

2ND YEAR (SEM-IV) BBA EXAMINATION, 2023

(2nd Year, 4th Semester)

SUBJECT: STATISTICS FOR BUSINESS DECISION**PAPER CODE: MAN 401 CBCS SYLLABUS**

Time : 3 hours

Full Marks : 100

Answer *any five* questions, each question carries equal marks.

1. i) Explain the properties of the Arithmetic Mean.
 ii) Find out the missing frequencies of the following data, given that A.M. is 67.45 inches.

Height (inches)	60-62	63-65	66-68	69-71	72-74	Total
No. of Students	5	18	f_3	f_4	8	100

- iii) Find the mean, median, mode & the two quartiles for the given frequency distribution.

X_i	10	20	30	40	50	60	70	80	90	100
f_i	5	10	15	20	25	10	7	3	3	2

$$5+5+10=20$$

2. i) Calculate range, quartile deviation, mean deviation, standard deviation coefficient of variation from the following:-

X_i	40	50	60	70
f_i	3	7	4	1

- ii) The first group has 100 items with mean 45 and variance 49. If the combined group has 250 items with mean 51 and variance 130, find mean and S.D. of the second group.
 iii) If the quartiles of a distribution are 28, 35 and 40, find the semi-interquartile range.

$$(3 \times 5) + 3 + 2 = 20$$

3. Ten students were given the following marks in Mathematics and Business Statistics:

Student No.	1	2	3	4	5	6	7	8	9	10
Marks in Mathematics	40	20	10	48	6	37	14	8	7	18
Marks in Statistics	30	35	25	32	15	45	20	3	10	27

- i) Calculate the correlation coefficient between X and Y.
 ii) Calculate the rank correlation coefficient between X and Y.
 iii) Two regression lines of a sample are $x + 6y = 6$ and $3x + 2y = 10$. Find the mean of x, y and the correlation coefficient.

$$7+7+(2+2+2)=20$$

4. i) Derive the regression equation of y on x along with its regression coefficient.

- ii) The following sums have been obtained for 100 observation pairs: $\sum_i x = 12500$; $\sum_i y = 8000$, $\sum_i x^2 = 1585000$, $\sum_i y^2 = 648100$; $\sum_i xy = 1007425$. Find the regression equation of y on x , and estimate the value of y when $x = 130$.
- iii) In a contest, two judges ranked eight candidates A, B, C, D, E, F, G and H in order of their preference, as show in the following table. Find the rank correlation coefficient.

	A	B	C	D	E	F	G	H
First Judge	5	2	8	1	4	6	3	7
Second Judge	4	5	7	3	2	8	1	6

$$6+8+6=20$$

5. i) With usual notations, prove that $P(A+B) = P(A) + P(B) - P(AB)$
- ii) If $P(A) = \frac{1}{2}$, $P(B) = \frac{3}{5}$, $P(AB) = \frac{1}{3}$, find $P(A+B)$, $P(\bar{A}\bar{B})$, $P(\bar{A}+\bar{B})$ and $P(A\bar{B})$.
- iii) For a binomial distribution, the mean is 3 and the variance is 2. Find the values of n and p . Hence find the probability that $X = 5$. 5+8+7=20
6. i) What do you understand by the term Mathematical expectation and variance of a probability distribution?
- ii) A man has the choice of running either a hot-snack stall or an ice-cream stall at a seaside resort during the summer season. If it is a fairly cool summer he should make Rs. 5000 by running the hot-snack stall, but if the summer is quite hot he can only expect to make Rs. 1000. On the other hand, if he operates the Ice-cream stall, his profit is estimated at Rs. 6500 if the summer is hot, but only Rs. 1000 if it is cool. There is a 40% chance of the summer being hot. Should he opt for running the hot-snack stall or the ice-cream stall? Give mathematical explanation.
- iii) If the arithmetic mean and standard deviation of a binomial distribution are respectively 4 and $\sqrt{8}/\sqrt{3}$. Find the values of the parameters of the distribution.
- iv) A die is tossed 1200 times. Find the probability that the number of 'sixes' lies between 190 and 210. (Given that the area under the standard normal curve between $z=0$ and $z=0.78$ is 0.2823 and between $z=0$ and $z=0.81$ is 0.2910) 2+8+4+6=20
7. i) State the merits of the Moving Average Method.
- ii) From the following series of observations find the 5-year weighted moving average with weights 1, 2, 2, 2, 1 respectively:

Year	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Sales (Rs. '000)	2	6	1	5	3	7	2	6	4	8	3

- iii) Discuss the tests for a good index number.

