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FCALI

THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.Com./B.B.A.

A12—PROFESSIONAL BUSINESS SKILLS

Time: Two Hours and a Half

Maximum: 80 Marks

Section A

Answer at least ten questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 30.

- 1. What is BCC in e-mail?
- 2. What do you mean by user documents?
- 3. Define 'Professionalism'.
- 4. List out any four e-Governance websites and its purposes?
- 5. What do you mean by Google Ads?
- 6. What is Phishing?
- 7. What is a Questionnaire?
- 8. What is internet hoax?
- 9. What do you mean by Cyberethics?
- 10. What is content marketing?
- 11. What is SWAYAM?
- 12. What is predictive analysis?
- 13. List out any four advantages of e-Books?
- 14. Differentiate between formal and informal e-mails?
- 15. What is a Trojan horse?

 $(10 \times 3 = 30 \text{ marks})$

Section B

Answer at least **five** questions.

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 30.

- 16. What is internet advertising? What are the various types of internet advertising?
- 17. Explain various stages or phases of data analysis process.
- 18. What do you mean by e-Governance? Explain its benefits and challenges.
- 19. What are the major uses or applications of AI in business?
- 20. How digital marketing is different from traditional marketing?
- 21. What are intelligent agents? Explain its features.
- 22. Explain the types of digital libraries. What are the disadvantages of digital libraries?
- 23. What are the standards to be followed for technical documentation?

 $(5 \times 6 = 30 \text{ marks})$

Section C

Answer any **two** questions.

Each question carries 10 marks.

- 24. What is Cyberspace? What are the various physical threats faced by the I.T. industry?
- 25. What are professional skills? What are the important soft skills required for business success? What are the benefits of such skills?
- 26. What you mean by e-Learning? Explain various types of e-Learning. What are the benefits and drawbacks of e-Learning?
- 27. Explain the importance of business data analytics. What are its components?

 $(2 \times 10 = 20 \text{ marks})$

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THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.Com./B.B.A.

A 11—BASIC NUMERICAL METHODS

Time: Two Hours and a Half

Maximum: 80 Marks

Section A

Answer at least ten questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 30.

- 1. What is weighted arithmetic mean?
- 2. What is real rate of interest?
- 3. What is present value?
- 4. What do you mean by symmetric distribution?
- 5. What is a sinking fund?
- 6. What do you mean by annuity certain?
- 7. Calculate mean: 3, 7, 5, 13, 20, 23, 39, 23, 40, 23, 14, 12, 56, 23, 29
- 8. Define 'Median'.
- 9. Define 'Arithmetic Progression'.
- 10. What do you mean by open-end classes?
- 11. What is Skewness?
- 12. Find the next number in the following sequence: 1,4, 27, 256, x.
- 13. What is variance?
- 14. What do you mean by simple interest?
- 15. What is harmonic mean?

 $(10 \times 3 = 30 \text{ marks})$

Section B

Answer at least **five** questions. Each question carries 6 marks. All questions can be attended. Overall Ceiling 30.

- 16. Solve the quadratic equation $2x^2 + x 528 = 0$, using quadratic formula.
- 17. A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. Find the principal amount.
- 18. What is the transpose of the matrix $\begin{pmatrix} 2 & -5 & 6 \\ -1 & 2 & -4 \\ -3 & -1 & 0 \end{pmatrix}$?
- 19. What is Standard Deviation? What are its merits and demerits?
- 20. An A.P. consists of 50 terms of which 3rd term is 12 and last term is 106. Find the 29th term.
- 21. Calculate the present value of an annuity due of PLs 5,000 per annum for 15 years at an interest at 8% p.a.
- 22. If the harmonic mean between x+1 and 5 is 3, find x.
- 23. Arun borrowed Rs. 12,500 at 12 % per annum for 3 years at simple interest and Binil borrowed the same amount for the same period at 10% per annum, compounded annually. Who pays more interest and by how much?

 $(5 \times 6 = 30 \text{ marks})$

Section C

Answer any **two** questions. Each question carries 10 marks.

- 24. Define 'Matrix". Explain various types of matrices with suitable examples.
- 25. If the supply function for a commodity is $p = q^2 + 8q + 16$ and the demand function is $p = -3q^2 + 6q + 436$, find the equilibrium quantity and equilibrium price.
- 26. Calculate the standard deviation and coefficient of variation for the following distribution:

Marks : $10 \quad 20 \quad 30 \quad 40 \quad 50$ Number of students $4 \quad 3 \quad 6 \quad 5 \quad 2$

27. Find the mean, median and mode of the following data:

Classes : 0-20 20-40 40-60 60-80 80-100 100-120 120-140 Frequency : 6 8 10 12 6 5 3 $(2 \times 10 = 20 \text{ marks})$

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THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION, NOVEMBER 2020

B.B.A.

BBA 3B 05—FINANCIAL MANAGEMENT

Time: Two Hours and a Half Maximum: 80 Marks

Section A

Answer at least ten questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 30.

- 1. What is the fundamental principle of finance?
- 2. What is capital budgeting?
- 3. What is the difference between gross working capital and networking capital?
- 4. What do you mean by cost of capital?
- 5. What do you understand by post pay-back profitability?
- 6. Distinguish between operating and financial leverage.
- 7. What is capital rationing?
- 8. Explain the net operating income approach.
- 9. What is factoring?
- 10. What is accounting rate of return?
- 11. Explain scrip dividend.
- 12. What is composite leverage?
- 13. What is stock split?
- 14. Explain lock box system.
- 15. What is ABC analysis?

 $(10 \times 3 = 30 \text{ marks})$

Section B

Answer at least **five** questions. Each question carries 6 marks. All questions can be attended. Overall Ceiling 30.

- 16. Discuss the steps involved in capital budgeting process.
- 17. What are the factors determining working capital requirements of a firm?
- 18. Explain the functions of financial management.
- 19. The cost of goods sold of Sunrise Ltd. is Rs. 5,00,000. The opening inventory is Rs. 40,000 and closing inventory is Rs. 60,000. Find out inventory turnover ratio.
- 20. A company has sales of Rs. 5,00,000, variable costs Rs. 3,00,000, fixed costs Rs. 1,00,000 and long term loans of Rs. 4,00,000 at 10% rate of interest. Calculate composite leverage.
- 21. A project costs Rs. 5,00,000 and yields annually a profit of Rs. 80,000 after depreciation @ 12% p.a. but before tax of 50%. Calculate pay-back period.
- 22. A company issues 10,000 10% preference shares of Rs. 100 each. Cost of issue is Rs. 2 per share. Calculate cost of preference share capital.
- 23. A firm expects a sale of 90,000 units, which it purchased for Rs. 3 per unit. The order cost is Rs. 300 and the firm's carrying cost is Rs. 6 per unit. What is the Economic Order Quantity?

