Paper / Subject Code :   / Introduction to Financial Accounts

Time: 2½ Hours	Marks : 75

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

2. Each question has internal options.

3. Figures to right indicate full marks.

4. Working notes are part of your answer.

Q.1 (a) State whether the following statements are True or False (Any 8)   [8]

1. Wrong balancing of an account will affect the Trial Balance.

2. Under fixed installment method, depreciation amount remains constant.

3. Errors can be removed by Rectification.

4. Going Concern means Continuation of business.

5. Credit transactions are also recorded in Cash book.

6. Carriage is Real Account.

7. In credit transaction Party's name is always given.

8. Ledger is the Prime books of Accounts.

9. Outstanding Expense is a Liability.

10. Expenses are recorded in Real Account.

Q.1 (b) Match the following (Any 7)   [7]

Column A	Column B
1. Machinery A/c	a) Insurance Contracts
2. Journal	b) Depreciation Accounting
3. IFRS	c) Debit Note no.
4. Purchase Return book	d) A book of daily records
5. AS – 6	e) Capital expenditure
6. Repairs to Plant	f) Real A/c
7. Depreciation	g) Recording same transaction two times
8. Error of Duplication	h) Revenue expenditure
	i) Fixed asset

Q.2 (a) Journalise the following transactions in the books of Shreya for January 2019.   [8]

Jan. 1	Started business with cash Rs. 60,000
Jan. 9	Paid rent by cheque Rs. 7,000
Jan. 18	Sold goods worth Rs. 40,000 to Yash @ 10% T.D. and 5% C.D. and received cash immediately.
Jan. 21	Deposited Rs. 9,000 in State Bank of India
Jan. 27	Cheque received form Mr. Jay of Rs. 10,000 deposited into the bank but dishonoured.
Jan. 30	Paid Insurance Premium Rs. 500.

Q.2 (b) You are required to prepare the Furniture A/c in the ledger book of Kestrel Ltd. on the basis of the following information for 2018-19.

1st April	Opening Balance Rs. 10,000
10th May	Furniture purchased for Cross Ltd. on credit Rs. 25,000
17th July	Furniture purchased from Crow Ltd. on cash basis Rs. 70,000
12th Oct.	Old Furniture sold for cash (Cost 18,000) for Rs. 14,000
15th Nov.	Furniture withdrawn from business Rs. 5,000
16th Jan.	Furniture brought by owner Rs. 8,000. [7]

OR

Q.2 Record the following transactions in a Double Column Cash Book with Cash and Bank columns and balance the Book on 30th June 2019. Post the entries in Ledger.

2019			**Rs.**
June	1	Cash in Hand	550
		Cash at bank	12,480
	3	Paid salary to Staff by cheques	4,200
	5	Interest paid by Bank on Bank Balance	100
	6	Received from Gora Cash Rs. 60 and a cheque for Rs. 300 and the cheque Was sent to Bank.	
	8	Withdrawn cash from Bank for office use	4,500
	12	Purchased Furniture in cash	3,800
	16	Paid Pal & Co. by cheque	2,300
	23	The Proprietor withdrew cash from office for his personal use	300
	27	Sold Goods to Mahabir for cash	3,400
	30	Deposited office cash into Bank	2,500

Q.3(a) State which of the following expenses/receipts are capital and revenue with reason.(any 4)

1. Wages paid to workers for setting up new machinery.
2. Office rent paid in advance for three years.
3. Term Loan from bank.
4. Income from sale of goods.
5. Recovery of Rs. 5,000 as bad debts.   [8]

Q.3 (b) Prepare a Trial Balance in Journal form from the following list of balances extracted as on 31-3-14. [7]

Particulars	Rs.	Particulars	Rs.
Purchases	21,665	Travelling Expenses	550
Machinery	15,000	Building	25,000
Capital	50,000	Drawings	4,800
Debtors	12,700	Sundry Creditors	4,255
Purchase Returns	1,333	Bank Balance	8,000
Salaries	1,350	Discount Received	1,600
Loans Payable	1,360	Carriage	448
Wages	450	Insurance	420
Bank Loan	1,800	Office Expenses	790
Cash	820	Commission Received	2,745
Furniture	2,500	Opening Stock	3,600
Sales	35,000		

OR

Q.3 From the following particulars prepare Bank Reconciliation Statement as on 30th June 2018.

