PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(Fourth Semester)

Branch – COSTUME DESIGN & FASHION

APPAREL STATISITCS

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 x 1 = 10)

1. Statistics deals with only
   i) Quantitative data   (ii) Qualitative data
   (iii) Both (i) and (ii)   (iv) Neither (i) nor (ii)

2. Statistical results are
   i) Almost correct   (ii) Average only
   (iii) Both (i) and (ii)   (iv) Neither (i) nor (ii)

3. Find the median of the call received on 7 consecutive days 10,20,30,40,50,60,70
   i) 30   (ii) 40   (iii) 50   (iv) 60

4. Find the Mode if median is 50 and Mean is 50
   i) 30   (ii) 40   (iii) 50   (iv) 60

5. Which is the suitable measure when the class interval is open class interval
   i) Mean   (ii) Median   (iii) Mode   (iv)None of the above

6. What is skewness when the Mean, median and mode are equal
   i) < 3   (ii) >3   (iii) 3   (iv) 0

7. Time series is a Set of data recorded
   i) Periodicall   (ii) on time intervals   (iii) space intervals   (iv) all the above

8. The long term fluctuation measured by using
   i) Seasonal variation   (ii) Irregular variation
   (iii) Secular trend   (iv) Moving average

9. The Random fluctuation is termed as
   i) Seasonal variation   (ii) Irregular variation
   (iii) Secular trend   (iv) Moving average

10. The random variation in the manufactured product is
    i) Controllable   (ii) Not controllable
    (iii) Both (a) and (b)   (iv) Neither (a) nor (b)

SECTION - B (35 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks (5 x 7 = 35)

11.   a) Explain Primary and Secondary Data.
            (OR)
   b) Define Statistics and State any 3 points of limitations of Statistics.

12.   a) Find the Median of the following frequency distribution.

Daily wages (in Rs.) :	Less than 200	200-250	250-300	300-350	350-400	400 above
Frequency :	5	15	20	30	20	8

            (OR)
   b) Find the mean median and mode for the following data
     18, 20, 12, 14, 19, 22, 26, 16, 19, 24, 12, 14, 19, 22, 26

Cont...

13. a) b) Find the standard deviation from the following distribution:

Age (years)	20-25	25-30	30-35	35-40	40-45	45-50	50-55
No. of employee	29	46	60	112	94	45	21

(OR)

b) Explain the following: i) Coefficient of Dispersion   ii) Coefficient of Variation.

14. a) Find the pearson's coefficient of Skewness for the following frequency distribution.

Annual sales(In '000 Rs)	0-20	20-40	40-60	60-80	80-100	100-120
No of items	20	50	59	30	25	16

(OR)

b) Define Time Series and Explain the Method of Simple Averages.

15. a) The following figures are the production data of a certain factor manufacturing air conditioners.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Production ('000Units)	17	20	19	26	24	40	35	55	51	74	79

Fit the second degree parabolic trend curve to the above data and obtain the trend values.

(OR)

b) Differentiate between product and process control in SQC?

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16. Draw less than and more than ogive for the following data and to determine the median.

Marks	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
No. of Students	7	11	24	32	9	14	2	1

17. Find the mean, median and mode for the following data

Class	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Frequency	3	7	13	17	12	10	8	8	6	6

18. Calculate the coefficient of variation for x and y for the following data and interpret it.

Group1 (X)	10	26	33	46	17	20	25
Group2 (Y)	19	22	26	27	29	33	37

19. Calculate the Seasonal variation indices by the method of simple averages for the following data

Year / Quarters	2012	2013	2014	2015	2016
Q1	45	48	49	52	60
Q2	54	56	63	65	70
Q3	72	63	70	75	84
Q4	60	56	65	72	66

20. Construct a control chart for mean and the range for the following data on the basis of fuses, samples of 5 being taken every hour. Comment on whether the production seems to be under control, assuming that these are the first data

Sample No.	1	2	3	4	5	6	7	8	9	10	11	12
X_1	42	42	70	36	42	49	58	13	67	51	60	15
X_2	64	45	65	54	51	72	58	88	76	74	60	90
X_3	75	68	80	69	57	73	69	37	94	75	72	39
X_4	78	72	81	77	59	76	93	59	56	78	95	62
X_5	64	48	52	61	53	54	69	60	71	56	71	62

Z-Z-Z   END