Reg. No .... Name **21U229S**

B B A DEGREE END SEMESTER EXAMINATION - JULY 2021
SEMESTER 2 : INTEGRATED MARKETING AND NEW MEDIA
COURSE : **16U2CRBBA5 : BUSINESS STATISTICS**
(For Supplementary 2019/ 2018/2017/2016 Admissions)

Time : Three Hours   Max. Marks: 75

PART A
Answer All (1 mark each)

1. What is frequency?
2. What is class boundary
3. Calculate AM of 12, 18, 16, 14, 20, 32. 28.
4. What is coeffecient of range?
5. What is a time series component?
6. What is positive correlation?

                                                                     (1 x 6 = 6)

PART B
Answer any 7 (2 marks each)

7. Write note on classification of data
8. What is more than cumulative frequency distribution?
9. The mean wage of 60 workers in morning shift is Rs.40. The mean wage of 40 workers working in the evening shift is 60. Calculate combined mean of both the shifts.
10. The table below gives the number of accidents each yearata particular road junction:

1991	1992	1993	1994	1995	1996	1997	1998
4	5	4	2	10	5	3	5

    Work out the mean, median, modee for thee value above?
11. 4 students were asked to write the total number of hours per week they spent on watching television. With this information find the standard deviation of hours spent forwatching television.

x	6	7	8	9	10	11	12
f	3	6	9	13	8	5	4

12. The frequency distributions of seed yield of 50 seasamum plants are given below. Find the standard deviation.

Seed yield in gms	3	4	5	6	7
Frequency	4	6	15	15	10

13. What are the components of time series?
14. How do you calculate moving average for even years?
15. What are the different types of regressions?
16. What is multiple correlation?

                                                                     (2 x 7 = 14)

PART C
Answer any 5 (5 marks each)

17. In a class, there are 40 students. They are in the age groups of 16-17, 17-18 and 18-19. There are 18 students in the age group of 16-17 of which 6 are girls, 12 students are in the age group of 17-18 of which 4 are girls. Of the remaining students, 2 are girls. Present the information in a two-way table.

18. Calculate simple and weighted arithmetic averages from the following data and comment on them.

Designation	Weekly salaries(Rs.)	Strength of cadre
Class I Officers	1500	10
Class II Officers	800	20
Subordinate Staff	500	70
Clerical staff	250	100
Lower Staff	100	150

19. Calculate weighted arithmetic mean

No: of offices	10	15	20	25	30	35	40
No: of computers per office	4	5	12	14	18	20	22

20.
Marks	10	12	16	20	25	30	35	40
No. of Students	3	5	8	7	6	4	2	5

Calculate quartile deviation and its coeffecient

21. The following distribution relating to marks obtained by students in an examination

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No. of Students	2	4	5	7	5	3	8	6

Calculate Standard deviation

22. How do you measure trend by method of least square?

23. Explain various components of time series

24. Find the regression equation of y on x

X	40	34	28	30	44	38	31
Y	32	39	26	30	38	34	28

(5 x 5 = 25)

PART D
Answer any 2 (15 marks each)

25. Calculate median from the following

Month Exp. Less than (₹)	10	20	30	40	50	60	70
No: of Families	2	8	15	22	32	38	44

26. From the data given below, calculate standard deviation and coefficient of variation

Class	15-20	20-25	25-30	30-35	35-40	40-45
Frequency	12	40	86	60	52	30

27. Calculate 3-yearly, 5-yearly and 8-yearly moving average trend for the time series given below.

Year :	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Quantity :	12	18	21	17	22	20	21	28	22	20	30	28

28. Ten competitors in a voice test are ranked by 3 judges in the order as follows:

Ji	1	6	5	10	8	2	4	9	7	8
J2	3	5	8	4	7	10	2	1	6	9
J3	6	4	9	8	1	2	3	10	5	7

Which pair of judges have the nearest approach to common likings in voice?

(15 x 2 = 30)