

N.B.1. All the questions are compulsory

2. Figures to right indicate full marks

Q.1. A. Fill in the blanks (10 Sentence each with three options Any 8)

8 Marks

1. Public relation professionals often need to ____.
(lie/ multitask/ manipulate)
2. RTI application should be submitted to ____.
(PIO/POI/PEA)
3. In the AIDA formula 'I' stands for _____. (inquiry/ image /interest)
4. Participants in a conference ____ voting rights.
(have /do not have/ may)
5. Employees speak frankly and fearlessly in an _____ interview.
(Grievance/Reprimand/Exit)
6. Individual or Committee report is determined by the number of ____ preparing it.
(persons/ papers/ managers)
7. A consumer redressal letter is drafted like any other ____ letter.
(complaint/ sales /adjustment)
8. The Right to information Act was passed in the year ____.
(2005 /2006/ 2007)
9. A job interview is also known as a ____ interview.
(selection /selector/ segregation)
10. Attending to complaints is known as _____. (claims/adjustment/ reimbursement)

Q.1. B. State whether the following statements are True or False

7 Marks

(10 Sentence each with three options Any 7)

1. In an interview, questioning is more important than listening.
2. The objective of the meeting should be communicated well in advance.
3. Public relations officers must stay away from the media.
4. The time and duration of the meeting should be according to the convenor's convenience alone.
5. The word conference is derived from the Latin word 'confer'.
6. The complainant should be thanked.
7. Language in a report should be very simple.
8. Offering a discount is a bad sales strategy.
9. The introductory paragraph of the sales letter performs a very important function of inducing the customer to action.
10. RTI promotes transparency and accountability in the working of every public authority.

Q.2. A. Define interview. Explain the role of an interviewer & interviewee. (8)

Q.2. B. What is a Conference? Discuss the various ways to ensure the successful organisation of a conference. (7)

OR

Q.2.C. Define Public Relations. List and explain any five methods of promoting External Public Relations in an organisation. (8)

Q.2. D. Define Crisis Management? Explain its types. How can Public Relation Department help in managing crisis situation. (7)

Q.3.A. Your cousin is getting married next month for which you require 50 traditional dresses. Write a letter of inquiry to ManMohan Dresses enquiring about price list & catalogue for purchase. (8)

Q.3 B. Write a letter to Ola cabs complaining about the rash driving and rude behavior of the drivers.(7)

OR

Q.3 C.Draft an investigative report on the staff turnover in German Travels. (8)

Q.3D. Draft notice and agenda for the monthly board meeting of Anita Travels Pvt. Ltd, Mahalaxmi, Mumbai. (7)

Also Draft resolutions for the following:

i) appointment of the Director ii) Resignation of a senior employee

Q.4 A. Write a sales letter to sell home cooked food. (8)

Q.4 B.You recently purchased a Samsung Galaxy 23 Ultra which was found to be defective as the touch panel was not functioning .Write a Letter to the appropriate Consumer Grievance Redressal Forum to get you a refund and a compensation of 50,000 for the mental trauma you suffered at the hands of the dealer. (7)

OR

Q.4 C. You had applied for admission to the University of Mumbai and issuance of your marksheet. Write a letter under the RTI Act seeking reasons behind the denial of admission and delay in mark sheet.(8)

Q.4 D. Q.4 D. Summarize the following passage giving it a suitable title. (7)

The term 'soft skills' refers to a group of skills and personal qualities that present-day employers look for and value in their employees. Soft skills relate to excellent communication skills, both spoken and written, positive personality traits, social skills and personal attitudes. In this sense, soft skills complement hard skills, which have to do the technical requirements of a job. Hence, you may have the right professional qualifications, be academically brilliant and perhaps even have the required work experience, but you will be successful in an organisation only if you know, for example, how to work as part of a team or how to get along with both your senior and junior colleagues. In other words, soft skills are all about how you deal with

people. They are very important in the present-day professional context that requires constant interaction and communication. Thus, it is not surprising that very often, an interviewer talking to two different candidates with equally impressive CVs, decides in favour of the one who seems relaxed, open, friendly and well-adjusted. Of course, neat personal appearance and pleasing personality also makes a positive impression in such situations.

While soft skills are acquired early in life and depend to a great extent on the environment in which you were brought up, they can also be consciously learnt. The process could begin either by asking someone who knows you closely to decide whether you possess the soft skills concerned or through an honest self-appraisal. You can begin by looking at some of the soft skills recommended by behavioural training experts.