- iv) Given the following information construct chain index numbers (Base 2012=100) for the year 2013-2017:

Year	2013	2014	2015	2016	2017
Link Index	103	98	105	112	108

4+6+4+6=20

8. a) Write Short Notes on *any two* :

5+5=10

- i) Cost of living Index
- ii) Criteria for a good estimator
- iii) Continuous Vs. Discrete probability distribution

- b) Answer *any one* :

- i) Show that the Fisher's price index number satisfies both time reversal test from the following data:

Commodity	1970		1980	
	Price	Quantity	Price	Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

10

- ii) Explain the problems involved in the construction of index numbers.

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2ND YEAR (SEM-IV) BBA EXAMINATION, 2023

(2nd Year, 4th Semester)

SUBJECT: HUMAN RESOURCE MANAGEMENT

PAPER CODE: MAN 402 CBCS SYLLABUS

Time : 3 hours

Full Marks : 100

Group – A

Answer *any ten* questions.

10×2=20

1. a) What is Dearness Allowance?
- b) What is ESOP?
- c) What is 360° Performance Appraisal?
- d) Mention any two functions of Trade Union.
- e) What is the role of a career anchor?
- f) Mention the different types of strike.
- g) Mention any two social security benefits provided in India.
- h) State the differences between job description and job specification.
- i) Differentiate between structured and unstructured interview with examples.
- j) What do you understand by corporate downsizing?
- k) Differentiate between arbitration and adjudication.
- l) Explain the Red Hot Stove Rule.

Group – B

Answer *any four* questions.

4×5=20

2. Explain the concept of Human Resource Audit.
3. Discuss any two on-the-job and off-the-job training methods.
4. Briefly discuss the steps in grievance-handling procedure.
5. Discuss the significance of workforce diversity in global workplaces.
6. Explain the different career life-stages.
7. Differentiate between minimum wage, fair wage and living wage.

Group – C

Answer *any four* questions.

4×15=60

8. Critically examine the following statement: "HRM refers to the policies, practices and systems that influence employees' behaviour, attitudes and performance."

15

[Turn over

9. Define HRP. Describe its characteristics and objectives. Explain the reasons for the growing interest in HRP in recent years. 3+12=15
10. a) Recruitment is a process of searching for prospective employees and stimulating them to apply for jobs. Discuss.
b) Discuss the merits and demerits of internal and external sources of recruitment. 10+5=15
11. a) How will you determine the training needs of an industrial organisation?
b) Briefly outline the steps involved in conducting a training program in a systematic way. 7+8=15
12. a) Differentiate between performance appraisal and performance management.
b) Discuss in detail the process of performance appraisal. 5+10=15
13. How does effective compensation management help an organisation achieve its strategic objectives? 15
14. Discuss the role of collective bargaining in maintaining Industrial Relations. 15
15. Write short notes (*any three*) : 3×5=15
- a) Fringe Benefit
 - b) E-recruitment
 - c) Work-Life Balance
 - d) Wage Differentials
 - e) Sensitivity Training.

2ND YEAR (SEM-IV) BBA EXAMINATION, 2023

(2nd Year, 4th Semester)

SUBJECT: FINANCIAL MANAGEMENT**PAPER CODE: MAN 403 CBCS SYLLABUS**

Time : 3 hours

Full Marks : 100

Answer *any five* questions.

All questions carries equal marks.

