BCOM DEGREE END SEMESTER EXAMINATION - OCTOBER 2015

SEMESTER - 1: B COM (CORE COURSE)
COURSE: 15U1CRCOM1 – BUSINESS STATISTICS

Time: Three Hours   Max. Marks: 75

Section – A

Answer all questions. Each question carries **two** marks.

1. What do you understand by central tendency?

2. Define Harmonic mean.

3. What is an index number?

4. What is meant by time series analysis?

5. Give any two properties of arithmetic mean.

6. Find the Geometric mean of 1.05, 1.08, and 1.77.

7. A person walks 9 hours at a speed of 3 kms per hour and again walks 8 hours at a speed of 4 kms per hour. Find weighted harmonic mean.

8. The mean of 5 observations is 3 and variance is 2. If three of the five observations are 5, 1, 3, find the other two.

9. The average marks of 80 students were found to be 40. Later, it was discovered that a score of 54 was misread as 84. Find the correct mean of 80 students.

10. Define Dispersion.   (2 x 10 = 20)

Section – B

Answer any **five** questions. Each question carries **five** marks.

11. Define the term "Statistics" and Discuss its limitations

12. Define Geometric Mean and discuss its merits and demerits

13. Describe any three measures of skewness.

14. Find out the mean deviation from mean for the following data

Class interval :	2 – 4	4 – 6	6 – 8	8 – 10
Frequency :	3	4	2	1

15. From the following data, calculate the trend values using four-yearly moving average:

Year :	2001	2002	2003	2004	2005	2006	2007	2008	2009
Values :	506	620	1036	673	588	696	1116	738	663

16. The sum of 50 observations is 500 and their sum of squares is 6,000 and median is 12. Compute the coefficient of variation and the coefficient of skewness.

17. Find the cost of living index for the following data:

Group	Group index	weight
Food	180	140
Clothing	150	42
Rent	100	49
Fuel and lighting	110	56
Miscellaneous	80	63

(5 x 5 = 25)

Section C

Answer any **three** questions. Each question carries **ten** marks

18. For the following data: fit a straight line trend by the method of least squares. Also calculate the trend values

Year	:	2001	2002	2003	2004	2005	2006	2007
Production	:	12	10	14	11	13	15	16

19. For the following data prove that the Fisher's Ideal Index satisfies both the Time Reversal Test and the Factor Reversal Test and calculate its value

Commodity	Base year Price	Quantity	Current year Price	Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24

20. Calculate Karl Pearson's Coefficient of Skewness from the data given below:

Hourly Wages (Rs.)	No. of Workers	Hourly Wages (Rs.)	No. of Workers
40 – 50	5	90 – 100	30
50 – 60	6	100 – 110	36
60 – 70	8	110 – 120	50
70 – 80	10	120 – 130	60
80 – 90	25	130 – 140	70

21. Calculate the mean and standard deviation from the following data:

Value	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 - 99
Frequency	1	4	14	20	22	12	2

22. What is a Cost of living Index number? What does it measure? Discuss briefly its uses and limitations.

(10 x 3 = 30)

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