B.A. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2015

Sixth Semester

B.A. Economics (Model I)

Core Course—QUANTITATIVE ECONOMICS

Time : Three Hours   Maximum Weight : 25

Part A

Answer all questions.
Each bunch of four questions carries a weight of 1.
Choose the correct answer for the following questions.

I.   1   If Arithmetic mean is 40 and $n = 20$, the value of ΣX is :

         (a) 40.   (b) 200.

         (c) 20.   (d) 800.

     2   Measure of central tendency can also be called as :

         (a) Correlation.   (b) Averages.

         (c) Dispersion.   (d) Regression.

     3   The maximum number of times a number appears in a series is referred to as :

         (a) Mode.   (b) Mean.

         (c) Median.   (d) None.

     4   Which of the following divides a group of data into four sub-groups?

         (a) Quartiles.   (b) Percentiles.

         (c) Median.   (d) Standard deviation.

II.   5   The sum of squares of deviation is least when measured from :

         (a) Median.   (b) Mode.

         (c) Mean.   (d) Zero.

     6   The value that divides the distribution into 100 parts is :

         (a) Median.   (b) Quartiles.

         (c) Deciles.   (d) Percentiles.

     7   $(L - S) \div (L + S)$ is used to measure the :

         (a) Coefficient of range.   (b) Quartile deviation.

         (c) Mean deviation.   (d) Standard deviation.

8 All are measures of dispersion *except* :

    (a) Mean deviation.   (b) Range.

    (c) Median.   (d) Standard deviation.

III. 9 The square of Standard deviation is :

    (a) Range.   (b) Variance.

    (c) Mean deviation.   (d) Median.

10 If $Q_1 = 33.06$, $Q_3 = 38.75$ the coefficient of quartile deviation is :

    (a) 2.0.   (b) 1.85.

    (c) 2.85.   (d) 0.08.

11 When coefficient of skewness is zero, the distribution is :

    (a) J-shaped.   (b) U-shaped.

    (c) L-shaped.   (d) Symmetrical.

12 Binomial distribution was discovered by :

    (a) James Bernouli.   (b) Pascal.

    (c) Fisher.   (d) None.

IV. 13 Multiplication theory is associated with :

    (a) Correlation.   (b) Time series.

    (c) Probability.   (d) Index Numbers.

14 Karl-Pearson's coefficient of skewness is :

    (a) Always positive.   (b) Always negative.

    (c) Always zero.   (d) Can be positive, negative or zero.

15 The semi-interquartile range is most closely related to :

    (a) Mean.   (b) Median.

    (c) Mode.   (d) None.

16 The first moment about mean (μ) is always :

    (a) One.   (b) Zero.

    (c) + 3.   (d) – 3.

$(4 \times 1 = 4)$

Part B (Short Answer Questions)

Answer any **five** *questions not exceeding 50 words each.*
Each question carries a weight of 1.

17 Define Quartiles.

18 Range.

19 Correlation.

20 Mode.

21 Binomial Distribution.

22 Skewness.

23 Regression coefficients.

24 Scatter diagram.

$(5 \times 1 = 5)$

Part C (Short Essays)

Answer any **four** *questions not exceeding 50 words each.*
Each question carries a weight of 2.

25 Explain merits and demerits of mean.

26 Compute mean from the following data :—

Marks (more than)	75	85	95	105	115	125	135	145
No. of students	150	140	115	95	70	60	40	25

27 Calculate median and mode from the following data :—

Profit	0—10	10—20	20—30	30—40	40—50	50—60
No. of shops	12	18	27	20	17	6

28 Calculate Quartile Deviation and its coefficient :

X	30—32	32—34	34—36	36—38	38—40	40—42	42—44
f	12	18	16	14	12	8	6

29 Explain the uses of Regression Analysis.

30 What is normal Distribution and explain its salient features.

$(4 \times 2 = 8)$

Part D (Long Essays)

Answer any **two** *questions not exceeding 450 words each.*
Each question carries a weight of 4.

31 Explain the uses of Normal Distribution. Assume the mean height of children to be 68.22 cm. with the variance of 10.8 cm. How many children in a school of 1000 would you expect to be over 72 cm. tall ?

Turn over

32 Define Probability. One bag contains 5 white and 4 black balls. Another bag contains seven white and nine black balls. A ball is tranferred from the first bag to the second and then a ball is drawn from the second. Find the probability that the ball is white.

33 Explain the uses of correlation. Calculate Karl-Pearson's coefficient of correlation for the data given below :

X :	45	55	56	58	60	65	68	70	75	80	85
Y :	56	50	48	60	62	64	65	70	74	82	90

$(2 \times 4 = 8)$