1. Balance as per cash book Rs. 70,000.

2. Bank directly paid Rent of Rs. 350.

3. Bank had directly collected, under standing instructions Rs. 500 being dividend on shares.

4. Debtor directly deposited cash into bank Rs. 6,000.

5. A cheque deposited amounting to Rs. 2,000 dishonored. Bank has debited the amount of the cheque and Rs. 15 for its charges.

6. Bank has credited Rs. 350 for interest and debited Rs. 450 for bank charges in the pass book.

7. Bank has credited interest on investment Rs. 150 which is not recorded in cash book.

8. Cheque deposited but not credited in the pass book Rs. 3,000.

9. Of the cheques of Rs. 8,500 sent for collection, cheques worth Rs. 3,500 were not credited in the pass book. [15]

Q.4 XYZ Company purchased on 1st April, 2017 Machinery for Rs. 3,80,000 and spent Rs. 20,000 on its installation. Another Machine was purchased on 1st July 2017 for Rs.1,00,000. After having used it for three years the machine purchased on 1st April was

sold for Rs. 2,00,000. Depreciation is to be provided every year at the rate of 15% per annum on the Fixed In stallment Method.

Pass the necessary journal entries, prepare Machinery Account and Depreciation Account for three years ends on 31st March every year. [15]

OR

Q. 4 Trial Balance of Mahendra Ltd. as on 31-3-18 is as follows. [15]

Particulars	Debit Rs.	Credit Rs.
Opening Stock:		
- Raw Material	2,50,000	
- Work In Progress	80,000	
- Finished Goods	2,20,000	
Purchases	2,15,000	
Building'	1,50,000	
Plant and Machinery	3,50,000	
Furniture	40,000	
Trade Mark	30,000	
Wages	83,000	
Factory Wages	83,000	
Factory Taxes	4,000	
Power	9,000	
Factory Insurance	5,000	
Printing and Stationery	5,200	
Bank Charges	2,500	
Travelling Expenses	10,000	
Discount	3,300	
Sales Return	11,000	
Advertisement	5,500	
Sales	-	7,80,000
Capital	-	8,50,000
Creditors	-	52,000
Debtors	82,500	
Discount	-	2,500
Miscellaneous Expenses	5,500	
Bills Payable	-	34,000
Bills Receivable	16,000	
Bank Account	98,000	
Cash in Hand	9,000	
Salary to Office Staff	11,000	
Office Rent	10,500	
Carriage Inwards	2,500	
	17,18,500	17,18,500

Adjustments :

1. Closing Stock :

Raw Material	85,000
Working Progress	30,000
Finished Goods	2,05,000

2. Factory Taxes Prepaid   2,000
3. Depreciation :
    Furniture - 10%
    Plant and Machinery – 15%
    Trade Mark – 20%
    Building – 5%

Prepare Manufacturing, Trading and Profit and Loss Account for the financial year 2017-18 and Balance Sheet as on 31-3-18.

Q. 5 (a) Advantages of Computerized Accounting System. |8|

    (b) Objectives of Book keeping. |7|

OR

Q.5 : Write short notes on : **(Any 3)** |15|

    (a) IFRS

    (b) Reducing Balance Method of Depreciation

    (c) Need for Book keeping

    (d) Revenue Expenditure v/s Capital Expenditure

    (e) AS- 1

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

Duration – 2 ½ hours   Marks – 75

Note: 1) All questions are compulsory and carry equal marks
        2) Each sub question carries marks as indicated towards the right

Q.1.A) State whether following statements are True of False (Any 8)   (08)
a) Resistance to change is a semantic barrier to communication.
b) Horizontal Communication takes place across the organizational hierarchy
c) Date is an optional part of business letters
d) Listening is an important part of communication
e) Facebook is an e-learning tool
f) Written communication can be stored for future reference
g) Twitter is a popular channel of mass communication
h) Feedback is insignificant in the process of communication
i) The process of communication ends with decoding
j) Application letters are always written in Full block layout

Q.1.B) Match the columns (Any 7)   (07)

a)	Signature	i.	Ethics
b)	Proxemics	ii.	Upward communication
c)	Suggestion	iii.	Encoding
d)	Sender	iv.	Obligatory part
e)	Personal integrity	v.	Study of space
f)	Grapevine	vi.	Paralanguage
g)	Letters	vii.	Informal
h)	Signs	viii.	Layout
i)	Pitch	ix.	Legal
j)	Full block	x.	Nonverbal