In short, soft skills are personality traits that determine a person's interaction with others and the ability to be successful at work. Soft skills complement a person's professional skills and affect his or her performance at work, relationships with colleagues and career prospects. Some important soft skills employers look for in the people they employ are attitude, adaptability, goal setting, motivation, time management, stress management, critical thinking and problem solving, team work and leadership.

Q. 5. Short Notes (out of 5 Any 3)

15 Marks

1. Steps to conduct appraisal interview
2. Ingredients of a group discussion
3. Types of Conferences
4. Activities of the Public Relation Department
5. Advantages of a meeting

XX

NB: (1) All questions are compulsory and carry equal marks
(2) Figures to the right indicate marks

Time: 2.5 hours
75 Marks

Q1) A. Choose the correct option: (Any 8)

(08)

1. NABARD was established in the year _____.
(a) 1982 b) 1956 c) 1955
2. Hypothecation is the mortgage of _____ property for securing loan.
(a) Movable b) Immovable c) Land and Building
3. Banking is essentially a business dealing with _____.
(a) Money b) Electronic c) Goods
4. Marine policy is also called as _____.
(a) Sea policy b) Floating policy c) Valued policy
5. Minimum period of fixed deposit is _____ days.
(a) 120 b) 30 c) 7
6. _____ are also called as fixed deposits and are repayable after the expiry of specified term.
(a) Term deposit b) Demand deposit c) Saving deposit
7. _____ deals with financial impact of risk and uncertainty.
a) Rider b) Risk manager c) Actuary
8. _____ risk refers to risk affecting individual but not to a community.
a) Fundamental b) Dynamic c) Particular
9. Causa Proxima means _____.
a) Periodic cause b) Nearer cause c) Far-off cause
10. The schedule banks are included in schedule
a) April,2000 b) April,2001 c) April,2002

Q1B. Match the following : (ANY 7)

Group A	Group B
1) Current Deposits	a) Foreign Bank
2) Indemnity	b) Demat share account
3) Debit Cards	c) Risk management tool
4) PoS	d) Not to allow profit
5) Standard chartered Bank	e) Additional Risk
6) De-mat	f) Life Insurance Act
7) Rider	g) 1938
8) 1956	h) ATM
9) Risk Financing	i) Time Deposit
10) Insurance Act	j) Point of sale

- Q2. A) What is a bank? What is the need for bank? (08)
B) Explain in brief the main functions of banks. (07)

OR

- C) Distinguish between private and public sector banks. (08)
D) Explain the reasons for regulation of banks. (07)

- Q3. A) Explain the types of bank accounts. (08)
B) Differentiate saving account and current account. (07)

OR

- C) Explain the role and functions of RBI. (08)
D) Define financial inclusion. Explain the scope of Financial inclusion (07)

- Q4. A) What is risk? Explain different types of risk in business. (08)
B) Explain the methods of handling the risk. (07)

OR

- C) What is Insurance? Explain the uses and benefits of Insurance (08)
D) Explain in brief basic Principles of Insurance (07)

- Q5. A) What is Marine Insurance? Explain the types of Marine policy (08)
B) Differentiate between Life insurance and Fire insurance. (07)

OR

- Q5. C) Write Short Notes on: (ANY 3) (15)
1. Current Account
 2. E-Banking.
 3. Plastic cards.
 4. Fire Insurance.
 5. Risk Management.

Semester Examination

Class / Semester: FY-BBI/2

Subject : Business Law.

N.B. 1. All the questions are compulsory

Time: 2 ½ hours

2. Figures to the right indicate full marks

75 Marks

Q.1 Answer the Following

(8)

a. Fill in the blanks (any 8)

[3., buyer, movable, 19, void, 5, consideration, uncrossed, constitute, Apex, valid]

1. Supreme court is also known as _____ court.
2. A Negotiable Instrument are of _____ types..
3. _____ means something in return.
4. Caveat emptor means let the _____ be beware.
5. Right to free dom is given under which Article ____.
6. Cheque can be crossed and _____..
7. Digital signature is _____ in Indian system .
8. the word constitution is derived from _____ term.
9. wrights are of _____ types ..
10. goods means _____.

b. True or False (any 7)

(7)

1. Caveat Emptor means he should not be beware of product..
2. Custom is a source of making law.
3. Apex court is high court .
4. Voluntary transfer of possession from one person to another is called delivery.
5. A negotiable instrument is of 4 types.
6. goods are movable property.
7. minor cannot be agent .
8. E-governance and digital signature are illegal in india.
9. In agency, no consideration is necessary to create a agency.