 $(5 \times 6 = 30 \text{ marks})$

Section C

Answer any **two** questions. Each question carries 10 marks.

- 24. Define Capital Structure. What are the principal determinants on the capital structure of a firm? Explain the important theories of capital structure.
- 25. A company is considering an investment proposal to install a new machinery at a cost of Rs. 2,50,000. It has a life expectancy of 5 years and has no salvage value. The tax rate is 40%. Assume the firm uses straight line depreciation and the same is allowed for tax purposes. The estimated cash flows before tax and after depreciation (CFBT) from the investment proposal are as follows:

Year	CFBT	P.V. Factor at 10%
1	Rs. 60,000	0.909
2	Rs. 70,000	0.826
3	Rs. 90,000	0.751
4	Rs. 1,00,000	0.683
5	Rs. 1,50,000	0.621

You are required to compute:

- (i) Average rate of return.
- (ii) NPV at 10% discount rate.
- (iii) Profitability index at 10% discount rate.
- 26. P Ltd has equity share capital of Rs. 5,00,000 divided into shares of Rs. 100 each. It wishes to raise further capital of Rs. 3,00,000 for expansion. The company plans following schemes.
 - a) All common stock.
 - b) Rs. 1,00,000 Equity shares and Rs. 2,00,000 in 10% Debentures.
 - c) Rs. 1,00,000 in Equity shares and Rs. 2,00,000 in 8% Preference share capital.

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CHINK LIBRARY Company's EBIT is Rs. 1,50,000 and corporate tax is 50%. Determine EPS in each plan and comment

 $(2 \times 10 = 20 \text{ marks})$

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THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION, NOVEMBER 2020

B.B.A.

BBA 3B 04—CORPORATE ACCOUNTING

Time: Two Hours and a Half

Maximum: 80 Marks

Section A

Answer at least **ten** questions.

Each question carries 3 marks.

All questions can be attended. Overall Ceiling 30.

- 1. What do you mean by Accounting Standards?
- 2. State the importance of IFRS.
- 3. What do you mean by redeemable debentures?
- 4. What is Redemption by conversion?
- 5. What is Cash flow statement?
- 6. What is contingent liability?
- 7. What is borrowing cost as per Accounting Standard?
- 8. What are the different sources of cash?
- 9. What is liquidity ratio?
- 10. What is Sinking fund?
- 11. What do you mean by leverage ratio?
- 12. State any two differences between Reserves and Provision.
- 13. What is statutory reserve?
- 14. What do you mean by irredeemable Preference Shares?
- 15. From the given information, calculate Gross MarginSales = 5,20,000. Sales returns = 20,000, Cost of goods sold = 4,00,000.

 $(10 \times 3 = 30 \text{ marks})$

Section B

Answer at least **five** questions.

Each question carries 6 marks.

All questions can be attended. Overall Ceiling 30.

- 16. Explain the advantages of Accounting standards.
- 17. Explain the limitations of accounting ratios.

Turn over

- 18. New India Ltd. has sold goods worth ₹ 2,50,000 with a gross profit margin of 20%. The stock at the beginning and at the end of the year was ₹ 35,000 and ₹ 45,000 respectively. Calculate the Stock Turn Over Ratio.
- 19. On July 1, 2017 A Ltd gave notice of its intention to redeem its outstanding ₹ 4,00,00,000 4 ½ %
 Debenture Stock on January 1, 2018 at 102 percent and offered the holders the following options:
 - (1) To apply the redemption money to subscribe for:
 - (a) 6% Cumulative Pref. Shares of ₹ 20 each at ₹ 22.50 per share accepted by the holders of Rs. 1,71,00,000 stock, or
 - (b) 6% Debenture stock of ₹ 96 % accepted by the holders of ₹ 1,44,00,000 stock, or
 - (2) To have their holdings redeemed for cash if neither of the options under (1) was accepted.
 - (3) You are required to show the journal Entries necessary to record the redemption and allotments under (1) and (2) and to state the amount of cash required to satisfy the option.
- 20. The following is the position of Current Assets and Current Liabilities of Z Ltd:

	2012	2013
	(₹)	(₹)
Provision for doubtful debts	1,000	
Short-term Loans	10,000	19,000
Creditors	15,000	10,000
Bills Payable	20,000	40,000

The company incurred a loss of ₹ 45,000 during the year. Calculate cash from operating activities.

- 21. A company has 4,000, 12% redeemable Preference shares of ₹ 100 each, fully paid. The company decides to redeem the shares on December 31,1989 at a premium of 5 percent. The company makes the following issues:
 - (a) 1,000 equity shares of ₹ 100 each at a premium of 5 %.
 - (b) 1,000 14% debentures of ₹ 100 each.

The issue was subscribed and all the amounts were received. The redemption was duly carried out. The company has sufficient profits. Give journal entries.

- 22. Given: Current Ratio = 2.5; 1, Liquid ratio = 1.5, Working Capital = 90,000.
 - Find out Current assets and Current Liabilities

or the year ended $31^{\rm st}$ March, 2017 provision for income-tax has been made for $\gtrless 30,00,00$ dvance payment of tax for that year amounted to $\gtrless 28,00,000$ and tax deducted at source scome earned by the company amounted to $\gtrless 23,000$. On December 10, 2017 the assessment wompleted and tax liability was determined at $\gtrless 35,45,000$. Advance payment of tax for the year ending $31^{\rm st}$ March, 20 ssuming $\gtrless 38,00,000$ provision for taxation for the year ending $31^{\rm st}$ March, 2018.

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Section C

Answer any two questions.

