B.Com(BIM) DEGREE EXAMINATION,NOVEMBER 2019
I Year I Semester
Business Statistics

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define statistics.
2. What do you mean by tabulation?
3. The mean of 200 items was 50 Later on it was discovered that two items were misread as 92 and 8 instead of 192 and 88. Find out the correct mean?
4. What is Standard deviation?
5. Calculate range and its co-efficient from the following data:

   Price of Gold per 10 gm from Monday to Saturday in December 2003

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5,260	5,250	5,285	5,300	5,320	5,305

6. State the properties of Correlation.
7. Calculate Co-efficient of correlation between x and y series from the following data:

	X series	Y series
No.of Observations	15	15
Arithmetic Mean	25	18
Standard deviation	5	5

   $\Sigma(x-25)(y-18) = 125.$

8. State the causes of variation in Time Series.
9. From the following data construct an index for 2008 taking 2007 as base:

Commodities	Prices in 2007 (Rs)	Prices in 2008 (Rs)
A	50	70
B	40	60
C	80	90
D	110	120
E	20	20

10. What do you know about Index number?
11. Represent the following data by a Simple bar diagram.

Countries	production of sugar (in '00000 Quintals)
China	38
Japan	40
Indonesia	25
India	20
Pakistan	8
SriLanka	8

12. Define Statistical Quality Control.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. State the functions of statistics.
14. Calculate Harmonic mean to the following.

marks	30-40	40-50	50-60	60-70	70-80	80-90	90-100
frequency	15	13	8	6	15	7	6

15. Calculate standard deviation to the following.

    14, 22, 9, 15, 20, 17, 12, 11

16. Calculate rank correlation to the following.

X	70	85	23	63	45	89	92	95	98
Y	56	82	47	57	30	70	65	92	90

17. Draw trend line by the method of semi-averages.

Year	1997	1998	1999	2000	2001	2002
Sales ('000)	60	75	81	110	106	120

18. Calculate 3 yearly moving average for the following series

Year	Production (in lakh tonnes)	Year	Production (in Lakh tonnes)
1994	17.2	2002	25.3
1995	17.3	2003	24.9
1996	17.7	2004	23.2
1997	18.9	2005	24.3
1998	19.2	2006	25.2
1999	19.3	2007	26.3
2000	18.1	2008	27.3
2001	20.2		

19. Convert the following fixed base index numbers into chain base index numbers.

Year	1998	1999	2000	2001	2002	2003
Fixed Base Index	376	392	408	380	392	400

Section C $(2 \times 15 = 30)$ Marks

Answer any **TWO** questions

20. Calculate coefficient of skewness based on mean and median to the following distribution.

C-I	frequency
0-10	6
10-20	12
20-30	22
30-40	48
40-50	56
50-60	32
60-70	18
70-80	6

21. Obtain the lines of regression to the following:

X	1	9	3	4	5	6	7	8	9
Y	9	8	10	12	11	13	14	16	15

22. Fit a straight line to the following data:

Year	1996	1997	1998	1999	2000	2001	2002
Profit (in '000)	60	72	75	65	80	85	95

23. Calculate consumer price index to the following:

Commodity	Q_0	P_0	P_1
A	100	8	12
B	25	6	7.5
C	10	5	5.25
D	20	48	52
E	65	15	16.5
F	30	19	27