10. Quasi contract is not a valid contract.

Q.2 Answer the Following :

(A) Explain the concept of law and classify different type of law. **8**

(B) Define Indian legal system and classification of courts in India **7**

OR

(A) Define the salient features of constitution of India **8**

(B) Different types of writs under constitution of India? **7**

Q.3 Answer the following :

(A) Explain contract and essential of valid contract under contract act **8**

(B) Explain in detail contract of bailment and duties of bailee. **7**

OR

(A) Explain the free consent under Indian Contract Act 1872. **8**

(B) Distinguish between indemnity and guarantee. **7**

Q.4 Answer the following :

(A) Explain promissory note and its features in detail **8**

(B) Explain bill of exchange and its features in detail **7**

OR

(A) Who is unpaid seller and rights of unpaid seller? **8**

(B) Explain the breach of contract and type of breach of contract **7**

Q.5 Answer the following :

(A) Explain the concept of E – governance in brief? **8**

(B) Explain the features of negotiable instruments in brief **7**

OR

Q.6 Short Notes :(Any 3) **15**

1. Foreign instrument

2. Hire purchase.

3. Writ of mandamus

4. Consideration **5.**
Principle of natural justice

N.B. 1. All the questions are compulsory.

2. Figures to the right indicate full marks.

3. Suitable working notes will be the part of your answer.

Q.1. A. Choose correct option from the following (Any 8)

(08)

1. The premium payable on redemption can be provided out of _____
 (a) General reserve (b) Capital redemption reserve
 (c) Debentures (d) Loan from bank
2. Capital redemption reserve can be utilised for _____
 (a) paying dividend (b) issue of bonus shares
 (c) set-off against losses (d) write off fictitious balance
3. Average profit is 19,167 and normal profit is ₹ 10,000. The super profit is _____
 (a) 9,167 (b) 29,167
 (c) 19,167 (d) 10,000
4. Net asset value is also called as _____
 (a) Asset backing value (a) Share Capital
 (c) Liquidation value (c) Current Liabilities
5. Yield value depends on _____
 (a) Future maintainable profit (b) Paid up equity capital
 (c) Normal rate of return (d) All of the above
6. The amount remaining unpaid to preference shareholders is included in Balance Sheet as.
 (a) Share Capital (c) Fixed Assets
 (b) Current Assets (d) Current Liabilities
7. Super profit is _____
 (a) excess of average profit over normal profit (c) average profit earned by similar companies
 (b) extra profit earned (d) none of the above
8. Securities premium may be used for _____
 (a) Payment of dividend (b) Issue of fully paid bonus shares
 (c) Issue of partly paid bonus shares (d) None of the above
9. Interest on sinking fund investment is credited to _____.
 (a) Sinking Fund account (b) Profit and loss account
 (c) Profit and Loss Appropriation (d) None of the above
10. Maximum buy-back in a year can be _____.
 (a) 10% (b) 20%
 (c) 25% (d) 30%

Q.1. B. State true or false for the following (Any 7)

(07)

1. The debentures can be redeemed at a discount.
2. Premium on redemption can be provided out of Profit & Loss Alc.
3. The shares must be cancelled and destroyed after buy-back.
4. Goodwill may be purchased or non-purchased.
5. Intrinsic value of also known as Net Assets Value.
6. Investments are non-trading assets.
7. Buy back must be as per RBI guidelines.
8. Preference shareholders have voting rights.
9. Capital Reserve is a divisible profit.
10. The debentures can be redeemed whenever company desires.

Q.2 A. Ascertain the value of Goodwill of Progressive Co. Ltd. carrying on business as retail traders from the following information: (15)

Balance Sheet as on 31st December, 2013

Liabilities	₹	Assets	₹
Paid-up Capital 2,500 Shares of 100 each	2,50,000	Goodwill	25,000
Profit & Loss Account	56,650	Land & Buildings	1,10,000
Bank Overdraft	58,350	Plant & Machinery	1,00,000
Sundry Creditors	90,500	Stock	1,50,000
Provision for taxation	19,500	Debtors	90,000
	4,75,000		4,75,000

The company commenced operations in 2009 with a paid-up capital of 2.50,000. The Profits earned before providing for taxation have been as follows:

Year	₹
2009	62,000
2010	64,000
2011	71,000
2012	78,000
2013	85,000

Income-tax may be taken at 50%.

