10	10	22	
Raw material cost	₹50	₹40	₹22	24,76,000
Direct labour hours	2.5	4	2	3,42,000
Machine hours	2.5	2	4	2,94,000
Direct labour cost	₹16	₹24	₹12	-
No of production runs	6	14	40	60
No of deliveries	18	6	40	64
No of receipts	60	140	880	1080
No of production orders	30	20	50	100

Overheads:

Setup	-	60,000
Machineries	-	15,20,000
Receiving	-	8,70,000
Packing	-	5,00,000
Engineering	-	7,46,000

The company operates a JIT inventory policy.

You are required –

1. Compute the product cost based on direct labour – hour recovery of overheads.
2. Compute the product cost using activity based costing.

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St Aloysius College (Autonomous)
Mangaluru
Semester IV– P.G. Examination – M.Com
April – 2019
DERIVATIVES AND RISK MANAGEMENT

Time: 3 hrs. Max Marks: 70

SECTION – A

Answer any FIVE questions out of seven questions. (5x4=20)

1. What are factors affecting call option price?
2. Explain the concept of interest risk and purchasing power risk.
3. What is 'Hedge Ratio'?
4. Distinguish between Forward and Futures.
5. Explain the concept of marking to the market in futures contract.
6. Write a note on currency and internal rate swap.
7. What are warrants?

SECTION – B

Answer any FOUR questions out of six questions. (4x10=40)

8. Discuss the sources of financial risks.
9. Explain the process of risk management.
10. Paul Easley has taken a short position in a gold futures contact. Each contract is for 100 ounces of gold and the futures price at the time of entering into the contract is $500 per ounce. The initial margin is $10,000 and the maintenance margin is 80% of the initial margin. The contract is entered into in the morning of March 1, 2016 and is held for a period of 10 days.

The following are the settlement prices at the end of everyday (per ounce of gold).

Day	1	2	3	4	5	6	7	8	9	10
Price	515	525	550	510	490	475	460	480	500	480

11. Suppose that a certain stock is currently worth $61. Consider an investor who feels that a significant price move in the next 6 months is unlikely. Suppose that the market prices of 6-month calls are as follows:

Strike Price ($)	Call Price ($)
55	10
60	7
65	5

Contd...2

Explain how an investor can construct Butterfly Spreads. Also give the payoff table.

12. Two companies are offered the following interest rates on a 5 year loan of ₹2 million, company A is interested in floating rate and B wants fixed rate. Design an interest rate swap netting 0.5% to be intermediary is equally attractive to both A and B. Explain the cash flow.

Company	Fixed	Floating
A	15%	MIBOR + 1%
B	18%	MIBOR + 2%

13. From the following data, calculate the price of call option under black and schools model:
    - Stock price: ₹50.
    - Months to expiration: 3 months
    - Risk free rate of interest:10% p.a
    - Standard deviation of stock:40%
    - Exercise price: ₹55
    - Option type: European call

SECTION – C

(Compulsory) **(1x10=10)**

14. Consider a long forward contract to purchase a non-dividend-paying stock in 3 months. Assume that the current stock price is $40 and 3 months risk-rate is 5% per annum. Calculate the theoretical price for this forward contract.

Analyse and explain how an arbitrager can make profit, if the actual forward price is,

i) $43

ii) $39

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St Aloysius College (Autonomous)

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Semester IV– P.G. Examination – M.Com

April – 2019

PORTFOLIO THEORY AND MANAGEMENT

Time: 3 hrs. Max Marks: 70

SECTION – A

Answer any FIVE questions out of seven questions. **(5x4=20)**

1. In what way can the relationship of risk and return be established?
2. What are the arguments raised against the EMH theory? Explain.
3. Define efficient frontier. Distinguish between efficient portfolio and feasible set.
4. Distinguish between CAPM and Arbitrage Pricing theory.
5. Explain the Jensen Index of Portfolio performance.
6. State the objectives of personal financial planning.
7. An equity share is priced ₹50. The price at the end of the year and their probabilities are given below. The company does not pay any dividend.
   a) What is the return that an investor can expect from this stock?
   b) Analyse the standard deviation of the returns.
   c) Calculate the co-efficient of variation.

End year price	Probability
60	0.1
65	0.2
70	0.4
75	0.2
80	0.1

SECTION – B

Answer any FOUR questions out of six questions. **(4x10=40)**

8. Discuss the Single Index Model as described by Sharpe to get the optimum portfolio.
9. "The investment process involves a series of activities starting from the policy formulation". Discuss.
10. Assume CAPM equilibrium model with unlimited borrowing and lending at the riskless rate of interest. Complete the blanks in the following table.