Each question carries 10 marks.

ollowing is the Trial Balance of Dinesh Ltd. as on 31st March, 2015:

Particulars	Credit (₹)	Particulars	Debit (₹)
Share Capital (Shares of ₹ 100)	40,00,000	Premises	30,72,000
12% Debentures	30,00,000	Plant	33,00,000
Profit & Loss A/C	2,62,500	Stock	7,50,000
Bills Payable	3,70,000	Debtors	8,70,000
Creditors	4,00,000	Goodwill	2,50,000
Sales	41,50,000	Cash in hand and at Bank	4,06,500
General Reserve	2,50,000	Calls in arrear	75,000
Prov. for bad debt as on		Interim dividend Paid	3,92,500
01-04-2014	35,000	Purchases	18,50,000
		Preliminary Expenses	50,000
		Wages	9,79,800
CX,		General Expenses	68,350
		Salaries	2,02,250
		Bad debts	21,100
		Debenture Interest Paid	1,80,000
	1,24,67,500		1,24,67,500

Additional Information:

- (i) Depreciate plant by 15%.
- (ii) Write off ₹ 5,000 from preliminary expenses.
- (iii) Half years debenture interest due.
- (iv) Create 5% provision on debtors for doubtful debts.
- (v) Provide for income tax @ 50%.
- (vi) Stock on 31st March, 2015 was ₹ 9,50,000.

Prepare Profit and Loss statement and Balance Sheet as on 31st March, 2015.

25. From the following Balance Sheet, prepare Cash Flow Statement of for the year 2018 according to AS 3 Revised :—

Balance Sheet of X Ltd as on 31/12/2018

Liabilities	1-1-2018	31-12-2018	Assets	1-1-2018	31-12-2018
	₹	₹		₹	₹
Creditors	40,000	44,000	Cash	10,000	7,000
Loan from X	25,000		Debtors	30,000	50,000
Loan from Bank	40,000	50,000	Stock	40,000	25,000
Capital	1,25,000	1,53,000	Machinery	80,000	55,000
			Land	35,000	50,000
			Building	35,000	60,000
	2,30,000	2,47,000		2,30,000	2,47,000

During the year machine costing ₹10,000 with accumulated depreciation ₹3,000 was sold for ₹ 5,000.

26. Following financial statement is summarized from the books of Armstrong Ltd. as on 31st March 2018:

Capital and Liabilities	Amount (Rs.)	Property and Assets	Amount (Rs.)
Paid-up capital	15,00,000	Fixed Assets	16,50,000
Reserves and Surplus	6,00,000	Stock-in-trade	9,10,000
Debentures (Long-term)	5,00,000	Book Debts	12,40,000
Bank overdraft	2,00,000	Investment (short-term)	1,60,000
Sundry Creditors	12,00,000	Cash	40,000
U'	40,00,000		40,00,000

Annual sales Rs. 74,40,000, Gross Profit Rs. 7,44,000, Bank Overdraft is payable on demand.

You are required to calculate the following Ratios for the year and comment on the financial position as revealed by these ratios:

i) Debt Equity Ratio.

ii) Current Ratio.

iii) Proprietary Ratio.

- iv) G.P Ratio.
- v) Debtors Turnover Ratio.
- vi) Stock Turn over Ratio.

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THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.Com./B.B.A.

A12—PROFESSIONAL BUSINESS SKILLS

Time: Two Hours and a Half

Maximum: 80 Marks

Section A

Answer at least ten questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 30.

- 1. List out the 5 D's of digital marketing.
- 2. What is an e-Book?
- 3. What is PPC advertising?
- 4. What do you mean by data mining?
- 5. Who is a data scientist?
- 6. What do you mean by digital divide?
- 7. What do you mean by C2C?
- 8. What is e-mail spoofing?
- 9. What is digital marketing?
- 10. What do you mean by Big Data Analytics?
- 11. What is cloud computing?
- 12. What are chatbots?
- 13. What is an intelligent agent?
- 14. Who is a digital native?
- 15. What is cyber addiction?

 $(10 \times 3 = 30 \text{ marks})$

Section B

Answer at least **five** questions. Each question carries 6 marks. All questions can be attended. Overall Ceiling 30.

- 16. What is verbal communication? What are the 5 C's of effective communication?
- 17. Briefly explain various approaches to e-Learning delivery.
- 18. What do you mean by a cyber crime? Explain various types of cyber crimes committed against individuals.
- 19. What is e-mail etiquette? Explain the do's and don'ts of email communication.
- 20. What are the advantages and disadvantages of online learning?
- 21. Explain the elements of an e-content.
- 22. What do you mean by E-wastes? Explain the role of citizen in E-waste disposal.
- 23. What is information overload? Explain various causes of information overload.

 $(5 \times 6 = 30 \text{ marks})$

Section C

Answer any **two** questions. Each question carries 10 marks.

- 24. What is an e-mail? What are the advantages and disadvantages of e-mail communication? Explain the importance of e-mail in business communication.
- 25. What are the various goals of social media advertising? Explain various types of social media platforms available for advertising.
- 26. Who is a data analyst? What are the duties and responsibilities of a data analyst? Explain various types of data analysis.
- 27. What do you mean by MOOCs? Explain its features and benefits.

 $(2 \times 10 = 20 \text{ marks})$

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THIRD SEMESTER (CBCSS-UG) DEGREE EXAMINATION, NOVEMBER 2020

B.Com./B.B.A.

A 11—BASIC NUMERICAL METHODS

Maximum: 80 Marks Time: Two Hours and a Half

Section A

4 OF CALICI Answer at least ten questions. Each question carries 3 marks. All questions can be attended. Overall Ceiling 30.

- 1. What is a matrix?
- What is compound interest?
- 3. What is a linear equation?
- What do you mean by a sequence?
- What is EMI?
- 6. What do you mean by deferred perpetuity?
- 7. What do you mean by dispersion?
- 8. What do you mean by singular and non-singular matrix?
- 9. Define Arithmetic Mean.
- 10. What do you mean by continuous series?
- 11. What is negative skewness?
- 12. Find next number in the sequence 1, 4, 9, 16, 25, x.
- 13. What is range?
- What do you mean by standard deviation?
- 15. What is Geometric Mean?

 $(10 \times 3 = 30 \text{ marks})$

Section B

Answer at least **five** questions. Each question carries 6 marks. All questions can be attended. Overall Ceiling 30.

16. Solve
$$4(x-1)+1=5(2x+1)-6$$
.

17. What is
$$\begin{bmatrix} 2 & -3 \\ -4 & 2 \end{bmatrix} - \begin{bmatrix} -1 & -5 \\ 3 & -2 \end{bmatrix}$$
?

18. At what rate percent per annum will a sum of money double in 8 years?

19. Find out the median from the following data:

Age	10	5	7	12	8
No. of Students	15	20	15	28	12

20. Find two natural numbers whose sum is 27 and product is 182.

21. The first term of an Arithmetic Progression is 15 and the last term is 85. If the sum of all terms is 750, what is the 6th term?