Average Dividend paid by the company is at 12 1/2% which is taken as a reasonable return expected on capital invested in the business. Goodwill is to be calculated with reference to capitalization of Maintainable Profits Method.

OR

Q. 2 B. Ascertain the value of Goodwill of Progressive Co. Ltd. carrying on business as retail traders from the following information: (15)

Balance Sheet as on 31st December, 2019

Liabilities	₹	Assets	₹
10,000 Shares of 10 each fully paid	1,00,000	Land and Building	1,20,000
Profit and Loss A/c	50,000	Plant and Machinery	80,000
Debentures	50,000	Furniture and Fittings	15,000
Trade creditors	25,000	Stock	
Provision for taxation	5,000	Book debts	20,000
Proposed Dividend	20,000	Cash and bank	10,000
			5,000
	2,50,000		2,50,000

The net profits of the company after charging depreciation and taxes for the years ending 31st March were as follows:

- 2013- ₹47,000;
- 2014 - ₹49,000;
- 2015- ₹50,000;
- 2016 - ₹52,000 and
- 2017 - ₹59,000
- On 31st March, 2017, assets were valued as under:
- Land and Building - ₹1,80,000, Plant and Machinery - ₹1,10,000, Furniture and Fittings - ₹10,000.
- 12% return on investment can be considered fair for the business.

You are required to find value of goodwill by:

- Five years purchase of super profits.
- Capitalization of super profits.

Q.3.A. Following is the Balance Sheet of Kavya Ltd. (a non-listed company) as on 31-3-2012:

Liabilities	₹	Assets	₹
Shares Capital :		Fixed Assets	10,20,000
80,000 Equity Shares of ₹10 each	8,00,000	Bank Balance	6,20,000
4,000 - Preference Shares Of ₹ 100 each	4,00,000		
Profit and Loss Account	80,000		
Debentures	1,60,000		
Creditors	2,00,000		
Total	16,40,000	Total	16,40,000

The company wants to buy back 20% of its equity capital at 10% premium. Not having sufficient profits to buy back, the company issued 1,200 Preference Shares of ₹100 each at 10% premium payable as ₹20 on application and the balance on allotment. These shares were duly taken up and company purchased the equity shares immediately, sufficient profits were used to supplement the new issue.

OR

Q.3.B. Following information is available from the books of a Company.

(15)

	₹
1,20,000 equity shares of 10/- each	1,20,000
Security premium	70,000
General Reserves	3,50,000

The company decided to buyback 25% of the equity share capital at 12/- per share. Pass journal entries without narration.

Q.4.A. Bharat Ltd. whose issued share capital on 31-12-2017, consisted of 12,000 8% redeemable preference shares equity shares of ₹100 each, ₹80 paid up, decided to redeem preference shares at a premium of ₹10 per share. The company's balance sheet as at 31-12-2017, showed a general reserve of ₹18,00,000 and a capital reserve of ₹1,70,000. The redemption was affected partly out of profits and partly out of the proceeds of new issue of 6,000 7.5% cumulative preference share of ₹100 each at a premium of ₹25 per share.

You are required to pass necessary journal entries.

(15)

OR

Q.4.B. Noida Toll Bridge Corporation Ltd. has outstanding 50,000, 8% debentures of ₹100 each issued in 2005 due for redemption on 31ST of March 2015. It was decided to invest the required amount in investment earning 10% p.a. interest on April 30th, 2014. How much amount of Debenture Redemption Reserve should be credited before the redemption of debentures begin. Record necessary Journal entries regarding redemption of debentures. (15)

Q. 5 A. Explain different types of Debentures?

(08)

Q.5. B. Distinguish between Redemption of Shares and Buy-back of Shares.