1. a) Explain the terms
- Investment Decision
 - Financing Decision
 - Dividend Decision. 4+3+3
- b) Distinguish between Profit Maximisation and Wealth Maximisation. 10
2. A firm is considering the purchase of an equipment which costs Rs. 1,000,000. It has an estimated life of 10 years (with no salvage value), and depreciation is on a straight line basis. The machine will generate additional sales of Rs. 4,00,000 and incur increased costs of Rs. 150,000 per annum. The firm's tax rate is 30% and cost of capital is 11%. Calculate:
- Annual cash flows.
 - Discounted payback period.
 - Net present value of the machine.
 - Internal rate of return of the project. 5+5+5+5
3. Firm X and Firm Y are in the same risk class, and are identical in every respect except that company X uses debt, while company Y does not. The levered firm has Rs. 900,000 debentures, carrying 10% rate of interest. Both the firms earn 20% operating profit on their total assets of Rs. 15 lakhs.
- Assume perfect capital markets, rational investors and so on; a tax rate of 35%, and a capitalization rate of 15% for an all-equity firm.
- Compute the value of firms X and Y using the Net Income (NI) approach.
 - Compute the value of each firm using the Net Operating Income (NOI) approach.
 - Using the NOI Approach, calculate the overall cost of capital (k_o) for firms X and Y. 5+5+10
4. a) Following are the details regarding three companies A Ltd, B Ltd, and C Ltd:

A Ltd	B Ltd	C Ltd
$r = 15\%$	$r = 5\%$	$r = 10\%$
$k_e = 10\%$	$k_e = 10\%$	$k_e = 10\%$
E = Rs.8	E = Rs.8	E = Rs.8

Calculate the value of an equity share of each of these companies applying Walter's formula when dividend payout ratio (D/E) is: (a) 25% (b) 50% (c) 75%.

- b) A firm has total investments of Rs. 500,000 in assets, and 50,000 equity shares of Rs. 10 each. It earns a rate of 15% on its investments, and has a policy of retaining 50% of the earnings.
- i) If the appropriate discount rate for the firm is 10%, determine the price of its share using Gordon Model.
- ii) What would happen to the price if the firm has a payout of 80%? 10+5+5
5. a) Calculate the degree of operating leverage (DOL), degree of financial leverage (DFL), and the degree of combined leverage (DCL) for the following firms.

	Firm A	Firm B
1. Output (units)	60,000	15,000
2. Fixed costs (Rs.)	7,000	14,000
3. Variable cost per unit (Rs.)	0.20	1.50
4. Interest on borrowed funds (Rs.)	4,000	8,000
5. Selling price per unit (Rs.)	0.60	5.00

- b) XYZ & Company buys an item costing Rs. 125 each in lots of 500 boxes which is a three month supply, with ordering cost at Rs. 150. The inventory carrying cost is estimated at 20% of unit value.
- i) What is the total annual cost of the existing inventory policy?
- ii) How much money could be saved by employing the economic order quantity? 10+5+5
6. a) A firm has the following data for the year 2022 (all in Rupees crore):
 Sales revenue: Rs. 8500; Cost of goods sold: Rs. 7300
 Opening inventory: Rs. 1750; Closing inventory: Rs. 1900
 Accounts Receivable: Opening: Rs. 1800; Closing: Rs. 1750
 Account payable: Opening: Rs. 1450; Closing: Rs. 1500
 Using formula calculate the firm's (a) Operating Cycle (b) Cash Cycle.
- b) Your Uncle wants to acquire a business and wants your advice regarding the working capital requirements in the first year. The following estimates are available with you:
- i. Average amount locked with stocks: Rupees
 Finished goods and WIP 24,000
 Raw material and stores 18,000
- ii. Average credit given to customers:
 Local sales: 3 weeks credit 210,000
 Sales outside the state: 5 weeks credit 700,000

iii. Time available for payment to suppliers:

For purchases: 5 weeks	190,000
For wages: 3 weeks	550,000

Calculate the average net working capital required, allowing 10% for contingencies.

10+10

7. a) A firm borrows Rs. 10,00,000 at an interest rate of 15% and the loan is to be repaid in 5 equal annual instalments payable at the end of next 5 years. You are required to find (a) the annuity amount and (b) Loan repayment (Amortisation) schedule.
- b) You have the right to harvest a teak plantation for the next 20 years over which you expect to get 1,00,000 cubic foot of teak p.a. The current price per cubic foot of teak is Rs. 500, but it is expected to increase at a rate 8% p.a. The discount rate is 15%. Find out the present value of the teak that you can harvest from the teak plantation. 10+10
8. Write short notes on *any four* of the following: 4×5
- Time value of money.
 - Capital budgeting.
 - EBIT-EPS analysis.
 - Profitability Index.
 - Conclusions of Gordon and Walter dividend models.

