Reg. No. | | | | | | | |

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.
(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.COM., PROFESSIONAL ACCOUNTING

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	ELECTIVE GENERIC - 3	U23PA3A3	BUSINESS MATHEMATICS AND STATISTICS

Date & Session: 14.11.2024 / AN   **Time : 3 hours**   **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	If A is 25 less than B then what will be the value of (2B-A)/A? a) 5/4 b) 3/2 c) 3/4 d) 5/3
CO1	K2	2.	Two ratio 384 : 480 in its simplest form is a) 3 : 5 b) 5 : 4 c) 4 : 5 d) 2 : 5
CO2	K1	3.	Calculate the simple interest if the principal amount is 50000 and the rate is 2% for 4 years. a) 4000 b) 400 c) 40000 d) 40
CO2	K2	4.	What is the simple interest formula? a) SI = PTR/100 b) SI = PNR/100 c) SI = PTN/100 d) SI = PTR/N
CO3	K1	5.	Relation between mean, median and mode is given. a) Mode = 2 Median – 3 Mean b) Mode = 2 Median + 3 Mean c) Mode = 3 Median – 2 Mean d) Mode = 3 Median + 2 Mean
CO3	K2	6.	If the variance of the data is 121, the standard deviation of the data is: a) 121 b) 11 c) 12 d) 21
CO4	K1	7.	The positive correlation means. a) X and Y are directly related b) X and Y are indirectly related c) X and Y are equally related d) none of these
CO4	K2	8.	if one of the regression coefficients is negative the other _____. a) must be negative b) must be positive c) must be equal d) none of these
CO5	K1	9.	index number is a _____. a) ratio b) multiplier c) divisor d) all of these
CO5	K2	10.	A movement in the time series that repeats over a period of 6 months is known as. a) secular trend b) seasonality c) cyclical trend d) irregular trend p

Course Outcome	Bloom's K-level	Q. No.	SECTION – B (5 X 5 = 25 Marks) Answer ALL Questions choosing either (a) or (b)
CO1	K3	11a.	The numbers are in the ratio 1:2:3. By adding 5 to each of the numbers then the ratio changes to 2:3:4. Calculate the smallest number. **(OR)**
CO1	K3	11b.	If 4, a, a, 36 are in proportion, then a = ?
CO2	K3	12a.	Calculate Simple interest on the sum of Rs 50,000 for 3 years at 6% rate of interest p.a. Also find the amount at the end of period. **(OR)**
CO2	K3	12b.	How do you calculate the Present Value(PV) of an Annuity?
CO3	K4	13a.	What is the formula for the median? **(OR)**
CO3	K4	13b.	Find the Variance and Standard Deviation of the Following Numbers: 1, 3, 5, 5, 6, 7, 9, 10.

CO4	K4	14a.	Distinguish Between Correlation and Regression.

(OR)

CO4	K4	14b.	Calculate the rank correlation co-efficient between 'X' and 'Y' variables.

X	10	20	35	14	18	21	16
Y	15	25	18	19	20	26	27

CO5	K5	15a.	The table below presents the average fares per railway journey.

Using 2010 average = 100, calculations are made according to base year weights.

Class of Ticket	No. of passenger journeys in 2010 (in million	Fare	
		2010	2020
Full Fare	23	12	60
Excursions	25	6	30
Festival	20	4	15
Season tickets	32	5	14

(OR)

CO5	K5	15b.	Write short note on Moving Average Method

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	16a.	The ratio of income of two persons is 10:6 and that of their expenditures is 8:10. If they save of Rs. 5,200 and Rs. 3,600 respectively. Calculate their income.

(OR)

CO1	K3	16b.	The first, second and fourth terms of a proportion are 16, 24 and 54 respectively. Calculate the third term.

CO2	K4	17a.	Mr. Sachin borrowing Rs.12000 for 4 years at compound interest rate of 8% p.a. How much will he have to repay at the end of the period.
CO2	K4	17b.	**(OR)** Harsh opened a recurring deposit in a bank for 4 years with payments of Rs. 5,000 paid at the end of every year. Find the money he will get at the end of period with 6% p.a

CO3	K4	18a.	Consider the following frequency distribution. Calculate the mean weight of students.

Weight (in kg)	31-35	36 – 40	41 – 45	46 – 50	51 – 55	56 – 60	61 – 65	66 – 70	71 – 75
Number of Students	9	6	15	3	1	2	2	1	1

(OR)

CO3	K4	18b.	The mean and standard deviation of 200 items are found to be 60 and 20 respectively? If at the time of calculation two items were wrongly taken as 3 and 67 instead of 13 and 17. Find the correct mean and standard deviation What is the correct coefficient of variation?

CO4	K5	19a.	The following data gives the marks obtained by 10 students in accountancy and statistics. find the coefficient of correlation.

Accountancy	45	70	65	30	90	40	50	75	85	60
Statistics	35	90	70	40	95	40	60	80	80	50

(OR)

CO4	K5	19b.	A student obtained the following two regression equation. Do you agree with him? 6X=15Y+21; 21X+14Y=56

CO5	K5	20a.	Calculate Laspeyres' and Paasche's Index Number from the following data

Items	Base year		Current year	
	Price (Rs.)	Quantity	Price (Rs.)	Quantity
A	20	7	25	9
B	42	6	40	8
C	30	17	25	4
D	8	15	14	10
E	10	8	13	5

(OR)

CO5	K5	20b.	Using three year moving averages determines the trend and short-term fluctuation.

Year	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Production	21	22	23	25	24	22	25	26	27	26