(07)

OR

Q.5.C. Write short notes on: (Any Three)

(15)

- Sources of Buy-back
- Bonus Shares
- Sinking Fund Method
- Yield Value Method of Shares Valuation
- Super-Profit Method of Valuation of Goodwill

NB: (a) All questions are compulsory and carry equal marks
(b) Figures to the right indicate marks

Time: 2.5 Hours
75 Marks

Q1. A. Choose the correct option: (Any 8)

(08)

1. _____ arises when goal directed behaviour is blocked.
(a) Stress b) Frustration c) Anger
2. _____ needs lie at the highest level of hierarchy of Maslow's Need Hierarchy Theory.
(a) Esteem b) Self- Actualization c) Social
3. _____ helps to develop the power of concentration
(a) Meditation b) Physical exercise c) Social support
4. The _____ is a layer of gases surrounding our planet.
(a) Hydrosphere b) Atmosphere c) Biosphere
5. Human rights have _____ application.
(a) Universal b) Limited c) Maximum
6. As per the new industrial policy, 1991, licensing is required only in _____ industries.
(a) Five b) Seven c) Six
7. Acid rain is one of the harmful effects of _____ pollution.
(a) Water b) Soil c) Air
8. Article _____ of the constitution abolished the practice of untouchability.
(a) 15 b) 16 c) 17
9. In the state of _____ the number of farmer's suicide is the highest.
(a) Maharashtra b) Orissa c) Bihar
10. Win-Win is the outcome of _____ strategy.
(a) Smoothing b) Compromising c) Collaborating

Q1.B. State whether True or False: (Any 7)

(07)

1. Atmosphere regulates the global temperature.
2. Meditation is an effective method of relieving stress.
3. Immigration means moving into a new country.

4. Eustress are also known as negative stress.
5. The UDHR consist of 28 Articles.
6. Lose-lose strategy eliminates the conflict in spite of the negative outcomes faced by both the parties.
7. Dereservation of public sector has resulted in efficiency in firms.
8. Maslow`s theory is on Human Motivation.
9. The fundamental rights are absolute.
10. The share of employment in the agriculture sector has increased over the years.

Q 2. A. Explain the concept of migration and its types and causes. (15)

OR

Q 2. B. Examine the impact of globalization on agrarian sector. (15)

Q 3. A. Explain the concept of human rights and explain its characteristics (15)

OR

Q3. B. What are fundamental rights? Explain its significance. (15)

Q4. A. What is environmental degradation? What are its causes? (15)

OR

Q4. B. Explain the concept of sustainable development. Discuss the guidelines of sustainable development. (15)

Q 5. A. Enumerate on strategies for coping with stress (15)

OR

Q5. B. Write Short Notes on: (Any 3) (15)

1. Impact of Environmental Degradation
2. Role of IT in communication
3. Types of Aggression.
4. Water Pollution.
5. Liberalisation

External Exam

Class: FYBBI II

MARKS:75

SUBJECT: ORG. BEHAVIOUR

TIME:2.1/2

Q1 {1} MATCH THE FOLLOWING ANY {8}

{8MK}

A

B

1.MASLOW

A. Computer Technology

2.MEGREGOR

B. Special Knowledge

3.GMTRIMSIC MOTIVATION

C. Big Hidden Area

4.MULTIPLE INTRLLIGENCE

D. Way Of Settle

5.VIRTUAL TEAMS

E. Depersonalization

6.TECHNICAL SKILL

F. Stressed

7.GNTEVIEWER

G. Prof. Gardner

8.NEGOTIATIONS

H. Centernal Motivation

9.BURN OUT

I. Theory X

10.TYPE [A] PERSONALITY

J. Need Hierarchy

{B} STATE THE FOLLOWING: ARE TRUE/FALSE ANY {7}

{7MK}

1. OB In INTERDISIPLINARY IN NATURE

2. OB HAS A SYSTEM ORIENTATION

3. TQM HAS BURROWED IDEA'S FROM PHYSICS

4. THERE IS NO PROBLEM OF WORK IN LIFE BALANCE IN ORGANATION

5. ADVANCEMENT APPORTUNITY IS AN HYGINE FACTOR

6. GROUP SIZE INFLUENCE BEHAVIOUR

7. ALL GROUP MEMBER'S PLAY A ROLE

8. A SPECIFIC GOAL IS A CLEARLY DEFINE GOAL

9. EFFECTIVE GOAL/ARE MEASURABLE GOAL

10. STRESS WITHIN LIMIT IS BENEFICIAL

Q2.

- (A) STATE THE GOALS OF ORGANISATIONAL BEHAVIOUR ? (08MK)
(B) WHAT IS A OB EXPLAIN THE DIFFERENT LEVEL OF PEOPLE BEHAVIOUR ?

OR (07 MK)

- (C) EXPLAIN THE DIFFERENT SOURCES WHO HAVE CONTRIBUTED TO OB? (08 MK)
(D) DEFINE OB & EXPLAIN THE FOUR MODELS IN BRIEF? (07 MK)

Q3.