2ND YEAR (SEM-IV) BBA EXAMINATION, 2023

(2nd Year, 4th Semester)

SUBJECT: TAX PLANNING**PAPER CODE: MAN 404 CBCS SYLLABUS**

Time : 3 hours

Full Marks : 100

Answer *any five* questions.

Each question carries equal marks.

1. a) Mr. J, an England based Cricket Player visits India for 100 days in every financial year. This has been his practise for the past 10 financial years. Determine his residential status for the assessment year 2022-23. Would your answer differ if he visits India for 90 days in every financial year? 10
- b) Mr. S, Karta of S & Sons (HUF), came to India from Canada for the first time on 01.04.2015. The Control and Management of the HUF is transferred to India permanently from 01.06.2015. He stayed here continuously for 3 years and went to Dubai on 01.04.2018. He returned to India on 01.07.2018 and went to Canada on 01.12.2019. He again came back to India on 25.01.2022 on a service in India. Determine the residential status of S & Sons (HUF) and Mr. S for A.Y. 2022-23? 10
2. Following are the particulars of Salary income for the period 01.04.2022 to 31.03.23 of Mr. A who is employed in a Private company at Kolkata. Compute Net income from salary of Mr. A for the Assessment Year 2022-23.
 - Salary Rs. 90,000 per month.
 - Dearness Allowance Rs. 12,000 per month.
 - Fees Rs. 10,000 per annum.
 - Commission 0.2% of Turnover (Turnover being Rs. 1.5 Crores)
 - Gratuity withdrawn was Rs. 50,000.
 - Leave salary encashed Rs. 40,000.
 - House Rent Allowance received Rs. 10,000 per month (Rent paid for house at Kolkata Rs. 15,000 per month)
 - Travel Allowance received Rs. 4,000 per month. (Actual expenditure incurred Rs. 40,000)
 - Medical Allowance received Rs. 8,000 per month.
 - Free Laptop provided by employer amounting to Rs. 50,000.
 - Professional Tax paid Rs. 2,400. 20
3. a) Find out the Gross Annual Value in respect of the following properties for the A.Y. 2022-23 (Rs. In thousands)

[Turn over

Particulars	H1	H2	H3
Gross Municipal Value	150	180	120
Fair Rent	140	140	240
Standard Rent	120	240	300
Actual Rent (let out throughout the P. Y. 2022-23)	180	300	150
Unrealised rent of the previous 2022-23	25	40	20
Period when the property remains vacant (in months)	3	1	—

b) B. Ltd. has following assets as on 01/04/2021

Assets	Amount (Rs.)	Rate of Depreciation
Building A	50,000	10%
Furniture B	30,000	10%
Building C	10,000	10%
Machinery A	40,000	15%
Machinery B	50,000	15%

i) During the year, building was purchased on 01/05/2021 for Rs. 50,000.

ii) Machinery A sold for Rs. 60,000 on 01/11/2021.

iii) Furniture B sold for Rs. 50,000 on 01/06/2021.

Compute depreciation allowed u/s 32 for the A. Y. 2022-23.

4. Calculate Gross total income and Tax liability of Mr. Manav, aged 50 years, after considering his income from the following heads for the Assessment Year 2022-23. Tax liability to be calculated applying Tax slab applicable under Old Tax Regime.

Particulars	Amount (Rs.)
Net income from House Property	2,00,000
Income from Salary	13,00,000
Income from Short Term Capital gain	50,000
Income from Other Sources	1,00,000
Life Insurance Premium paid	80,000
Contribution made to Public Provident Fund	90,000
Contribution to Unit Linked Insurance Plan	50,000
Premium paid for Self and Senior citizen Parent towards Health Insurance	70,000
Interest on Home Loan paid	1,50,000

5. a) The following information for P.Y. 2021-22 for M/s. ABC Ltd. is given as follows:-

- Sold 5,000 Shares of Tata Steel Ltd. for Rs. 950, which were held for 3 months and purchased for Rs. 875 per share.
- Sold 2,500 Shares of TCS for Rs. 980, purchased for Rs. 1015 held by the company for 20 days.