Q.2.A) Define and Illustrate the process of communication   (08)
Q.2.B) Discuss the advantages of written communication   (07)
                              OR
Q.2.A) What are language barriers in communication? How to overcome them?   (08)
Q.2.B) Discuss the significance of body language in communication   (07)

Q.3.A) Define listening. Discuss the different types of listening   (08)
Q.3.B) Discuss advantages of social media in communication   (07)
                              OR
Q.3.A) Discuss Business Ethics with reference to corporate social responsibility   (08)
Q.3.B) Discuss the negative impacts of any one source of mass communication   (07)

Q.4.A) Draft an application letter in response to an advertisement for a teachers post. Use Full
block layout   (08)
Q.4.B) Assuming your selection as a teacher with reference to the above application draft an
acceptance letter for the same. Use modified block layout   (07)
                              OR
Q.4.A) You plan to relocate to another city. Draft a resignation letter from your current
organization. Use full block layout   (08)
Q.4.B) Discuss the various parts of a typical Business letter .   (07)

Q.5. Write short notes (any three)   (15)
a) IPR
b) Signs and symbols
c) Grapevine communication
d) Para language
e) Full Block layout

Business Law

Time : 2 ½ hours	FY-BMS Sem-I	20/11/19	Total Marks : 75

NB.:   1) All questions are compulsory.
           2) Each question has internal option.
           3) Figures to right indicates full marks.
           4)Working notes are part of your answer.

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1.   **A. Fill in the blanks (any 8):**   (8)

2. An agreement _____ by law is a contract.
3. Misrepresentation means making a _____ statement.
4. In case of conflict between MOA and AOA, _____ prevails.
5. A patent is granted for _____ years.
6. Offer + Acceptance = _____.
7. The person making the offer is called _____.
8. Something in return is called _____.
9. Age limit for making contract is _____.
10. A negotiable instrument has to be in _____.
11. Design is granted for _____ years.

B. True or False (Any Seven):   (7)

1. A person with unsound mind can never enter into a contract.
2. A Negotiable Instrument is always transferable.
3. There are 8 clauses in Memorandum of Association.
4. The Sale of Goods Act is of 1923.
5. Intellectual Property Rights grants ownership rights.
6. Cheque is a Bill of Exchange.
7. Unascertained goods are called specific goods.
8. Repudiation of a contract means to cancel the contract.
9. Resale is one of the remedies of an unpaid seller.
10. Copy of the minutes must be furnished within 14 days of requisition.

2. (1) Define Contract. What are the essentials of a valid contract?   (8)
    (2) Explain implied conditions and warranties.   (7)
                                    OR
    (1) Define Consideration. What are the rules for consideration?   (8)
    (2) State the difference between Sale and Agreement to sell.   (7)

3. (1) Define Cheque. What are the characteristics of a Cheque?   (8)
    (2) Explain the objects of Consumer Protection Act, 1986.   (7)
                                    OR
    (1) Discuss the essential characteristics of a Promissory Note.   (8)
    (2) Explain the different modes of Discharge of a contract.   (7)

4. (1) Explain the different kinds of Meetings.   (8)
    (2) Define Company. What are the features of a Company?   (7)
                                    OR
    (1) What are the different kinds of Company?   (8)
    (2) What is Memorandum of Association? Explain the different clauses of MOA.   (7)

5. (a) What is Trade Mark? Explain the functions of Trade Mark.   (8)

    (b) Explain Patent in brief as per Intellectual Property Rights ?   (7)

                                    OR

5.   Write short notes on : (Any Three)   (15)

        a) Doctrine of Indoor Management
        b) Copyright
        c) Articles of Association
        d) Prospectus
        e) Dishonour of cheque under section 138 of Negotiable Instrument.

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

2. Each question has internal options.

3. Figures to right indicate full marks.

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1. **A. State whether the following statements are True or False (Any 7)** (07)

1. Type B people are highly stressed.
2. White Hat is an Information hat.
3. Teams usually have greater autonomy than groups.
4. Result orientation is the degree to which the management takes into the consideration the effect a decision will have on its people.
5. Personality comes from heredity and not environment.
6. Two factor theory was proposed by Henry Minzberg.
7. There is no clear outcome in compromising strategy.
8. Interest group is a formal group.
9. Planning is a continuous and a never ending process.
10. Intrapersonal Conflict means Conflict between two People.