- (A) DEFINE MOTIVATION AND EXPLAIN HIE MODELOF MOTIVATION ? (08 MK)
(B) STSTE THE IMPORTANCE PRAPERTIES OF GROUPS ? (07 MK)

OR

- (C) DEFINE OB AND EXPLAIN THE GOALS OF OB ? (08MK)
(D) EXPLAIN TO KNOW ABOUT HUMAN BEHAVIOUR ? (07MK)

Q4.

- (A) EXPLAIN THE MAJOR AREA OF THE INDIVIDUAL DEFFERENCE ? (08MK)
(B) EXPLAIN THE GARDENER'S THEORY OF MUNTIPLE INTELLIGENCE? (07MK)

OR

- (C) WHAT IS GROUP EXPLAIN THE TYPE OF GROUP? (08MK)
(D) EXPLAIN THE PRAPERTICL OF A GROUP? (07MK)

Q5.

- (A) DEFINE LEADERSHIP & EXPLAIN THE FEATURE & FUNCTION'S? (08MK)
(B) DEFINE STRESS & EXPLAIN IT'S EFFECTS (07MK)

OR

- (C) WRITE SHORT NOTE (ANY 3) (15MK)
1. TIME MANAGEMENT
2. ORGANISTATIONAL DEVELOPMENT
3. TQM
4. CAUSE OF CONFLICT'S
5. FUNCTION OF ORG CULTURE

EXTERNALS

Date :

FYBBI / Semester - II / Subject Code:

Subject : Quantitative Methods - II

- N.B. 1. All the questions are compulsory
2. Figures to the right indicate full marks
3. Use of non-programmable calculators allowed
4. Use graphs wherever necessary

Time: 2.5 Hours
[75 Marks]**Q.1 (A) Fill in the blanks with the correct alternative: (any 8) (8)**

1. If we reject H_0 when H_0 is actually true, then we are making _____ error.
(No, Type II, Type I)
2. In the process of testing a statistician starts with a hypothesis called _____.
(Null, Supplementary, Alternative)
3. Graphical method can be used to solve a linear programming problem when number of variables is _____.
(Four, Two, Three)
4. The conditions in a LPP of the type $x_1, x_2 \geq 0$ are called _____.
(Non-negativity conditions, Negative conditions, Positivity conditions)
5. If A is a matrix of order $m \times n$, then it contains _____.
(n rows, m rows, mn rows)
6. A matrix of order n , having all non-diagonal elements zero is called _____.
(Diagonal matrix, Scalar matrix, Square matrix)
7. If $x : y = 2 : 3$ and $y : z = 4 : 3$, then $x : y : z$ is _____.
(7 : 11 : 10, 8 : 11 : 9, 8 : 12 : 9)
8. The triplicate ratio of 1 : 3 is _____.
(1 : 27, 1 : 9, 1 : 3)
9. The total risk of return R is measured using _____.
(expected value, standard deviation, variance)
10. Net Domestic Product (NDP) is _____.
(NNP - depreciation, GNP - depreciation, GDP - depreciation)

(B) Match the column: (any 7)

(7)

A	B
1. Rejecting H_0 when it is false	a. Transpose matrix
2. In two tailed test, reject H_0 at 5% level of significance if	b. No error
3. Full form of LPP is	c. 3 : 2
4. A matrix obtained by interchanging rows and columns of given matrix	d. Constraints
5. The conditions put on the variables in a linear programming problem are	e. 4 : 9
6. A square matrix with all elements zero	f. $ Z > 1.96$
7. The inverse ratio of 2 : 3	g. Portfolio
8. Duplicate ratio of 2 : 3	h. Linear Programming Problem
9. A combination of a group of securities	i. High
10. If the securities within the portfolio have high degree of correlation, then the risk of the portfolio is	j. Null matrix

.....
Q.2 A) Solve the following LPP graphically.

(8)

$$\text{Maximize } z = 5x + 3y$$

Subject to:

$$2x + 3y \leq 12$$

$$3x + 9y \leq 27$$

$$\text{where, } x \geq 0 \text{ \& } y \geq 0$$

Q.2 B) Is it likely that a sample of size 300 whose mean is 12, is a random sample from large population with mean 12.8 and standard deviation 5.2 ?

Use 5% level of significance.