3. Purchased a Commercial Space for Rs. 12 Lakhs on 01/09/2017 was sold 01/10/2021 for Rs. 14.75 Lakhs and the brokerage of Rs. 80,000 was paid.
4. Purchased a Godown Space for Rs. 32 Lakhs on 02/03/2016 was sold for Rs. 31.25 Lakhs on 02/12/2021 and the brokerage of Rs. 75,000 was paid.
5. CII :- 2017-18-272; 2015-16-254; 2021-22-317.

You are required to compute the taxable income for Capital Gains.

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b) The following information for P.Y. 2021-22 for T & HUF is given as follows:-

1. Received Rs. 9,000 as Dividend from Indian Company.
2. Received Rs. 11,000 as Dividend from Foreign Company.
3. Received Rs. 95,000 as agricultural income.
4. Bank account was credited by Rs. 21,000 on account of winnings from lotteries.
5. Savings interest Rs. 9,500 received from SBI and Interest on Fixed Deposit received Rs. 12,000 from ICICI.

You are required to compute the taxable income for Income from Other Sources for the A.Y. 2022-23.

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6. a) Elaborate with example the Dual GST model in India as per the GST Act of 2017. 10
- b) Explain the Tax treatment of Children's education allowance and Professional development allowance. 10
7. a) Explain the difference between the taxability of Indian Income and Foreign Income in the case of individuals who are resident but not ordinarily resident in India. 8
- b) Distinguish between tax planning and tax avoidance. 6
- c) Discuss in brief Inter-State Supply as per Goods and Services Act. 6
8. Write Short Note on *any four* of the following : 4×5=20
 - i) Clubbing of Income.
 - ii) Input Tax credit.
 - iii) Direct Tax and Indirect Tax.
 - iv) Indexation benefit in case of long-term capital gains
 - v) Block of Assets
 - vi) Casual Income

2ND YEAR (SEM-IV) BBA EXAMINATION, 2023

(2nd Year, 4th Semester)

SUBJECT: E-COMMERCE**PAPER CODE: MAN 405 CBCS SYLLABUS**

Time : 3 hours

Full Marks : 100

Answer *any five* questions.

1. a) Differentiate between E-commerce and E-business with an example. Identify the technological building blocks of E-commerce.
- b) Describe the three-tier architecture of Web Technology.
- c) What is the role of HTML and JavaScripts in E-commerce. (5+5)+5+5
2. a) Discuss the advantage and risk of electronic payment system over cash on delivery in an E-commerce system.
- b) Differentiate between digital envelop and digital certificate in details. 10+10=20
3. a) Describe parity check for error detection and correction.
- b) Explain the differences between symmetric and asymmetric key cryptography. Describe Ceaser cipher. 10+(5+5)=20
4. a) Discuss the Electronic Data Interchange (EDI) process.
- b) Differentiate between B2B and B2C business models with examples. 10+10=20
5. a) What are the steps of Internet Marketing? Describe the Customer Relationship Management (CRM) process in E-commerce.
- b) Elaborate on the concept of direct selling by the manufacturer with an example. Differentiate between specialized and generalized e-store. 10+10=20
6. a) Describe TCP/IP model.
- b) Describe the Porters Competitive forces model and generic strategies with proper example. 10+10=20
7. a) A web page contains two inputs with the following features
 - i) Mail Id should contain @ character.
 - ii) Password should be at least 8-character length.
 Write HTML and JavaScript code to meet the requirements.
- b) Compare and contrast between Inline CSS, External CSS and Embedded CSS with proper example. (5+5)+10=20
8. Write Short notes on *any four* of the following : 4×5=20

a) Secure Socket Layer	b) Firewall	c) EDI as B2B tool
d) Legal issues in E-commerce	e) Aggregator Model	f) Subscription Model
g) C2C Model		