Security	E(R)	σ	β	e_1^2
A	.15	-	2.0	.10
B	-	.25	0.75	.04
C	.09	-	0.50	.17

Contd...2

11. You are given the following historical performance information on the capital market and a mutual fund:

Year	Mutual Fund Beta	Mutual Fund return (%)	Return on market index (%)	Return on government securities (%)
1	0.90	-3.00	-8.50	6.50
2	0.95	1.50	4.00	6.50
3	0.95	18.00	14.00	6.00
4	1.00	22.00	18.50	6.00
5	1.00	10.00	5.70	5.75
6	0.90	7.00	1.20	5.75
7	0.80	18.00	16.00	6.00
8	0.75	24.00	18.00	5.50
9	0.75	15.00	10.00	5.50
10	0.70	-2.00	8.00	6.00

Calculate the following risk adjusted return measures for the mutual fund:

a) Reward –to-variability ratio

b) Reward –to-volatility ratio

Comment on the mutual fund's performance.

12. Describe the rules of investment success spelt out by John Templeton.

13. Verma can buy an equity that will pay ₹2 in dividends annually over the next three years. The earnings of the company are expected to grow and the equity is expected to reach a price of ₹70 per share at the end of three years. This is a conservative investment and Verma expects a yield of 18%. What price should he pay for the equity if he wishes to earn 18%?

SECTION – C

(Compulsory)

(1x10=10)

14. From the following data calculate (a) Beta (b) Alpha (c) Residual variance (d) Correlation (e) Co-efficient of determination.

Year	X (Market Index return) %	Y (Security returns) %
1	0.10	0.29
2	0.24	0.31
3	0.11	0.10
4	0.08	0.06
5	0.03	0.07

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St Aloysius College (Autonomous)
Mangaluru
Semester IV– P.G. Examination – M.Com
April – 2018
INTERNATIONAL FINANCIAL MANAGEMENT

Time: 3 hrs. Max Marks: 70

SECTION – A

Answer any FIVE questions out of seven questions. (5x4=20)

1. Explain the types and structure of carbon credit.
2. Explain the major participants of the forex market.
3. Illustrate the influence of relative interest rates on exchange rates.
4. Examine the measures for correcting disequilibrium in BOP.
5. Classify the various forms of currency exposure.
6. Explain decentralized cash management.
7. Given the following information, calculate the possibilities of triangular arbitrage profit.
   CAD=USD 0.90; NZD=USD 0.30;CAD=NZD 3.02

SECTION – B

Answer any FOUR questions out of six questions. (4x10=40)

8. From the following information determine the outright rates, spread and premium or discount in annual percentages.

	Spot	1 month	3 months	6 months
INR/EUR	62.2402/10	20/30	35/25	40/35
INR/GBP	79.5863/901	225/250	210/203	165/182

9. Explain the various exchange rate systems.
10. A series of transaction between the United States and the rest of the world are given below:
    i. An American company exports goods to a British company for $2000.
    ii. An Italian American ships $3000 worth of goods to his relatives in Italy.
    iii. An American citizen buys Korean government bonds for $3000 in cash.
    iv. An American citizen spent $5000 on his vacation to Mexico.
    v. An American company imports diamond jewellery from India for $4000.

    Prepare the balance of payment for United States.
11. Examine the strategies for managing transaction exposure.
12. Explain the guidelines of FEMA.
13. Examine the special issues in International Working Capital Management.

SECTION – C

(Compulsory) (1x10=10)

14. Given the following data, show how arbitrage possibility exists for 10000 units currency.

    Spot rate MXP 16:60=USD 1

    6 months forward rate MXP 16.62=USD1

    Interest rate MXP=8%; USD=5%

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St Aloysius College (Autonomous)
Mangaluru
Semester IV – P.G. Examination - M.Com
April - 2018
CORPORATE LAW, ETHICS AND GOVERNANCE

Time: 3 Hours Max. Marks: 70

SECTION – A

Answer any **FIVE** of the following: (5x4=20)

1. What are the issues in Indian corporate Governance?
2. State the need for corporate social responsibility in India.
3. Write a note on company law administration in India.
4. What are the different causes of unethical behaviour?
5. Explain 'Ethical Dilemma' with its characteristics.
6. Write the process of the 'Registration of a stock broker'.
7. State the circumstances in which corporate veil can be lifted.

