

**B.A. DEGREE END SEMESTER EXAMINATION - MARCH 2020****SEMESTER –6: ECONOMICS (CORE COURSE)****COURSE: 15U6CRECO11: QUANTITATIVE ECONOMICS**

*(Common for Regular 2017 Admission & Supplementary 2016 /2015 Admissions)*

Time: Three Hours

Max. Marks: 75

**PART A**

***Answer all questions in one or two sentences. Each question carries 1 mark.***

1. Probability
2. Normal curve
3. Coefficient of variation
4. Median
5. Regression
6. Correlation
7. Variance
8. Mode
9. Integration
10. Mutually exclusive events (1 x 10 = 10)

**PART B**

***Answer any eight of the following in three or four sentences. Each question carries 2 marks***

11. Bring out the merits of arithmetic mean
12. What are the mathematical properties of standard deviation?
13. What do you mean by conditional probability?
14. Scatter diagram
15. Explain Positive and Negative correlation
16. Write the sample space for the following cases a) tossing a coin b) Throwing a dice
17. Find mode 23, 35, 28,42,62,53,35,28,42,35,23,42,35
18. Explain Random experiment
19. Define Kurtosis
20. Define binomial distribution (2 x 8 = 16)

**PART C**

***Answer any five of the following in not more than one page. Each question carries 5 marks.***

21. Bring out the difference between correlation and regression
22. Explain various types of skewness using diagrams
23. What is a Lorenz curve? What are its economic implications?
24. Find the maxima and minima points of  $x^4 + 8x^3 - 80x^2 + 195$
25. Subin is a cricket player. The probability that he scores century in a match is  $\frac{1}{3}$ . Using binomial distribution, find the probability that out of 5 matches, he may score century in a) exactly 2 matches b) no matches.
26. Find Bowley's coefficient of skewness form the data given below

Marks	No. of students
1-5	3
6-10	4
11- 15	68
16- 20	30
21- 25	10
26- 30	6
31- 35	2

27. Compute standard deviation using step deviation method

Size	Frequency
0-2	2
2-4	4
4-6	6
6-8	4
8-10	2
10-12	6

(5 x 5 = 25)

#### PART D

**Answer any two of the following in not exceeding four pages. Each question carries 12 marks**

28. Discuss the properties of a normal curve. A project yields an average cash flow of Rs. 500 lakhs with a standard deviation of Rs. 50 lakhs. Calculate the following, cash flow will be 1) more than Rs. 560 lakhs 2) more than Rs.420 lakhs 3) between Rs. 460 lakhs and 540 lakhs

29. From the following data, obtain the two regression lines.

X : 61 68 68 64 65 70 63 62 64 67

Y : 112 123 130 115 110 125 100 113 116 125

Estimate Y when X is 69.

30. Find the value of the correlation coefficient using Karl Pearson's method

X	Y
43	99
21	65
25	79
42	75
57	87
59	81

31. Find mean, median and mode from the data given below

Marks : 0-10 0-20 0-30 0-40 0-50 0-60 0-70

No. of Students : 3 13 28 48 60 67 70

(12 x 2 = 24)