22. What is mean deviation? What are its merits and limitations?

23. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1,600 each on 1st January and 1st July of a year. Calculate the amount he would have gained by way of interest at the end of the year.

 $(5 \times 6 = 30 \text{ marks})$

Section C

Answer any **two** questions.

Each question carries 10 marks.

24. What are the major measures of central tendency? List out the merits and limitations of each measures.

25. A man constructed his house by taking a home loan of Rs. 15,00,000. He is asked to repay the loan in 5 years and rate of interest is 13% p.a. Calculate EMI.

26. Find a solution to the following system by using Cramer's rule:

$$x-2y+3z=9$$
, $-x+3y-z=-6$, $2x-5y+5z=17$.

27. Find mean, median and mode of the following data:

Wages	0–50	50-100	100-150	150-200	200–250	250-300	300–350
No. of Employees	2	3	5	6	5	3	1

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THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.B.A.

BBA IIIC 03—QUANTITATIVE TECHNIQUES FOR BUSINESS

(Multiple Choice Questions for SDE Candidates)

Time: 15 Minutes	Total No. of Questions: 20	Maximum : 20 Marks
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INSTRUCTIONS TO THE CANDIDATE

- 1. This Question Paper carries Multiple Choice Questions from 1 to 20.
- 2. The candidate should check that the question paper supplied to him/her contains all the 20 questions in serial order.
- 3. Each question is provided with choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and enter it in the main answer-book.
- 4. The MCQ question paper will be supplied after the completion of the descriptive examination.

BBA IIIC 03--QUANTITATIVE TECHNIQUES FOR BUSINESS

(Multiple Choice Questions for SDE Candidates)

1.		— is a powerful device developed of	ver th	ne matrix algebra.
	(A)	Integration.	(B)	Differentiation.
	(C)	Determinants.	(D)	None of these.
2.	The we	ord correlation usually implies ——		
	(A)	Cause and effect relationship.	(B)	Mutual interdependence.
	(C)	Both.	(D)	None of the above.
3.	When t	the values of two variables move in	the s	ame direction, correlation is said to be ———.
	(A)	Positive.	(B)	Negative.
	(C)	Linear.	(D)	Non-linear.
4.	Scatter	r diagram is also called ———.	1	
	(A)	Correlation graph.	(B)	Zero correlation.
	(C)	Dot chart.	(D)	None of the above.
5.	Co-effic	cient of correlation lies between —		•
	(A)	0 and 1.	(B)	0 and - 1.
	(C)	+ 1 and – 1.	(D)	None of these.
3.	Correla	ation can be ———.		
	(A)	Positive only.	(B)	Negative only.
	(C)	Positive or negative.	(D)	None of these.
7.	Scatter	diagram of the various values of (X, Y)	gives the idea about ———.
	(A)	Regression model.	(B)	Distribution of errors.
	(C)	Functional relationship.	(D)	None of the above.

8.	The re	gression co-efficient of regression e	eguati	on X on Y is denoted by ———.
	(A)		(B)	•
	(C)	0.	(D)	or Cabono
9.	When	$P(A \cup B) = P(A) + P(B)$, the A a	nd B	are ———.
	(A)	Dependent.	(B)	Independent
	(C)	Mutually exclusive.	(D)	None of these.
10.	If two	sets have no common element, the	y are (called ———
	(A)	Subset.	(B)	Super set.
	(C)	Disjoint set.	(D)	Equal set.
11.	Probab	oility of an event lies between ——	 .	
	(A)	+ 1 and – 1.	(B)	0 and 1.
	(C)	0 and - 1.	(D)	0 and infinite.
12.	The de	finition of priori probability was or	iginal	ly given by ———.
	(A)	De-Moivre.	(B)	Laplace.
	(C)	Pierre de Fermat.	(D)	James bernoulli.
13.	If it is called -		ccurr	ed, the probability of an event B given A is
	(A)	Empirical probability.	(B)	Conditional probability.
	(C)	Priori probability.	(D)	Posterior probability.
14.	The me	ean of a binomial distribution is—		
	(A)	np.	(B)	npq.
	(C)	Square root of npq.	(D)	None of these.
15.	In a bir	nomial distribution, if $n = 8$ and $p = 1$	1/3, t	hen variance =
	(A)	8/3.	(B)	48/3.
	(C)	64/3.	(D)	16/9.

16.	Poissor	n distribution is a ———— probabili	ity dis	tribution.
	(A)	Discrete.	(B)	Continuous.
	(C)	Poisson.	(D)	None of these.
17.	If two i	independent random variables follo	w bind	omial distribution, their sum follows ———.
	(A)	Binomial distribution.	(B)	Poisson distribution.
	(C)	Normal distribution.	(D)	None of these.
18.	Theore	tically, the range of normal curve is	s ——	
	(A)	- 1 to + 1.	(B)	+ 1 to infinity.
	(C)	infinity of +infinity.	(D)	None of these.
19.	Out of t	the two types of errors, ——— is t	the m	ore severe error.
	(A)	Type I error.	(B)	Type II error.
	(C)	Both are equally severe.	(D)	None of these.
20.	A null l	hypothesis is indicated by ———.		
	(A)	H ₀ .	(B)	H ₁ .
	(C)	H_2	(D)	None of these.
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THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION **NOVEMBER 2020**

B.B.A.

BBA IIIC 03—QUANTITATIVE TECHNIQUES FOR BUSINESS

Maximum: 80 Marks Time: Three Hours

Part I

Ch

		Answer all		(1)
		Each question	n carı	ries 1 mark.
100S6	the cor	rect answer from the choices given :	:	OX
1.	The the	eory used to determine the optimum	strat	tegy in a competitive situation :
	(a)	Sequencing.	(b)	Network theory.
	(c)	Game theory.	(d)	Simulation.
2.	The reg	gression co-efficient b_{xy} if $3x + 2y + 2y$	4=0	is the equation of x on y :
	(a)	2/3.	(b)	- 2/3.
	(c)	4/3.	(d)	- 4/3 .
3.	The pro	obability of getting a total of 7 or 11	in a	single throw with two dice:
	(a)	1/3.	(b)	2/3.
	(c)	2/9.	(d)	3/9.
4.	A rand	om variable X has the values land 2	2 witl	h probabilities 1/3 and 2/3 respectively. Then its
	mean:			•
	(a)	2/3.	(b)	1.
	(-)	4/0	(4)	r/o

- 5. Normal distribution is:
 - a) Mesokurtic.

b) Leptokurtic.

c) Platykurtic.

d) None of these.