SECTION - B

Answer any **FOUR** of the following: (4x10=40)

8. Write short notes on
   i)Doctrine of Indoor management
   ii) Doctrine of constructive notice
9. Under the articles, the directors of a company had power to borrow upto ₹ 10,000 without the consent of the general meeting. The directors themselves lent ₹ 35,000 to the company without such consent and took debentures. How much is the company liable for? Explain with relevant inputs.
10. Are advertisements by professionals like Doctors and Lawyers ethical? Critically analyse.
11. Explain corporate social reasonability models suitable for Indian business.
12. Elaborate the factors influencing ethical behaviour at work.
13. Who are whistle blowers? Analyse a real -life case for a whistle blower in India.

SECTION – C (Compulsory)

(1x10=10)

14. General Electric (GE) is one of the world's most admired companies ranked fifth in fortune 500 list of companies in 2002. It operates a diverse range of business covering aircraft engines, power generation, financial services, medical imaging , television programming and plastics. GE's sales had risen from $ 60 billion in 1993 to $ 131 billion in 2002-03. It had established various principles with regard to corporate governance and put in place various systems and processes to implement them. GE was established in 1892 in New York, following a merger between Thomson-Houston and Edison General Electric. Its financial strength and research focus contributed to its initial success. In 1920s, GE joined AT & T and westing house in a radio broadcasting venture.

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St Aloysius College (Autonomous)
Mangaluru
Semester IV – P.G. Examination – M.Com.
April - 2018
COST AND MANAGEMENT ACCOUNTING

Time: 3 hrs.

Max Marks: 70

SECTION - A

Answer any FIVE of the following: **(5x4=20)**

1. State the role of management accounting as a tool in decision making and exercising central.

2. What are the areas in which activity based information is used for decision making?

3. How does TQM facilitate the value addition in an organization?

4. Give an account of various techniques used in strategic management accounting for decision making.

5. A company ltd. produces and sells 1,500 units of a commodity at ₹20 each. The variable cost of production is ₹12 per unit and fixed cost ₹8000 per annum.

   Calculate: i) P/V ratio ii) sales at BEP

   iii) Additional sales required to earn the same amount of profit if the selling price is reduced by 10%.

6. Standard time rate for unit component X are given below.

   Standard hours per unit -15

   Standard rate ₹4 per hour

   Actual data and related information are as follows –

   Actual production : 1000 units

   Actual hours : 15300 hours

   Actual rate : ₹3.90 per hour

   Calculate labour cost variance, labour efficiency variance and labour rate variance.

7. Reliance Ltd manufactures and sells T V valves. Due to competition the company proposes to reduce its selling price. If the present level of profit is to be maintained, indicate the number of units to be sold if proposed reduction in selling price is 10% and 15%. The following additional information is available –

	₹	₹
Present sales (3,000 units)		3,00,000
Variable cost (3000 units)	1,80,000	
Fixed cost	70,000	2,50,000
Net Profit		**50,000**

Contd...2

SECTION – B

Answer any FOUR of the following: **(4x10=40)**

8. Describe the types of information required by a manager to implement the balanced score card approach.

9. "Marginal costing is the administrative tool for the management to achieve higher profits and efficient operation". Explain.

10. Explain the various factors to be considered while fixing the price of the product. What are the implications of different pricing strategies in short run and long run?

11. Product X is obtained after it passes through three distinct processes. The following information is available for the operation.

	Total	Process -1	Process -2	Process -3
Material	5,625	2,600	2,000	1,025
Direct wages	7,330	2,250	3,680	1,400
Production over head	7,330			

500 units @ ₹4 per unit were introduced in process –I. Production overheads are absorbed as a percentage of direct wages. The actual output and normal loss of the respective process are –

	Output (units)	Normal loss on input	Value of sirap per unit (₹)
Process 1	450	10%	2
Process 2	340	20%	4
Process 3	270	25%	5

There is no stock or work-in-progress in any process. Show –

a) The three process account
b) The abnormal loss and abnormal gain account

12. The directors of Kolkatta Trading Co. Ltd are considering the sales budget for the next budget period. The following information has been made available from the cost records.

	Product A	Product B
Direct material	₹20	₹25
Direct wages @ ₹2 per hour	5 hours	7½ hours
Selling price	₹60	₹100

Variable overhead 100% of direct wages

Fixed overhead ₹10,000 per annum.

You are required to present to the management a statement showing the marginal cost of each product and to recommend which of the following sales mix should be adopted –

a) 450 units of A and 300 units of B
b) 900 units of A only
c) 600 units of B only
d) 600 units of A and 200 units of B

13. T Ltd has the following activities and associated cost behaviours.

Activities	Cost behaviour
Labour	₹10 per direct labour hour
Setup	Variable ₹100 per setup Step-fixed-₹30,000 for per step, step=10 setups
Receiving	Step-fixed ₹40,000 per step, step=2000 hours.

