SG – 594

II Semester B.H.M. Examination, September/October 2021
(Semester Scheme) (Repeaters) (Prior to 2012-13)
HOTEL MANAGEMENT
Paper – 2.6 : Business Statistics
(80 Marks – Prior to 2011-12) (100 Marks – 2011-12 Only)

Time : 3 Hours Max. Marks : 80/100

Instructions : 1) *Students of batch **2010-11** and before must attempt upto Section – **C**.*
2) *Students of batch **2011-12** must attempt upto Section – **D**.*
3) *Diagram and graph should be written on **separate** graph sheets.*

SECTION – A

1. Answer **any ten** questions. **Each** question carries **two** marks : **(10×2=20)**

a) Define statistics according to Croxton and Cowden.

b) What is negative correlation ?

c) What is Graph ?

d) State any two uses of Median.

e) What is time series ?

f) Why is Fisher's formula of index called ideal ?

g) What do you mean by Regression Analysis ?

h) Mention any two methods of measuring trend values.

i) What is range ?

j) Bring out the difference between Diagram and Graph.

k) What is Quartile Deviation ?

l) Define Arithmetic mean.

P.T.O.

SECTION – B

Answer **any three** questions. **Each** question carries **five** marks : **(3×5=15)**

2. Explain the components of time series.

3. From the following information calculate A.M. :

Items of expenditure	₹
Food	300
Clothing	350
Rent	550
Fuel	400
Education	200
Miscellaneous	600

4. Find the median value of the following data :

   43, 62, 15, 80, 56, 72, 34, 8, 25.

5. Draw a histogram from the following data :

Marks	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120
No. of Students	15	20	30	35	55	60

6. Calculate quartile deviation from the following data :

Marks	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
No. of Students	3	5	15	10	3	4

SECTION – C

Answer **any three** questions. **Each** question carries **fifteen** marks : **(3×15=45)**

7. From the data given below construct Fisher's Ideal index number and prove that they satisfy TRT and FRT.

Items		M	N	O	P	Q
2014	Price	20	50	40	60	10
	Quantity	08	10	05	20	06
2015	Price	30	40	50	60	40
	Quantity	10	08	12	16	10

8. Complete the following distribution if its median is 2,600 and compute the value of arithmetic mean.

Size	Frequency
1000 – 1500	120
1500 – 2000	?
2000 – 2500	400
2500 – 3000	500
3000 – 4000	?
4000 – 5000	50
5000 – 6000	20
Total	**1,500**

9. A textile worker earns Rs. 350 per month. The cost of living index for that particular month is known as 136. Using the following data find the amounts spent by him on leased rent and clothing :

Group	Food	Clothing	House rent	Fuel	Miscellaneous
Expenditure (Rs.)	140	?	?	56	63
Group Index	180	150	100	110	80

10. Calculate Karl Pearson's co-efficient of correlation from the following data :

X	7	9	13	16	19	21	25	34
Y	11	13	16	16	19	26	23	36

11. Calculate the trend values by Moving averages method taking 5 yearly cycle and plot the actual and trend values on a graph for the following data :

Year	Sales (in '000' units)
2001	23
2002	26
2003	28
2004	32
2005	20
2006	12
2007	12
2008	10
2009	9
2010	13
2011	11
2012	14
2013	12
2014	9
2015	3

SECTION – D

Answer **both** of the following questions. **Each** question carries **ten** marks : **(2×10=20)**

12. Calculate Rank correlation co-efficient from the following data :

X	70	80	65	78	68	65	82	65
Y	13	15	12	14	13	11	16	10

13. Following are the marks scored by 2 students in a class test.

X : 25, 29, 35, 39, 49
Y : 28, 23, 32, 40, 49
Find who is more consistent ?