Fill in the blanks:

- 6. A Standard normal variate has mean zero and variance
- 7. Accepting a null hypothesis when it is false is termed as ————.
- 8. A distribution free statistical test is usually known as ———.
- 9. If E(X) = 3.5, then E(2x + 7) ———.
- 10. Two way classification model analysis of variance is called analysis.

 $(10 \times 1 = 10 \text{ marks})$

Part II

Answer any eight questions. Each question carries 2 marks.

- 11. What is Simulation?
- 12. What is meant by partial correlation?
- 13. Write any four properties of regression co-efficients?
- 14. State Bayes theorem.
- 15. A petrol pump proprietor sells on an average Rs. 80,000 worth of petrol on rainy days and an average of Rs. 95,000 on clear days. Statistics from the meteorological department show that the probability is 0.76 for clear weather and 0.24 for rainy weather on coming Wednesday. Find the expected value of petrol sale on coming Wednesday.
- 16. Assume the mean height of soldiers to be 68.22 inches with a variance of 10.8 inches. How many soldiers of a regiment of 1000 would you expect to be over six feet tall.
- 17. What are the main uses of F test?
- 18. Distinguish between one tailed and two tailed tests?
- 19. What is the difference between large sample and small sample?
- 20. An investigation of a sample of 64 BBA students indicated that the mean time spend on preparing for the examination was 48 months and the S.D. was 15 months. What is the average time spent by all BBA students before they complete their examinations.

Part III

Answer any six questions. Each question carries 4 marks.

- 21. Explain Statistical Quantitative Techniques?
- 22. The Co-efficient of rank correlation of the marks obtained by 10 students in statistics and English was 0.2. It was later discovered that the difference in ranks of one of the students was wrongly takes as 7 instead of 9. Find the correct result.
- 23. Following information is obtained from the records of a business organization:

Sales (in '000)	91	53	45	76 89	95	80	65
Sales (in '000) Advertisement Expense (in '000):	15	8	7	12 17	25	20	13

- 1 Obtain the two regression equations; and
- 2 Estimate the advertisement expenditure for a sale of Rs. 1,20,000.
- 24. A manufacturing firm produces units of products in 4 plants, A, B, C and D. From the past records of the proportions of defectives produced at each plant, the following conditional probabilities are set:— A:0.5; B:0.10; C:0.15 and D:0.02 The first plant produces 30% of the units of the output, the second plant produces 25%, third 40% and the fourth 5% A unit of the products made at one of these plants is tested and is found to be defective. What is the probability that the unit was produced in Plant C.
- 25. Explain the procedure of testing of hypothesis.
- 26. In a sample study about the tea habit in two towns, following date are observed in a sample of size 100 each:—

Town —A: 51 persons were male, 31 were tea drinkers and 19 were male tea drinkers.

Town — B:-46 persons were male, 17 were male tea drinkers and 26 were tea drinkers.

Is there any association between sex and tea habits?

- 27. Explain the procedure of Wilcoxon matched pairs test signed rank test.
- 28. Distinguish between one way ANOVA and two way ANOVA?

 $(6 \times 4 = 24 \text{ marks})$

Part IV

Answer any two questions.

Each question carries 15 marks.

29. Two random sample were drawn from two normal populations and their values are :—

Α		66	67	75	76	82	84	88	90	92	
В	:	64	66	74	78	82	85	87	92	93	95 97

Examine whether the standard deviations of the population are equal?

30. From the adult population of four large cities, random samples were selected and the number of married and unmarried men were recorded

CI	T	TE	70
		16	7.0

	Α	В	С	D	Total
Married	137	164	152	147	600
Single	32	57	56	35	180
Total	169	221	208	182	780

Is there significant variation among the cities in the tendency of men to marry.

31. Apply the technique of analysis of variance to the following date relating to yields of 4 varieties of wheat in 3 blocks:

Varieties	X	Y	Z
A	10	9	8
В	7	7	6
Ċ,	8	5	4

Carry two-way analysis of variance.

 $(2 \times 15 = 30 \text{ marks})$

(Pages: 4)

Name

Reg. No....

THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.B.A.

BBA III B 04—HUMAN RESOURCE MANAGEMENT

(2015 Admissions)

(Multiple Choice Questions for SDE Candidates)

Time: 15 Minutes Total No. of Questions: 20 Maximum: 20 Marks

INSTRUCTIONS TO THE CANDIDATE

- 1. This Question Paper carries Multiple Choice Questions from 1 to 20.
- 2. The candidate should check that the question paper supplied to him/her contains all the 20 questions in serial order.
- 3. Each question is provided with choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and enter it in the main answer-book.
- 4. The MCQ question paper will be supplied after the completion of the descriptive examination.

BBA III B 04—HUMAN RESOURCE MANAGEMENT

(Multiple Choice Questions for SDE Candidates)

1. Which of the following term is used to identify, "what the job holder does"? "how it is done"? and

	"why i	t is done"?		
	(A)	Job specification.	(B)	Job evaluation.
	(C)	Job description.	(D)	Job title.
2.	The in	tellectual and mechanical process u	sed by	an organization to transform inputs into outputs
	is term	ned as:		
	(A)	Task.	(B)	People.
	(C)	Structure.	(D)	Technology.
3.	Accord	ing to which of the following interv	view t	ype, several applicants are being interviewed by
	one or	more company representatives?		
	(A)	One-to-one interview.	(B)	Panel interview.
	(C)	Group interview.	(D)	Stress interview.
4.	Previou	is company records and customer s	atisfa	ction surveys may serve as a source for :
	(A)	Cultivating learning culture with	in the	organization.
	(B)	Determining deficiencies that requ	ire tr	raining.
	(C)	Developing career development pl	ans fo	or employees.
	(D)	Identifying training outcomes thr	ough	evaluation.
5.	Which	of the following term reflects the p	rocess	s of preparing organizational people according to
	the futu	are needs?		
	(A)	Learning.	(B)	Training.
	(C)	Development.	(D)	Need analysis.
6.	"Self-m	otivated and result oriented individu	ıals w	ith sound knowledge of combined cycle gas turbine
	power p	lant operations and practical experi	ence	of mechanical, electrical and I and C maintenance
	of plant	." This section of job advertisement	repre	sents which of the given term?
	(A)	Job analysis.	(B)	Job description.
	(C)	Job specification.	(D)	Job evaluation.

