

B COM DEGREE END SEMESTER EXAMINATION - OCT. 2020 : FEBRUARY 2021**SEMESTER 1 : COMMERCE (CORE COURSE)****COURSE : 19U1RCOM1 : BUSINESS STATISTICS***(Common for Regular - 2020 & Improvement / Supplementary 2019 Admission)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 10 (2 marks each)**

1. What is Empirical Analysis?
2. "Statistics are like the clay of which one can make God or Devil as one likes". Comment
3. What is a spatial Series?
4. Average rainfall in Ponmudi from Monday to Saturday was 5 cm. Due to heavy rainfall on Sunday, the average for the week increased to 10cm. Find the rainfall on Sunday.

5. Calculate the average daily income of 10 families

family	1	2	3	4	5	6	7	8	9	10
income	18	20	35	55	38	54	100	85	37	53

6. What do you understand by the term dispersion?
7. What is meant by quantity index number? How is it different from value index number?
8. What do you mean by the line of best fit?
9. Find the code for the following
 - a) In a certain code 'PURPOSE' is written as 'UPPRSOE'. How 'WATER' be written in that code?
 - b) 'ZYXW' as coded as 'ABCD' then 'STUV' is coded as.....
10. Choose the correct answer
 - a) Statements: All Carrots are birds. Some telephones are Carrots. All bedsheets are telephone.
Conclusion:
 - I. All bedsheets are birds
 - II. Some bedsheets are birds
 - III. Some birds are telephones
 - IV. All telephones are birds
 1. Only I follows
 2. Only II follows
 3. Only I and III follow
 4. Only III follows
 - b) If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?
A. Brother B. Sister
C. Nephew D. Cannot be determined
11. There are Five houses P, Q, R, S, T. P is right of Q and T is left of R and right of P. Q is right of S. Which house is in the middle.
12. Find the present value of Rs. 10,000 to be required after 5 years if the interest rate is 9%?

(2 x 10 = 20)**PART B****Answer any 5 (5 marks each)**

13. What is meant by coding of data? Also, explain the different methods of coding?
14. Find median from the following

Wages:	Above 0	Above 10	Above 20	Above 30	Above 40	Above 50
No of labourers:	650	500	425	375	300	275
Wages:	Above 60	Above 70				
No of labourers:	250	100				
15. In the frequency distribution of 100 families given below, the number of families corresponding to income groups 20-40 and 60-80 are missing from the table. However the median is known to be 50. Find the missing frequencies?

Income:	0-20	20-40	40-60	60-80	80-100
No of Families:	14	?	27	?	15
16. Compute mean deviation about median and the coefficient of Mean Deviation for the frequency distribution given below:

Size	5	8	13	20	25	30	40
Frequency	2	10	20	35	18	7	5

17. Find the standard deviation and coefficient of variation of the values:

Values	10	12	80	70	60	100	0	4
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18. From the following calculate Fisher's ideal index number and see whether it satisfies time reversal and factor reversal test.

Commodity	BASE YEAR		CURRENT YEAR	
	price	expenditure	price	expenditure
A	6	300	10	600
B	2	200	2	240
C	4	240	6	360

19. Solve the following

- If in a certain language CARROM is coded as BZQQNL, which word will be coded as HORSE?
- If PAINT is coded as 74128 and EXCEL is coded as 93596, then how would you encode ANCIENT?
- If TAP is coded as SZO, then how is FRIEND coded?
- In a certain code, MENTION is written as LNEITNO. How is PRESENT written in that code?
- In a certain code, 2 is coded as P, 3 as N, 9 as Q, 5 as R, 4 as A and 6 as B. How is 423599 coded in that code?

20. Find the odd man out.

- January, May, July, November
- 10, 14, 16, 18, 23, 24 and 26
- 1, 5, 14, 30, 51, 55, 91
- 16, 25, 36, 62, 144, 196, 225
- 41, 43, 47, 53, 61, 71, 73, 75

(5 x 5 = 25)

PART C

Answer any 3 (10 marks each)

- What are the different methods of collecting primary data and secondary data?
- Calculate Median and the percentage of failure if the minimum mark for pass is 35, from the following data:-

Marks	: 0-20	21-30	31-40	41-50	51-60	61-70	71-80
No of Students:	42	38	120	84	48	36	31

23. Calculate mean deviation and its coefficient from median

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	5	8	12	15	20	14	12	6

24. The following relate to the number of tourists visited in a tourist spot from 2001 to 2007. Fit a straight line trend by the method of least square obtain the trend value and also estimate the number of tourist expected to visit in 2010. Also calculate the monthly increase in sales.

year	no.of tourist
2001	300
2002	700
2003	600
2004	800
2005	900
2006	700
2007	1000

25. Answer the following questions

Sachin deposited Rs.1,00,000 in his bank for 2 years at simple interest rate of 6%. How much interest would he earn? How much would be the final value of deposit?

Find in what ratio will the total wages of the workers of a factory be increased or decreased if there be a reduction in the number of workers in the ratio 15:11 and an increment in their wages in the ratio 22:25.

(10 x 3 = 30)