1.B Match the Following. (Any 8) (08)

1.Sabbaticals	a. Lower level management
2. Technical skills	b. Food
3. Conditioned stimuli	c. Assessment of ability to think and reason
4. Unconditioned stimuli	d. Bell
5. IQ	e. Manipulating the situation
6.Power plays	f. McGregor
7. Negotiation	g. Behaviour modification Theory
8.Theory X & Theory Y	h. Ways to settle a conflict
9.Skinner	i. Depersonalization
10. Burnout	j. Reduces stress

2. A) Explain the Role of Environment in building personality. (08)
   B) Define Attitude. Explain the various errors in judgement. (07)
   OR
   C) Determine the various managerial skills a manager needs to processes (07)
   D) How does personality impact the behaviour of people in an organisation? (08)

3. A) Explain the Difference between Teams and Groups. (07)
   B) Define Power. Explain the various types of Power. (08)
   OR
   C) What is conflict? Explain the Conflict Model in detail. (07)
   D) What are the causes of Political Behaviour? (08)

4. A) Explain the characteristics of Organisation Culture. (07)
   B) What are the various forces of change? (08)
   OR
   C) What are the various reasons of resistance to change? (07)
   D) Explain Theory X & Theory Y and 2 factor theory in detail. (08)

5. A) Explain the process of Organisational Development (07)
   B) What the major ways of overcoming Stress? (08)
   OR
   Write Short Notes on (Any 3) (15)
   1. Levels of Conflict
   2. Stress
   3. ERG Theory
   4. Classical Conditioning
   5. Functions of Manager

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[Duration: 2 1/2 Hours]   FY- BMS Sem-I   Marks:- 75

NB (1) All questions are compulsory   (2) Figures to the right indicate marks
Q.1) A) Choose the correct alternative (Any 8)   [08]

1) The traditional Hindu Society was divided into _____ Varnas.
a)Three   b)four   c)six

2) India is the _____ largest country by area in the world.
a)fourth   b)seventh   c)tenth

3) _____ refers to the attachment towards ones own region.
a) Regionalism   b) Linguism   c)Communalism

4) The Constitution of India came into effect on _____ 1950.
a) 26th November   b) 26th December   c)26th January

5) _____ water dispute involves the states of Karnataka and Tamil Nadu.
a) Krishna b)Cauvery c)Godavari

6) Caste system is a form of _____ stratification.
a) economic   b)social   c)political

7)The word Disparity derived from _____ word in "dispar" which means unequal.
a) French   b) Greek   c) Latin

8) _____ is the main reason for female foeticide.
a)preference of male child   b)unemployment   c)globalization

9) _____is a form of social violence against women.
a) eve teasing   b)abduction c)dowry harassment

10)_____ state has the highest literacy rate in India
a) Haryana   b) Assam   c)Kerela

Q.1)B State whether the following statement are True or False (Any 7)   [07]
1)Glaucoma can be detected during pregnancy.
2) Communalism is opposed to secularism
3)India has a uniform civil code
4)The constitution of India confers single citizenship

5)English is the secondary official language of Indian Union
6) Maharashtra was the first state to be formed on linguistic basis.
7) There is 100% political participation of women in India
8) Fundamental rights are justiciable in nature
9) Discrimination based on religion is unconstitutional.
10) 'Sons of the Soil' demand is an example of communalism.

Q.2) A) Explain the causes and consequences of declining gender ratio in India   [08]
Q.2)B)Explain Linguistic Diversity.   [07]

OR

Q2)C) Comment on the problems of persons with disabilities in India.
[08]Q.2)D)Explain rural characteristics in detail.
[07]

Q.3)A) Explain caste system with its features.   [08]
Q.3)B)Explain the conflicts arising through communalism with its causes and measures.
[07]

OR

Q.3)C) Explain conflicts arising through Regionalism and its types.[08]
Q.3)D) Explain Conflicts arising through Linguism with its causes and measures.[07]

Q.4)A)Write about peace and Communal Harmony in detail.   [08]
Q.4)B) Discuss the salient features of the Indian Constitution.   [07]

OR

Q.4)C) "The Preamble reflects the ideal and philosophy of Indian Constitution.   [08]
Q.4)D)Explain all the eleven fundamental duties in detail.   [07]

Q5.) A) Explain about Women trafficking with its causes.
[08]Q5.) B)Explain the meaning of Substance use with its causes and risks.
[07]

OR

Q5. Write Short Notes on (Any three)   [15]
    1) Challenges to Womens Participation in Politics
    2) Inequalities against people with physical disabilities.
    3) India as a muti religious nation.
    4) Urban characteristics of Indian Society.
    5) Religious Diversity in India.

