CVM UNIVERSITY
M.Sc. (Real Estate Valuation)/ M.Sc. (Plant and Machinery Valuation) Semester-I
Examination-2021
Friday, 1st March 2021
2:00 PM to 04:00 PM
PAPER CODE: 101370104/101380104 – INTRODUCTION TO STATISTICS

Total Marks: 60

Note: (1) Attempt all questions.
(2) Figures to the right indicate marks.

Q. 1 (a) Answer the following multiple choice questions. **(08)**

(1) If Arithmetic Mean = median =mode, then the data is.
(a) left skewed (b) right skewed (c) symmetric (d) cannot say

(2) Information before it is arranged and analysed is called ___ data.
(a) Organised (b) Raw (c) Classified (d) Unit

(3) If mode is on the right of median then the data is?
(a) left skewed (b) right skewed (c) symmetric (d) cannot say

(4) Which decile represents the median of the given data
(a) D1 (b) D2 (c) D5 (d) D10

(5) Assigning a probability of 'zero' means that something will _____.
(a) Certainly not happen   (b) Certainly happen
(c) Possibly Happen   (d) May or may not happen

(6) Which of the following is not an example of Binomial Distribution?
(a) Tossing of a coin (b) Spinning a dice
(c)True/False (d) Good/Bad

(7) Statisticians use the word _____ to describe a portion chosen from the population.
(a) Sample (b) Population (c) Statistics (d) Parameters

(8) The Laspeyres method, which uses quantities consumed during the_____, is the method most commonly used because it requires quantity measures for only one period.
(a) base period   (b) current period (c) continue period (d) non-base

(b) State whether following statements are **True or False.** **(08)**

(1) For Q1, exactly 25% of observations are below the value of Q1 and 75% of the observations are above the value of Q1

(2) Probability of getting 53 Sundays in a non-leap year is 2/7

(3) In paasche Method the weights used are the quantity measures of the Base period

(4) If slop of a line is positive and X is endependent while Y is dependent variable. Then the relationship between X and Y is Indirect

(5) Time-series analysis is one quantitative method we use to determine patterns in data collected over time

(6) The sample mean is not an estimator of the population mean.

(7) Simple random sampling selects samples by methods that allow each possible sample to have an equal probability of being picked and each item in the entire population to have an equal chance of being included in the sample.

(8) In systematic sampling, elements are selected from the population at a uniform interval that is measured in time, order or space.

Q.2 Attempt **any six** of the following. **(12)**

(1) What is the meaning and uses of statistics?

(2) Explain inter quartile range in brief.
(3) If a year is selected at random from 1996 and 2000 (including), what is the probability that it has 53 Sundays
(4) List all four methods of sampling
(5) Explain Normal Distribution curve with figure in brief
(6) Write any four characteristics of the t-distribution
(7) Write two advantages and two disadvantages of Paasche method.
(8) Write two advantages and two disadvantages of sampling.

Q. 3 Draw both Less than and, More than Ogive curves for the following data. **(08)**

Class			Frequency (f)
15.2	to	15.5	2
15.5	to	15.8	5
15.8	to	16.1	11
16.1	to	16.4	6
16.4	to	16.7	3
16.7	to	17.0	3

OR

Q. 3 Draw both histogram and polygon for the above mentioned data **(08)**

Q. 4 Calculate mean deviation from mean and median, also co-efficient **(08)** of mean deviation for following data :

Sale price (Rs. in lakhs)	No. of transaction taken place(f)
7.5 - 12.5	2
12.5 - 17.5	4
17.5 - 22.5	6
22.5 - 27.5	8
27.5 - 32.5	5

OR

Q. 4 Calculate mean deviation from Mean and Median and also calculate Co- **(08)** efficient of Mean Deviation for the following data:

Marks	No. of Student (f)
0-10	5
10-20	10
20-30	20
30-40	5
40-50	10

Q. 5 A bag contains 5 red, 3 white and 2 black balls and another **(08)** contains 4 red, 6 white and 3 black balls. Two balls are shifted from the first bag in to the second and a ball is drawn from the second. Find the probability that is Red

OR

Q. 5 A problem of statistics is given to three students A, B, C whose **(08)** chances of solving it are 1/3, 3/4, 4/5 respectively. Find out the probability that –

(a) Only one student solve it

(b) None is able to solve it

(c) At least one student solve it

(d) At most one student solve it

Q. 6   Do the computation of the following data by Laspeyres Price Index as   **(08)**
well as Paasche Price Index

Elements in the composite	Q₀ Average quantity consumed in 2000 per house	Prices in Rupees	
		P_0 Base Price 2000	P_1 Current Price 2005
Cement	200 bags	100	175
Bricks	20	1400	2000
Steel	500	15	25

OR

Q. 6   How are Quantity Indices measured? In which cases quantity   **(08)**
indices are used? and do the Computation of a weighted average of
relatives Quantity Index for the following data.

Elements in the compo-site	Q₀ Average quantity consumed in 2000 per house	Q₁ Average quantity consumed in 2005 per house	P_0 Base Price 2000
Cement	200	250	100
Bricks	20	25	1400
Steel	500	700	15

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