7.	Organizations started emphasizing on making rules and regulations during:				
	(A)	Mechanistic period	(B)	Legalistic period.	
	(C)	Catalytic period.	(D)	Strategic period.	
8.		of the following force makes an indivi ctivities of others?	idual e	eligible to make decisions, give orders and directing	
	(A)	Power.	(B)	Influence.	
	(C)	Authority.	(D)	Command.	
9.	What n	neasure should be needed to ensure	effec	tive recruitment ?	
	(A)	Keep pool of large size to get best	out of	it.	
	(B)	Address personnel needs of applic	ants.	OX	
	(C)	Meet economies of scale for an org	ganiza	ition.	
	(D)	Clearly understand organizationa	ıl goal	s.	
10.	The a	ctions of people at work place are st	udied	under which of the following discipline?	
	(A)	Psychology.	(B)	Organizational behaviour.	
	(C)	Sociology.	(D)	Anthropology.	
11.	Which	of the following is served as criteria	a for d	eclaring a particular job as worth-full?	
	(A)	Physical motion.	(B)	Significance of task.	
	(C)	Mental stress.	(D)	Long working hours.	
12.	The th	ree most important job-related attit	udes	are:	
	(A)	Job involvement, organizational c	ommi	tment and job enrichment.	
	(B)	Job satisfaction, job orientation ar	nd org	ranizational commitment.	
	(C)	Job satisfaction, job involvement a	and or	ganizational commitment.	
	(D)	Job satisfaction, job enlargement	and o	rganizational behaviour.	
13.	Which employ		espor	asible for handling safely and health issues of	
	(A)	HR department.	(B)	Procurement department.	
	(C)	Finance department.	(D)	Marketing department.	

14.	Which of the following information is NOT collected through observation method while conducting job analysis?						
	(A)	Who is monitoring the task?	(B)	What task has done?			
	(C)	How task has done?	(D)	How long a task has taken to complete?			
15.	Goal se	etting is :					
	(A)	Top down process.					
	(B)	Bottom up process.		, 10			
	(C)	A process of top down support and	l botto	om up development.			
	(D)	A function of senior management	nior management.				
16.	Effective	veness is ———.		$O_{\mathbf{k}}$			
	(A)	Do right things.	(B)	Do things right.			
	(C)	Productivity.	(D)	All of the given options.			
17.	Organi	zation, where employees are provid	led wi	th the opportunity to learn on continuous basis is			
	known	as:					
	(A)	Formal.	(B)	Informal.			
	(C)	Bureaucratic.	(D)	Learning.			
18.	Which	of the following term is said to be a	part	of Organizational Structure?			
	(A)	Goal attainment.	(B)	Hierarchy level.			
	(C)	Performance standards.	(D)	Supporting staff.			
19.	HRIS h	nelps managers to perform ———	me	ore effectively and systematically.			
	(A)	Management functions.	(B)	Controlling functions.			
	(C)	Planning functions.	(D)	HR functions.			
20.	The goa	al of pre-retirement educational pr	ogran	as is to:			
	(A)	Improve job satisfaction.					
	(B)	Increase employee commitment.					
	(C)	Minimize medical claims from reti	rees.				

 $(D) \quad Ease the \, transition \, from \, working \, life \, to \, retirement.$

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(Pages: 3)

Name	B
Reg.	No

THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.B.A.

BBA IIIB 04—HUMAN RESOURCE MANAGEMENT

	(2015 Adm	issions)	Ci),
Time: Three	e Hours		Maximum: 80 Marks
	Part A (Objectiv	ve Questions)	·AL
	Answer all ter Each question ca	-	
1. Under	project are about re	r the multiple mutual be	nefits of the organisation,
employ	rees and their family members.		
a)	Human resource management.	25,	
b)	Personnel management.		
c)	Functional management.		
d)	Performance management.		
2. Which	is a continuous process of human resou	rces management?	
a)	Pricing. b)	Recruitment.	
c)	Job. d)	Valuation.	
3. Bonus	comes under the category of ————	<u>-</u> .	
a)	Wages. b)	Allowances.	
c)	Incentives. d)	Fringe benefits.	
4. The pr	ocess of estimating manpower requirem	ents is called ————	
a)	Human resource management.		
b)	Human resource planning.		
c)	Human resource policy.		
d)	Human resource control.		

5.	The process of collecting information	on relating to	a job is ——	3	
	a) Job evaluation.	b)	Job descripti	on.	
	c) Job analysis.	d)	Job specifica	tion.	
Fill in	the blanks:				
6.	In Human resource management n	nanpower is	considered as	a	
7.	A statement of facts relating to a jo	b is called —		–.	Ci),
8.	is the process of	of introducing	g a selected em	ployee to the	organisation.
9.	is a sequence	of jobs or pos	sitions held by	an individua	during his life time.
10.	A dispute or disagreement	about any	terms and	conditions	of employment is
	called ———.		A	0,	$(10 \times 1 = 10 \text{ marks})$
	Part B (Short Ansv	ver Questions	s)	
	Answer any eight out of	^r the ten ques	stions in two o	r three senten	aces.
	• •	question car			
11.	What do you mean by discipline?	111/1			
12.	Define human resource manageme	ent.			
13.	What is job specification?				
14.	Define Strategic Human Resource	Managemen	t.		
15.	Define Placement.				
16.	Define Recruitment.				
17.	What is Compensation?				
18.	What is job analysis?				
19.	Define Grievance.				
20.	Define job evaluation.				
					$(8 \times 2 = 16 \text{ marks})$

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Part C (Short Essay Questions)

Answer any six out of the eight questions in about 200 words.

Each question carries 4 marks.

- 21. Discuss the process of management by objectives.
- 22. What are the characteristics of performance appraisal?
- 23. What are the differences between traditional human resource management and Strategic Human Resource Management?
- 24. What are the objectives of training?
- 25. What are the aims and objectives of discipline?
- 26. What are the demerits of external source of recruitment?
- 27. What are the objectives of career planning?
- 28. What are the basic principles of a sound grievance handling procedure?

