AJEENKYA
D Y PATIL UNIVERSITY

End Term Examinations (December 2019)

School: SOM Program: BBA LOGISTICS &SUPPLY CHAIN MANAGEMENT

Course: BUSINESS MATHEMATICS Course Code: COM103

Semester: 1 Max Marks: 70 Duration (mins): 180

Note: 1. Figures to the right indicates full marks.

Attempt any seven from the following: (70 marks)

Q 1 (A) Define the following terms: (5 marks)
a. Loans b. Mortgages c. Sinking funds d. Net Present Value e. Annuities.

Q 1(B) A loan of Rs. 15,000 has been issued for 4 years at 5 % per annum. (5 marks)

Calculate amount to repaid on the basis of simple interest and compound interest

Compounded semi annually.

Q2. Calculate the mean deviation from median from the following data: (10 marks)

Class Interval	1-3	3-5	5-7	7-9	9-11	11-13	13-15	15-17
Frequency	6	53	85	56	21	26	4	4

Q3. From the following data draw (i) Histogram (ii) Frequency polygon (10 marks)

(iii) Frequency curve .

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	4	6	7	14	16	14	8	6	5

Q4. Calculate mean, median and mode. (10 marks)

Daily wages	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of worker (c. f.)	5	20	40	65	115	190	225	250

Q.5.Find the Rank correlation coefficient from the following marks awarded by the examiners in statistics: (10 marks)

Examiner A	24	29	19	14	30	19	27	30	20	28	11
Examiner B	37	35	16	26	23	27	19	20	16	11	21

Q6. A. calculate three yearly moving averages for the following data: (5 marks)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
y	242	250	252	249	253	255	251	257	260	265	262

Q6. B. An urn contains a thoroughly mixed set of 5 white, 8 red and 12 black marbles. (5 marks) Determine the probability of drawing. (i) either a white or black marble (ii) either a red or black marble.

Q7 (A) Draw Venn diagram for the following: (5 marks)

1. Only B 2. (AUB) 3. (A not) 4. A intersection B 5. (B)

Q7 (B) From the following frequency distribution draw two types of gives. (5 marks)

Marks obtained	0-10	10-20	20-30	30-40	40-50
No. of students	20	50	100	30	20

Q8 (A) Calculate Net Present value to determine whether to accept or reject the project?

(5 marks)

Cost of the project	Rs. 2,00,000
Year 1 cash inflow	Rs. 1,00,000
Year 2 cash inflow	Rs. 1,50,000
Year 3 cash inflow	Rs. 1,75,000

Q8 (B) Find the standard deviation and coefficient of variation from the following data:

(5 marks)

Score of A	6	73	7	119	36

****ALL THE BEST****