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B.A. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017

Fourth Semester

B.A. Economics (Model II)

QUANTITATIVE ECONOMICS

(2013 Admission onwards)

Time : Three Hours Maximum Marks : 80

Part A (Definition Type Questions)

Answer **all** *the following questions in* **one sentence** *each.*
Each question carries 1 *mark.*

1. Arithmetic mean.
2. Median.
3. Standard deviation.
4. Harmonic mean.
5. Conditional probability.
6. Lorenz Curve.
7. Correlation.
8. Regression.
9. Sampling.
10. Normal distribution.

(10 × 1 = 10)

Part B (Short Answer Questions)

Answer any **eight** *of the following questions in* **a paragraph** *each not exceeding* 100 *words.*
Each question carries 2 *marks.*

11. Difference between Arithmetic mean and Weighted Arithmetic mean.
12. Explain the merits of using mode.
13. Difference between Bar diagram and Histogram.
14. Explain the condition for first order derivatives.
15. State and explain addition theory of probability.
16. Difference between Correlation and Regression.
17. Difference between Skewness and Kurtosis.
18. Explain the regression equation Y on X $Y = a + bX + C$.
19. Difference between time series data and cross-section data.
20. State and explain the concept of Ordinary Least Square (OLS) method.
21. Explain the concept of quartile deviation.
22. Explain the merits and demerits of correlation.

(8 × 2 = 16)

Turn over

Part C (Short Essays)

Answer any **six** *of the following questions in* **one and a half pages** *each not exceeding* 150 *words. Each question carries* 4 *marks.*

23. Briefly explain the economic application of derivatives with examples.

24. State and explain the concept of moments.

25. State and explain multiplication theory of probability.

26. Calculate the Linear regression of Y on X :

X	:	15	20	30	45	50
Y	:	10	15	20	25	30

27. The frequency table present the income in hundred by family consist 259 in Trivandrum shows that :

Income :	0—10	10—50	50—200	200—500
f	22	78	124	35

28. Find out the standard deviation of the following data :

Wages (X) :	0—20	20—40	40—60	60—80
No. of workers (Y) :	10	15	20	22

29. State and explain the uses of binomial distribution.

30. Explain the methods of studying regression.

31. Explain the methods of measuring correlation by using scatter diagram.

(6 × 4 = 24)

Part D (Long Essays)

Answer any **two** *of the following questions not exceeding* **four** *pages each. Each question carries* 15 *marks.*

32. Find out the coefficient of correlation between the value of supply (X) and price (Y) :

Year :	2005	2006	2007	2008	2009
Supply (X) :	100	200	300	400	500
Supply (Y) :	10	20	30	40	50

33. State and explain the practical application of Maxima and Minima function in economics through suitable diagram.

34. What do you mean by central tendency ? Briefly explain the merits and demerits of mean, median and mode.

35. A box contain 12 white and 15 black balls. 8 balls are drawn at together. What is the probability that (a) all are black ; and (b) all are white?

(2 × 15 = 30)