Enrolment No.: .....

IIHMR UNIVERSITY

School of Development Studies

MBA Development Management
Batch-3rd (2023-2025)
First Year, Term 3 End Term Examinations, April 2024
CC – 643 Quantitative Techniques

Time - 3 Hour **Maximum Marks: 50 (Minimum Marks: 20)**

Instructions to students:

- **This question paper contains 2 printed pages.**
- **Don't write anything on the Question Paper except writing your Enrolment No.**

Part A

(Maximum Marks: 5)

Q1. Choose the correct option for the following (1 mark each):

(a) Which of the following statements describes quantitative techniques & statistics most appropriately?

(i) science of counting.
(ii) science of averages.
(iii) concerned with the collection, presentation and analysis of data leading to valid conclusions.
(iv) aggregate of facts.

(b) What should be the modal class?

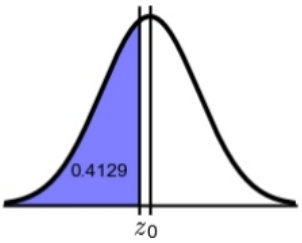
Classes	0-10	10-20	20-30	30-40	40-50	50-60
Frequencies	5	6	13	38	30	4

(i) 10 – 20
(ii) 30 – 40
(iii) 40 – 50
(iv) 50 – 60

(c) Which of the following terms best describes the data collected for the first time keeping in view the objective of the survey?

(i) Primary data
(ii) Secondary data
(iii) Important data
(iv) Personal data

(d) Find the z value that corresponds to the area in the adjacent figure:
(Note: the diagram is not necessarily to scale.)



(i) 0.22
(ii) 1.33
(iii) –0.51
(iv) 0.41

You can use following extract of z table while answering the question

Z	0	0.01	0.02	0.03	0.04
0.1	0.0398	0.0438	0.0478	0.0517	0.0557
0.2	0.0793	0.0832	0.0871	0.0910	0.0948

(e) A single number, used to estimate an unknown population parameter is

(i) Point Estimate
(ii) Interval Estimate
(iii) Interval Estimates of the proportion
(iv) All the above

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Part B

(Maximum Marks: 15)

Attempt any three of the following questions of Part B.

Q2 Explain the importance of quantitative techniques & statistics in development sector. (5)

Q3 What do understand by primary and secondary data. Explain the methods of primary data collection. (5)

Q4 Explain data classification, tabulation, and presentation. (5)

Q5 Arrange the data into a frequency distribution table having a suitable number of classes. (5)

10	17	15	22	11	16	19	24	29	18
25	26	32	14	17	20	23	27	30	12
15	18	24	36	18	15	21	28	33	38
34	13	10	16	20	22	29	29	23	31

Also draw the frequency polygon.

Q6 Explain probability and probability distributions. (5)

Part C

(Maximum Marks: 30)

Attempt any three questions and answer in detail.

Q7 The number of people who visited in OPD in a hospital over thirty-day period were counted and a frequency distribution table was generated as shown below: (10)

Class Interval	Frequency (f)
0-10	1
10- 20	2
20-30	3
30-40	5
40-50	6
50-60	9
60-70	4

Draw a cumulative frequency curve, or an ogive. What is the average number of people that visited per day.

Q8 Explain measure of central tendency & measures of dispersion in a data set. (10)

Q9 What do you understand by sample? Explain the various sampling techniques. (10)

Q10 Find the area under the standard normal curve and draw neat diagrams for each: (10)
(a) between z = 0 and z = 0.75
(b) between z= - 0.55 and z = 0
(c) between z = - 0.41 and z = 0.78
(d) between z = 0.44 and z = 1.60
(e) to the right of z = -1.3

Use of Normal Distribution Table is allowed.

Q11 What do you understand by point and intervals estimate of population parameter. Explain the 90%, 95% & 99% CI for normal distribution. (10)