Activities with step cost behaviour are being fully utilized by existing products. Thus any new product demand will increase resource spending on the activities.

Two designs are being considered for a new product – Design I and Design II.

The following information is provided about each design (1000 units of the product will be produced)

Cost driver	**Design - I**	**Design – II**
Direct labour hours	3000	2000
No of set-ups	10	20
Receiving hours	2000	4000

The company has recently developed a cost equation for manufacturing costs using direct labour hours as the driver.

The equation was R^1=0.60 and is given below

Y= ₹15,00,000 + 1200X

Required –

1. Compute the cost of each design (based on the direct labour cost equation if the design engineering is told that only direct labour hours drive manufacturing costs. Which design would be chosen based on this unit?
2. Now compute the cost of each design using all drivers and activity information.

SECTION – C (Compulsory) (1x10=10)

14. Ambika condiments bringout two products SUCHI and RUCHI which are popular in market. The management has the option to alter the sales mix of the two products from out of the following combinations –

Options	SUCHI	RUCHI
I	800	600
II	1600	-
III	-	1300
IV	1100	500

The per unit of production cost /sales data are

	SUCHI	RUCHI
Direct material (₹)	25	30
Direct labour (hours)	10	12

Variable factory overhead is 100% of direct labour cost for both products.

	SUCHI	RUCHI
Selling price (₹)	75	90

Labour rate is ₹2 per hour.

Common fixed overhead for both products ₹10,000

You are required to –

a) Prepare Marginal cost statement for the two products.

b) Evaluate the option and identify the most profitable sales mix.

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St Aloysius College (Autonomous)
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Semester IV– P.G. Examination – M.Com
April – 2018
DERIVATIVES AND RISK MANAGEMENT

ne: 3 hrs. Max Marks: 70

SECTION – A

Answer any FIVE questions out of seven questions. **(5x4=20)**

1. What do you understand by Derivatives? Give suitable examples.
2. Explain "default risk".
3. What is initial and maintenance margin in futures contract.
4. Write differences between hedging and speculation.
5. Explain comparative advantage argument in swaps.
6. Compare and contrast call and put options.
7. What do you understand by "long and short hedge" in the context of forwards and futures?

SECTION – B

Answer any FOUR questions out of six questions. **(4x10=40)**

8. Discuss role and limitations of derivative markets.
9. Describe the different types of financial risks.
10. Mr. Ajay has taken a long position in a gold futures contract. Each contract is for 100 ounces of gold and the futures price at the time of entering into the contract is $500 per ounce.

The initial margin is $10,000 and the maintenance margin is 80% of the initial margin. The contract is entered into in the morning of March 1, 2017 and is held for a period of 10 days.

The following are the settlement prices at the end of everyday (per ounce of gold).

Day	1	2	3	4	5	6	7	8	9	10
Price	515	525	550	510	490	475	460	480	500	480

Prepare margin account.

11. Consider a European call option on a stock when there are ex-dividend dates in two months and five months. The dividend on each ex-dividend date is expected to be $0.50. The current share price is $40, the exercise price is $40, the stock price volatility is 30% per annum, the risk free rate of interest is 9% per annum and the time of maturity is six months.

Compute the option price using Black-schools model.

Contd...2

12. Companies A and B face the following interest rates (adjusted for the differential impact of taxes):

	Company A	Company B
US dollars (floating rate):	LIBOR+0.5%	LIBOR +1.0%
Canadian dollars (fixed rate):	5.0%	6.5%

Assume that A wants to borrow US dollars at a floating rate of interest and B wants to borrow Canadian dollars at a fixed rate of interest. A financial institution is planning to arrange a swap and requires a 50-basis-point spread. Id the swap is equally attractive to A and B, what rates of interest will A and B end up paying?

13. Suppose that put options on a stock with strike prices $30 and $35, cost $4 and $7, respectively. How can the options be used to create (a) a bull spread and (b) a bear spread? Construct a table that shows the profit and payoff for both spreads.

SECTION – C

14. **Case Study(Compulsory)** **(1x10=10)**

Consider a long forward contract to purchase a coupon-bearing bond whose current price is $900. We will suppose that the forward contract matures in 9 months. We will also suppose that a coupon payment of $40 is expected after 4 months. We assume that the 4-month and 9-month risk-free interest rates (continuously compounded) are, respectively, 3% and 4% per annum. Analyse and explain how an arbitrager can make profit if the actual forward price is $900 and $910.