 $(6 \times 4 = 24 \text{ marks})$

Part D (Essay Questions)

Answer any **two** out of the three questions in about 800 words. Each question carries 15 marks.

29. Discuss the factors influencing wage system.

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- 30. Explain the need and importance of performance appraisal.
- 31. Explain the objectives of Human Resource Management.

 $(2 \times 15 = 30 \text{ marks})$

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THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.B.A.

BBA IIIB 03—BUSINESS REGULATORY FRAMEWORK
(Multiple Choice Questions for SDE Candidates)

Time: 15 Minutes Total No. of Questions: 20 Maximum: 20 Marks

INSTRUCTIONS TO THE CANDIDATE

- 1. This Question Paper carries Multiple Choice Questions from 1 to 20.
- 2. The candidate should check that the question paper supplied to him/her contains all the 20 questions in serial order.
- 3. Each question is provided with choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and enter it in the main answer-book.
- 4. The MCQ question paper will be supplied after the completion of the descriptive examination.

BBA IIIB 03—BUSINESS REGULATORY FRAMEWORK

(Multiple Choice Questions for SDE Candidates)

1.	A Void	agreement is one which is:		
	(A)	Valid but not enforceable.		
	(B)	Enforceable at the option of both	he pa	eements are:
	(C)	Enforceable at the option of one p	arty.	
	(D)	Not enforceable in a court of law.		
2.	In case	of illegal agreements, the collatera	l agre	eements are :
	(A)	Valid.	(B)	Void.
	(C)	Voidable.	(D)	None of these.
3.	An agre	eement the object or consideration	of wh	ich is unlawful, is :
	(A)	Void.	(B)	Valid.
	(C)	Voidable	(D)	Contingent.
4.	Conside	eration must move at the desire of-	77	 .
	(A)	Promisor.	(B)	Promisee.
	(C)	Any other person.	(D)	None of these.
5.	Implied are sati		expre	ess words, is perfectly ———— if other conditions
	(A)	Void.	(B)	Valid.
	(C)	Voidable.	(D)	Illegal.
6.	When t	the consent of a party is obtained by	y frau	d, the contract is ———.
	(A)	Valid.	(B)	Void.
	(C)	Voidable.	(D)	Illegal.

7.	A agrees to sell his car worth Rs. 3,00,000 to B for Rs. 25,000 only, and A's consent was obtained by coercion. Here, the agreement is:				
	(A)	Void.	(B)	Valid.	
	(C)	Voidable.	(D)	Unlawful.	
8.		es to pay Rs. $5,000$ to B if it rains, an nent is an example of :	dBp	romise to pay Rs. 5,000 to A if it Does not rain, this	
	(A)	Quasi contract.	(B)	Contingent contract.	
	(C)	Wagering agreement.	(D)	Voidable.	
9.	An agı	reement in restraint of marriage is	a	Voidable.	
	(A)	Valid.	(B)	Voidable.	
	(C)	Void.	(D)	Contingent.	
10.	A cont	ract made by mistake of the Indian	law is	S:	
	(A)	Void.	(B)	Valid.	
	(C)	Voidable.	(D)	Illegal.	
11.	Which	of the following statement is true?	11,		
	(A)	Consideration must be adequate.			
	(B)	Past consideration is no considera	tion.		
	(C)	Consideration is something, which	h a pr	omisor is not already bound to do.	
	(D)	Consideration must result in a ber	nefit t	to both parties.	
l2.	Which	of the following statement is true?			
	(A)	Agreement in restraint of legal pro	oceed	ings.	
	(B)	Agreement by an outgoing partne a specified period of within specific	r with ed loc	n his partners not to carry on any business within al limits.	
	(C)	Voidable agreement.			
	(D)	Contingent contracts.			
		·			

13.	Consid	eration means :		
	(A)	Nothing in return.	(B)	Something in return.
	(C)	Everything in return.	(D)	Anything in return.
14.	Liabilit	y of joint promisors is :		
	(A)	Several.	(B)	Joint.
	(C)	Joint and several.	(D)	None of these.
15.	Quasi o	contract is also known as ———.		
	(A)	Constructive contract.	(B)	Executory contract.
	(C)	Executed contract.	(D)	All of these.
16.	Reason	able time stands for :		A
	(A)	One month.	(B)	One day.
	(C)	One week.	(D)	Depends up on the circumstances of the case.
17.	Resciss	ion means ——— of the contract		
	(A)	Cancellation.	(B)	Introduction.
	(C)	Maintenance.	(D)	None of these.
18.	In a cor	ntract of bailment there is a transfe	er of -	 .
	(A)	Possession.	(B)	Ownership.
	(C)	Possession and ownership both.	(D)	None.
19.	Contra	ct of bailment may be for the benef	it of -	
	(A)	Bailor.	(B)	Bailee.
	(C)	Both the parties.	(D)	Any one.
20.	A contr	act of sale include both sale and —		- .
	(A)	Purchase.	(B)	Resale.
	(C)	Agreement to sale.	(D)	None of these.

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(Pages: 3)

Name
Reg. No

THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION **NOVEMBER 2020**

B.B.A.

		BBA IIIB 03—BUSINESS F	REG	ULATORY FRAMEWORK			
Time	: Three	Hours		Maximum : 80 Marks			
		Pa	ırt I				
		Answer al Each question	_				
1.	Conside	eration must move at the desire of —					
	a)	Promisee.	b)	Promisor.			
	c)	Any other person.	d)	None of these.			
2.	In a con	ntract of guarantee, the liability of th	ne sı	rrety is ———.			
	a)	Primary.	b)	Not existing.			
	c)	Absolute.	d)	Secondary.			
3.	3. A contract in which one person promises to save the other from the loss suffered by him due to conduct of the promisor or of any other person is known as ————.						
	a)	Contract of guarantee.	b)	Contract of indemnity.			
	c)	Quasi contract.	d)	Void contract.			
4.	A conti	ract of agency does not require ———		- .			
	a)	Principal.	b)	Agent.			
	c)	Consideration.	d)	None of these.			
5 .	Right o	of lien implies :					
	a)	Deliver the goods.	b)	Regain the possession.			
	c)	Retain the possession.	d)	None of these.			
6.	A wron	g representation when made withou	t an	y intention to deceive the other party amounts to			
•	700 1						
7.	The de	livery of goods by one person to anoth	ner a	as security of the repayment of a debt is known as			

- 8. Goods which are in existence at the time of the contract of sale is known as ———.
- 9. ——— means any allegation in writing made by a complainant with a view to obtaining any relief provided by or under the Consumer Protection Act, 1986.
- 10. The District Consumer Redressal Forum shall have jurisdiction to entertain complaints where the value of the goods or services and the compensation, if any, claimed does not exceed Rs. ————.