Time: 2.30hours	University question paper-October 2019	Marks: 75

1) All questions are compulsory
2) Figures to right indicate full marks.
3) Draw diagram wherever necessary.

FYBMS 23/11/19
Sem-I B. Economics -

Q.1 (a) State whether the following statements are True or False.(Any Eight)   08marks

1. Extension in Demand and increase in demand means the same.
2. When demand is perfectly elastic the demand curve will be a vertical straight line.
3. Isoquants normally intersects Y axis
4. Economies of scale leads to reduction in cost of making
5. At breakeven point the firms total revenue is maximum
6. Perfectly competitive firm is a price maker.
7. Selling cost is a unique feature of Monopolistic competition.
8. Cartel formation helps the oligopoly firms to avoid competition.
9. Price discrimination exists only in mark up pricing.
10. Cost plus pricing is also called as Mark up pricing.

(b) Match the following (Any Seven)   07marks

Group A	Group B
1. Duopoly	i. Tc/n
2. No consumer surplus	ii. Additional cost
3. Monopoly	iii. Two sellers
4. MC=MR	iv. Pen and ink
5. Long run average cost	v. Internal economies of scale
6. Division of labour	vi. Single seller
7. Joint demand	vii. Equilibrium of a firm
8. Demand function	viii. $Q=f(P)$
9. Marginal cost	ix. Envelops curve
10. Average revenue	x. 1st degree of price discrimination

Q.2 Answer the following

A. Explain with the help of diagram different types of Price elasticity's of demand. 08marks
B. Explain in detail the steps involve in demand forecasting.   07marks

OR

C. Enumerate the importance of Demand forecasting.   08marks
D. What are the factors responsible for elasticity of Demand? Explain   07marks

Q.3 Answer the following

A. Define is-quants. What are the properties of iso-quants?   08marks
B. "The law of variable proportion". Explain in detail.   07marks

OR

C. Discuss types of internal and external economies of scale.   08marks

D. The total fixed cost incurred by a firm is Rs1000.Calculate TC,AC and TVC from the following data .
07marks

Units	1	2	3	4	5	6	7	8
MC	100	200	300	400	500	600	700	800

Q.4 Answer the following

A. Explain kinked demand curve with the help of diagram.   08marks

B. Discuss in detail the concept of Breakeven Analysis   07marks

OR

C. Explain the features of perfect competition. And discuss the long run equilibrium of a firm in perfect competition market structure.   08marks

D. Explain the features of Monopolistic competition.   07marks

Q.5 A. Explain the relationship between AC and MC. Discuss the concept of Long run Average cost?   15marks

OR

Q5.B. Write short notes on (Any Three)   15marks

1) Shift in demand and supply curve
2) Promotional elasticity of demand
3) Expansion path
4) Mark up pricing
5) Dumping

Subject Name	BUSINESS STATISTICS		
Class	FYBMS	Semester	1
Date:		Marks	75

N.B.: ALL QUESTIONS ARE COMPLUSORY.

Q.1) Answer the following questions.   Marks: 15
   A) Choose the correct option. (Any 8).   Marks: 8
     1) The difference between true value and estimated value is called as,
       a) Frequency   b) error   c) bias   d) data
     2) Bivariate Frequency Distribution considers the variation in _____ variables simultaneously.
       a) 3   b) 2   c) 1   d) 4
     3) To locate the median graphically we need to construct,
       a) Histogram   b) Frequency curve
       c) Frequency polygon   d) less than cumulative frequency curve
     4) Which of the following is not relative measure of dispersion
       a) Co-efficient of range   b) Co-efficient variation
       c) Standard deviation   d) Co-efficient of Q.D.
     5) If the value of co-efficient of correlation is $0.3 \leq r \leq 0.7$ then there is
       a) High degree of positive correlation   b) Modrate positive correlation
       c) low degree of positive correlation   d) No correlation.
     6) When the regression equation of weight on height is used weight is the _____
       a) Independent   b) dependent   c) discrete   d) Continuous
     7) Probability of an event A is always such that.
       a) $-1 \leq P(A) \leq 1$ b) $0 \leq P(A) \leq 1$ c) $1 \leq P(A) \leq 2$ d) $1 \leq P(A) \leq -1$
     8) Maximax criterion is a decision making under _____
       a) Risk   b) Uncertainty   c) certainty   d) Regret
     9) Index no is special type of _____
       a) measures   b) units   c) averages   d) none of these
     10) Range of the data 11, 13, 20, 14, 15, 16, 21
       a) 11   b) 12   c) 10   d) 9
   B) State true or false.   Marks: 7
     1) The data collected by investigator itself is called secondary data.
     2) To locate the mode graphically we need to construct Histogram.
     3) Quartile deviation is absolute measure of dispersion.
     4) Beauty is a quantitative characteristic.
     5) $P(A) = 1 + P(A')$
     6) In index no. the year selected as a reference period for comparison is called current year.
     7) There are always two lines of regression for a paired set of data.
     8) If correlation co-efficient is 0 then the association between the two variables is perfect positive.
     9) Frequency polygon does not touch x- axis.
     10) In maximin criterion decision makers thinking is optimistic.