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St Aloysius College (Autonomous)

Mangaluru

Semester IV– P.G. Examination – M.Com

April – 2018

PORTFOLIO THEORY AND MANAGEMENT

Time: 3 hrs. **Max Marks: 70**

SECTION – A

Answer any FIVE questions out of seven questions. **(5x4=20)**

1. "Systematic risk cannot be controlled but unsystematic risk can be reduced" – Elaborate.

2. Distinguish between the Security Market Line and Capital Market Line.

3. The stock market analyst has analysed the stock and given his opinion regarding J.J Steel Company and the market in the following table.

Growth	Likely return		Probability
	J.J Steel	Market	
Boom	20%	24%	0.4
Fair	13%	15%	0.5
Depression	5%	-7%	0.1

The risk free rate is 7%. Is it advisable to buy J.J Steel Company's Stock?

4. Write a note on portfolio performance evaluation.

5. "Benjamin Graham was a quantitative navigator". Illustrate.

6. Pioneer's preference shares are selling for ₹44 per share in the market and pay a ₹4.40 annual dividend.
   a) What is the expected rate of return on the preference shares?
   b) If an investor's required rate of return is 12%, what is the value of a preference share for that investor?
   c) Should the investor acquire the preference shares?

7. The market price of a share is ₹155. Following information is available about market condition, dividends and market price after one year (year-end). Find the expected return of the share and the variability of the return.

Market condition	Probability	Market Price	Dividend
Bullish	0.25	200	15
Stable	0.50	160	10
Bearish	0.25	150	5

Contd...2

SECTION – B

Answer any FOUR questions out of six questions. **(4x10=40)**

8. Construct a portfolio of two investments X and Z. Calculate risk and return. Which is the best, out of the three portfolios? The following information is given of the investments.

Co-efficient of correlation r=0.15

	X	Y
Expected return	11%	20%
Standard deviation of returns	9%	18%

Calculate when

i) 50% of funds are in X and 50% in Z
ii) 75% in X and 25% in Z
iii) All funds invested in Z.

The expected return of the portfolio is the weighted average of the returns of the securities. The weights are proportion of the security in the portfolio.

9. A portfolio manager has the following information about several stocks. He has to build an optimum portfolio for his client with short sales.

Security	Expected return	β	σ^2_{ei}
A	22	1.0	35
B	20	2.5	30
C	14	1.5	25
D	18	1.0	80
E	16	0.8	20
F	12	1.2	10
G	19	1.6	25
H	17	2.0	30

The market index variance is 12% and the risk-free rate of return is 7%.

10. Discuss the three forms of market efficiency? State its implications.

11. What are the basic assumptions of CAPM? Explain the utility and limitations of CAPM.

12. The stock of Alpha company performs well relative to other stocks during recessionary periods. The stock of Beta company, on the other hand, does well during growth periods. Both the stocks are currently selling for ₹50 per share. The rupee return (dividend plus price change) of these stocks for the next year would be as follows:

	Economic Conditions			
	High Growth	Low Growth	Stagnation	Recession
Probability	0.3	0.3	0.2	0.2
Return on Alpha stock	55	50	60	70
Return on Beta stock	75	65	50	40

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Calculate the expected return and standard deviation of:

a) ₹1,000 invested in the equity stock of Alpha.

b) ₹1,000 invested in the equity stock of Beta.

c) ₹500 invested in the equity stock of Alpha and ₹500 in the equity stock of Beta.

d) ₹700 invested in the equity stock of Alpha and ₹300 in the equity of Beta.

13. The following three portfolios provide the particulars given below:

Portfolio	Average Annual return	Standard Deviation	Correlation co-efficient
A	18	27	0.8
B	14	18	0.6
C	15	8	0.9
Market	13	12	-

Risk free rate of interest is 9.

a) Rank these portfolio using Sharpe's and Treynor's methods.

b) Compare both the indices.

SECTION – C

(Compulsory) **(1x10=10)**

14. The rates of return on stock A and market portfolio for 15 periods are given below:

Period	Return on stock A (%)	Return on market portfolio (%)	Period	Return on stock A (%)	Return on market Portfolio (%)
1	22	12	9	-8	1
2	13	14	10	13	12
3	17	13	11	14	-11
4	15	10	12	-15	16
5	14	9	13	25	8
6	18	13	14	9	7
7	16	14	15	-9	10
8	6	7			

What is the beta for stock A?

What is the characteristic line for stock A?

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