 $(10 \times 1 = 10 \text{ marks})$

Part II (Short Answer Questions)

Answer any **eight** questions. Each question carries 2 marks.

- 11. What is voidable contract?
- 12. What is a general offer?
- 13. What is a bilateral mistake?
- 14. What are the rights of an indemnity holder?
- 15. Define Bailment.
- 16. What is a specific guarantee?
- 17. What is a contract of agency?
- 18. Define the term 'agreement to sell'.
- 19. Explain the terms 'condition' and 'warranty'.
- 20. Which are the consumer disputes redressal agencies provided under the Consumer Protection Act, 1986?

 $(8 \times 2 = 16 \text{ marks})$

Part III (Short Essays)

Answer any six questions.

Each question carries 4 marks.

- 21. Define Consent. When consent is said to be free?
- 22. What are the remedies for breach of contract?
- 23. What are the essentials of contract of guarantee? Explain the different types of guarantees.
- 24. State briefly the circumstances in which a surety is discharged from liability.

- State briefly the duties of an agent to the principal.
- What are the rights and duties of a bailor? 26.
- Explain the circumstances under which sale of goods by non-owner is valid. 27.
- What is the composition and jurisdiction of the National Consumer Redressal Commission? 28.

 $(6 \times 4 = 24 \text{ marks})$

Part IV (Long Essays)

Answer any two questions. Each question carries 15 marks.

- 29. Define Contract. Explain the different classification of contract.
- 30. Define 'agent' and 'principal'. Explain the different modes of termination of agency.
- 31. Briefly explain the implied conditions and warranties as stated in the Sale of Goods Act. CHNIK LIBRARY UNIVERSITY

 $(2 \times 15 = 30 \text{ marks})$

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Reg. No.....

THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

B.Com. (2014-2016 Admissions)/B.B.A. (2014-2018 Admissions)

BCM 3A 11—BASIC NUMERICAL SKILLS

Time: Three Hours Maximum: 80 Marks

Part I

Answer all questions.

Each question carries 1 mark

	Each question carries 1 mark.								
I.	Choose th	e correct answer :		OX					
	1 The r	neasure of dispersion based on all	the	observations of the series is:					
	a)	Range.	b)	Quartile deviation.					
	c)	Standard deviation.	d)	Inter quartile range.					
	2 A ma	trix with a single column is called	la:						
	a)	Column matrix.	b)	Zero matrix.					
	c)	Identity matrix.	d)	Row matrix.					
3 A statement of equality of two expressions is known as:									
	a)	Equation.	b)	Association.					
	c)	Co-efficient.	d)	Equality.					
	4 Sequence of numbers whose terms increase or decrease by a 'constant ratio' is called :								
	a)	Permutation.	b)	Geometric Progression.					
	c)	Common ratio.	d)	Arithmetic progression.					
5 The weight used in Paasche's formula belongs to:									
	a)	Current period.	b)	Base period.					
	c)	Any arbitrary chosen period.	d)	None.					

II. Fill in the blanks:

- 6 The equation of the first degree is called ———.
- 7 A⁻¹ means ————.
- 8 Index numbers shows —————————— changes rather than absolute changes.
- 9 ———— is the value of the variable corresponding to the highest frequency.
- 10 The midpoint of a class is —————

 $(10 \times 1 = 10 \text{ marks})$

Part II

Answer any **eight** questions. Each question carries 2 marks.

- 11 What is complex numbers?
- 12 Define Polynomials.

13 If
$$A = \{1, 4, 7, 10\}$$
, $B = \{2, 4, 5, 8\}$, $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ find $A \cap B$.

- 14 Insert 5 Geometric Means between 2 and 31, 250.
- 15 Rs. 10,000 for 3 years @ 15 % p.a. Calculate the simple interest and amount for the investment.
- 16 What is Triangular Matrix?
- 17 Find Range:

- 18 Which term of the A.P. 49, 44, 39,....9 ?
- 19 Calculate determinant of $A = \begin{pmatrix} 2 & 7 \\ 5 & 3 \end{pmatrix}$.
- 20 Find the 15^{th} term of the series 3, -6, 12, -24...

 $(8 \times 2 = 16 \text{ marks})$

Part III

Answer any six questions in about 200 words. Each question carries 4 marks.

21. What is Graph? What are the uses of graphs?

22. Solve:
$$x^2 - y^2 = 20$$

 $x + y = 10$.

- 23. Find the sum to n terms of the series $6 + 66 + 666 + \dots n$ terms.
- 24. A person borrows Rs. 10,000 at 10 % simple interest and lends it out at the same rate of compound interest. What is his net earnings in 4 years?
- 25. Calculate determinant of the matrix,

$$A = \begin{bmatrix} 2 & 7 & 3 \\ 6 & 4 & 8 \\ 1 & 2 & 5 \end{bmatrix}.$$

26 From the following distribution find the harmonic mean:

x	15	237 1345	45678	0.5	0.015	.00237
f	7	6 5	4	3	2	1

27. Calculate simple index number by average relative method:

Items	:	1	2	3	4	5
Price in base year		5	10	15	20	8
Price in current year	:	7	12	25	18	9

28. What is Price Index Numbers and what are the methods used for the construction of price index numbers?

 $(6 \times 4 = 24 \text{ marks})$

Part IV (Essay Questions)

Answer any **two** questions. Each question carries 15 marks.

29 If
$$A = \begin{bmatrix} 1 & 5 & 2 \\ 3 & -2 & 4 \\ 6 & 2 & 1 \end{bmatrix}$$
, find the inverse of A .

30 The marks of two students A and B during a examination are as follows. Examine who is more consistent in marks, who is more efficient?

Student A	10	12	80	70	60 100	0	4
Student B	8	9	7	10	5 9	10	8

:.

31 Explain the different stages in a statistical enquiry.

$$(2 \times 15 = 30 \text{ marks})$$