Q.2) Answer the following questions.   Marks: 15
   A) Calculate mean and median of the following data.   Marks: 8

Weight in grams	0-25	25-50	50-75	75-100	100-125
No. of fishes	5	10	25	11	4

   B) Locate the mode Graphically for the following data.   Marks: 7

Height in cm	150-154	154-158	158-162	162-166	166-170
No. of children	10	12	20	10	8

<div align="center">OR</div>

   P) Tables given below give heights in cm and weights in kg for 24 people.   Marks: 15
     i) Prepare bivariate frequency distribution table. Taking class intervals 35-40, 40-45 for weight and 95-100, 100-105,.......for height.

ii) Find marginal distribution.

iii) Also find the conditional distribution of a) Height when weight is in the range 45-50 kg

b) Weight when height is in the range 105-110 cm

Weight	35	49	36	35	35	40	35	42	46	40	50	51
In kg	37	38	39	40	42	43	38	44	35	40	48	50
Height	100	117	100	99	105	110	108	107	106	96	112	115
In cm	103	102	101	109	108	108	107	106	99	97	113	114

Q.3) Answer the following questions.　　　　　　　　　　　　　　　　Marks: 15

A) Calculate Q.D. and Co-efficient of Q.D. for the following data.　　Marks: 8

Income in Rs.	100-200	200-300	300-400	400-500	500-600	600-700
No. of Persons	120	200	170	220	100	90

B) Average prices of rice and wheat per quintal for 6 years are given below. Find coefficient of correlation

Price of Rice (100 Rs.)	15	18	20	19	23	25
Price of wheat (100 Rs)	10	10	11	12	12	13

OR

P) Find the two line of regression for the following data.　　　　　　Marks: 8

X	3	5	7	9	11
Y	9	12	16	14	15

Q) Find 3 yearly moving averages for the following data.　　　　　　Marks: 7

Year	1991	1992	1993	1994	1995	1996	1997	1998
Production in ('000 quintals)	8	7	9	8	10	8	7	9

Q.4) Answer the following questions.　　　　　　　　　　　　　　　　Marks: 15

A) Calculate Laspeyre's and Paasche's index no for the following data

Commodity	Base year		Current year	
	price	Quantity	Price	Quantity
A	12	50	20	120
B	10	100	12	70
C	14	60	15	70
D	16	30	18	50
E	15	40	18	40

B) A bow contains 5 blue and 8 green balls. If two balls are selected at random from this box what is the probability that, (i) They are both blue, (ii) Both green, (iii) 1blue and 1green　　Marks: 7

OR

P) Define Primary data, explain the methods of collection of primary data.　　Marks: 8

Q) Define statistics state the functions of statistics　　　　　　　　　Marks: 7

Q.5) Answer the following questions.　　　　　　　　　　　　　　　　Marks: 15

A) Following is the pay off a matrix corresponding to four states of nature S_1, S_2, S_3, S_4, and four courses of action A_1, A_2, A_3, A_4

State of Nature	Course of action				Probability of State
	A_1	A_2	A_3	A_4	
S_1	50	400	-50	0	0.15
S_2	300	0	200	300	0.45
S_3	-150	100	0	300	0.25
S_4	50	0	100	0	0.15

i) Calculate the expected pay off and find best course of the action using EMV.

ii) Calculate EOL for each course of action hence find best course using EOL.

B) Define correlation. Explain the terms positive correlation and negative correlation with proper example.　　　　　　　　　　　　　　　　　　　　　　Marks: 7

OR

P) Write a short note on.(any three)　　　　　　　　　　　　　　　Marks: 15

　　i) Probability distribution.

　　ii) Error

　　iii) Relative measures of dispersion.

　　iv) Skewness schedule

ALL THE BEST