(7)

OR

Q.2 C) Use simplex method to solve:

(10)

$$\text{Maximize } z = 4x + 7y$$

Subject to:

$$x + y \leq 9$$

$$3x + 2y \leq 23$$

$$\text{where, } x \geq 0 \text{ \& } y \geq 0$$

Q.2 D) A company manufactures two products X and Y and each unit of product has to go through 3 machines A, B, C.

Machine A can be operated for a maximum of 3000 minutes, and it takes 10 minutes for 1 unit of products X and 5 minutes for 1 unit of product Y.

Machine B can be operated for a maximum of 6000 minutes and it takes 5 minutes for 1 unit of product X and 10 minutes for 1 unit of product Y.

Machine C can be operated for a maximum of 500 minutes and it takes 1 minute for 1 unit of product X and 1 minute for 1 unit of product Y.

Profit per unit of product X is ₹10 and that per unit of product Y is ₹15.

Form this L.P. problem to maximize the profit. (5)

Q.3 A) Solve the following equations using Cramer's rule. (8)

$$7x + 3y + z = 11$$

$$2x - y + 3z = 4$$

$$x + y + z = 3$$

Q.3 B) if $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & -2 & 1 \\ 4 & 2 & 1 \end{bmatrix}$, then find A^{-1} . (7)

OR

Q.3 C) Solve the equations simultaneously using matrix inversion method (8)

$$2x + y - z = 0$$

$$x + y + z = 9$$

$$2x + 5y + 7z = 52$$

Q.3 D) If $A = \begin{bmatrix} 1 & 4 & 3 \\ 2 & -5 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 3 & 1 \\ -1 & 0 & 2 \end{bmatrix}$ & $C = \begin{bmatrix} 2 & 3 & 5 \\ 4 & 1 & 2 \end{bmatrix}$. (7)

Prove that : $(2A + 3B) - 4C = 2A + (3B - 4C)$.

Q.4 A) The following data provides the likely returns of shares of 'Joy Ltd.' and 'Tom Ltd.' in different economic conditions. (3)

Economic Conditions	Probability (p)	Returns on 'Joy Ltd.' (R _j)	Returns on 'Tom Ltd.' (R _t)
E ₁	0.4	121	110
E ₂	0.2	110	141
E ₃	0.1	125	120
E ₄	0.3	130	135

Calculate the expected returns. Also compare the total risks and check which company is a better option for investment ? Why ?

Q.4 B) Given below is the probability distribution of return of two stocks. (7)

Find: (i) Expected return from X.

(ii) Expected return from Y.

- (iii) Total risk from X.
- (iv) Total risk from Y.
- (v) Covariance of return from X and Y.

Economic Conditions	Probability (p)	Returns of X in % (R _X)	Returns of Y in % (R _Y)
E ₁	0.4	30	40
E ₂	0.5	25	30
E ₃	0.1	20	15

OR

Q.4 C) From the following information, calculate beta (β) of the security and comment on the result. (10)

Return on Security in % (R _S)	-3	5	10	6
Return on Market Portfolio in % (R _M)	-1	6	3	7

Q.4 D) The following table gives the return of two shares A & B under four states of economy with corresponding probabilities (p). Find and compare the expected return of both shares A and B. (5)

States of Economy	Probability (p)	Returns of Share A (R _A)	Returns of Share B (R _B)
Depression	0.2	-5.2	-7.4
Recovery	0.3	-1.8	-3.2
Prosperity	0.4	2.7	4.3
Recession	0.1	6.4	8.4

Q.5 A) A, B, C, D and E are five numbers such that, (8)

$$A : B = 3 : 4, B : C = 8 : 11, C : D = 33 : 40, D : E = 20 : 33.$$

Find the ratios (i) A : D (ii) B : E (iii) A : B : C (iv) A : B : C : D (v) A : B : C : D : E

Q.5 B) Monthly salaries of Mr. Karan and Mr. Shukla are in the ratio 7 : 8 and their monthly expenditures are in the ratio 6 : 7. If both of them save ₹500 per month, find their monthly salaries. (7)

OR

Q.5 C) Write Short notes on: (Any 3 out of 5) (15)

- a. What do you mean by variation? Explain direct and indirect variation with examples.
- b. Discuss different types of matrices.
- c. Explain Type I and Type II error in Testing of Hypothesis
- d. Explain different types of ratios.
- e. Discuss the terms Null Hypothesis and Alternative Hypothesis with examples.
