Reg. No	Name
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B Com DEGREE END SEMESTER EXAMINATION - OCTOBER 2019 SEMESTER 1 : B Com

COURSE: 19U1CRCOM1: BUSINESS STATISTICS

(For Regular - 2019 Admission)

Time: Three Hours Max. Marks: 75

Section A Answer any 10 (2 marks each)

- 1. What is "Foot Note"?
- 2. What do you understand by Biased Sampling Errors?
- 3. Explain the two stages where editing can be done.
- 4. State the relationship between arithmetic mean, harmonic mean and geometric mean

5. Calculate harmonic mean from the following data.

X	2 4	7	12	19	
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- 6. State the absolute and relative measure of Mean Deviation
- 7. "Index numbers are barometers of economic activity" Explain.
- 8. What do you mean by Fixed base and Chain base index number?
- 9. What do you mean by the time value of money?
- 10. What is opportunity cost?
- 11. Kapil deposited some amount in bank for 7and half years at 6% p.a. simple interest. Kapil received Rs.101500 at the end of the term. Calculate the amount deposited by Kapil initially.
- 12. Find the wrong terms of the series 9, 29, 65, 126, 217, 344

 $(2 \times 10 = 20)$

Section B Answer any 5 (5 marks each)

- 13. What are statistical series? Explain its classification?
- 14. Calculate Median from the following central values

195 Mid values: 115 125 135 145 155 165 175 185 25 48 72 116 60 38 22 3 Frequency: 6

15. Ten coins are tossed 1024 times. The theoretical frequencies of heads are given below.

No. of heads	0	1	2	3	4	5	6	7	8	9	10
Frequency	1	10	45	120	210	252	210	120	45	10	1

Calculate arithemetic mean. Also evaluate the merits and demerits of this method.

16. Find the mean deviation from mean and its coefficient for the following values

No of Children	0	1	2	3	4	5	6	
No of Families	171	82	50	25	13	7	2	

17. Find Standard Deviation of the following data:

Size	2	3	4	5	6	7	8
Frequency	1	2	3	5	3	2	1

18. draw a trend line using semi- average method from the following data.

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
production	20	25	24	30	36	32	38	54	60	58	65

- 19. The monthly incomes of two persons are in the ratio 4:5 and their monthly expenditures are in the ratio 7:9. If each saves Rs.50 per month, find their monthly incomes.
- 20. Four ladies & A, B, C and D and Four Gentlemen E, F, G and H are sitting in a circle around a table facing each other .
 - I. No two ladies or gentlemen are sitting side by side.
 - II. C, who I sitting between G and E, is facing D.
 - III. F is between D and A and facing G.
 - IV. H is to the right of B.
 - 1. Who is sitting left of A?
 - a. E
- (b) F
- (c) G

(d) H

- 2. E is facing whom?
 - a. F
- (b) B
- (c) G

(d) H

- 3. Who is immediate neighbour of B?
 - a. G and ${\sf H}$
- (b) E and F
- (c) E and H
- (d) F and H

Give reason for your answers.

 $(5 \times 5 = 25)$

Section C Answer any 3 (10 marks each)

- 21. What is tabulation? What are its parts? Also, state the general rules for the construction of a good statistical table.
- 22. Calculate Mode from the following data. Also state the utilities of Mode.

Profit in	10	20	30	40	50	60	70	80	90
Lakhs(Below)									
No. of firms	4	6	24	46	67	86	96	99	100

23. Find standard deviation from the following data using (1) Direct method (2) Short cut method (3) Step deviation Method

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

24. From the following data compute the quantity index number for 2016 using

i) Laspeyre's ii) Paasche's. iii) Dorbish and Bowley iv) Fishers v) Marshall Edgeworth formula.

commodity	Quant	tity in units	Value in Rupees		
	<u>2010</u>	<u>2016</u>	<u>2010</u>	<u>2016</u>	
Α	90	120	450	600	
В	80	90	480	630	
С	75	80	300	240	
D	50	60	350	300	

- 25. Identify the relationships. Give reasons for your answers.
 - 1. A is D's brother. D is B's father. B and C are sisters. How is A related to C?
 a.)Son (b) Grandson (c) Father (d) Uncle
 - 2. A is B's sister. C is B's mother. D is C's father. E is D's mother, then how A is related to D?
 - a. Grandfather (b) Daughter (c) Grandmother (d) Granddaughter
 - 3. A is father of C and D is son of B. E is brother of A. If C is sister of D how is B related to E?
 - a.) Sister-in-law (b) Sister (c) Brother (d) Brother-in-law
 - 4. C is wife of B. E is the son of C A is the brother of B and father of D. What is the relationship of E to D?
 - (a) Mother (b) Sister (c) Brother (d) Cousin
 - 5. X and Y are brothers. R is the father of Y. S is the brother of T and maternal uncle of X. What is T to R?
 - (a) Mother (b) Wife (c) Sister (d) Brother

 $(10 \times 3 = 30)$