E 4236 (Pages : 4) Reg. No.....

Name.....

B.Com. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2016

First Semester

Core 1—BUSINESS STATISTICS

(Common for Model I, Model II and U.G.C. Sponsored B.Com. Degree Programmes)

[2013 Admission onwards]

Time : Three Hours Maximum Marks : 80

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. What is meant by Statistics ?
2. What are the different types of Statistics ?
3. Define Mean.
4. What do you mean by measures of central tendency ?
5. What is meant by a measure of dispersion ?
6. What is Moments ?
7. What are Index Numbers ?
8. What is value based index numbers ?
9. What is "Time Series" ?
10. What is seasonal and Irregular Time Series ?

(10 × 1 = 10)

Part B

Answer any **eight** *questions.*
Each question carries 2 *marks.*

11. What are the functions of statistics ?
12. What are the relationship between Arithmetic mean, Geometric mean and Harmonic mean ?
13. What are the merits of Range ?
14. What are the difference between Absolute and relative' measure of dispersion ?
15. List out the merits of Standard Deviation.
16. What are the uses of cost of living index ?
17. Explain various methods of determination of trend.

Turn over

18. Calculate mean from the following data :

Roll Nos.	...	1	2	3	4	5	6	7	8	9	10
Marks	...	40	50	55	78	61	64	18	99	98	47

19. Calculate median and mode values from the following data :

280 180 96 98 104 75 80 94 100 75 600 200

20. Calculate skewness from the following data :

x	...	0	1	2	3	4	5	6	7
f	...	12	17	29	19	8	4	1	0

21. Fit a trend line by the method of semi averages :

Year	...	2011	2012	2013	2014	2015
Sales Rs.	...	60,000	75,000	1,00,000	1,20,000	1,50,000

22. From the following, calculate three years moving average :

Year	...	2010	2011	2012	2013	2014	2015
No. of students	...	50	60	45	54	68	71

(8 × 2 = 16)

Part C

Answer any **six** *questions.*
Each question carries 4 *marks.*

23. Explain the importance and limitations of Statistics.

24. What are the merits and de-merits of Harmonic mean ?

25. "Index Numbers are Economic Barometers". Discuss this statement. What precautions would you take while constructing index numbers ?

26. Describe the components of time series.

27. Find out the mean deviation from the data given below about its median :

Salaries	...	40	50	50-100	100-200	200-400
No. of Employees	...	22	18	10	8	2

28. From the following data, calculate standard deviation :

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

29. Calculate coefficient of quartile deviation from the following data :

MARKS	NUMBER OF STUDENTS
Below 20	8
Below 40	20
Below 60	50
Below 80	70
Below 100	80

30. The mean and standard deviation of a set of 100 observations were worked as 40 and 5 respectively by a researcher, who by mistake tool the value of 50 in place of 40 for one observation, Recalculate the correct mean and standard deviation.

31. From the following, Compute Consumer Price Index Number :

Group	Base Year Price Rs.	Current Year Price Rs.	Weight (%)
Food	400	550	35
Rent	250	300	25
Clothing	500	600	15
Fuel	200	350	20
Entertainment	150	225	5

(6 × 4 = 24)

Part D

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. An investor is fond of investing in equity shares. During a period of falling prices in the stock exchange, a stock is sold at Rs. 120 per share on one day, Rs. 105 on the next and Rs. 90 on the third day. The investor has purchased 50 shares on the first day, 80 shares on the second day and 100 shares on the third day. What average price per share did the investor pay ?

33. Calculate mean, S.D. and coefficient of variation from the following data :

43 48 65 57 31 60 37 48 78 59

34. From the following data, Construct Index Numbers of price by applying Laspeyres method and Fishers' Ideal Index method.

	2014		2015	
	Price	Quantity	Price	Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	13

35 From the data given below, Fit a straight line trend by the method of least square :—

Year	Production of Computer
2004	17,000
2005	20,000
2006	19,000
2007	26,000
2008	24,000
2009	40,000
2010	35,000
2011	55,000
2012	50,000
2013	74,000
2014	69,000

Estimate the production for 2019.

(2 × 15 = 30)