



Seat No. : \_\_\_\_\_

# NQ-119

November-2025

B.Sc., Sem.-III

SEC-236 : Mathematics

(Practicals on Mathematical Statistics-I)

Time : 1:00 Hour]

[Max. Marks : 25

- Instructions :** (1) There are total **three** questions.  
(2) Figures to the right indicate full marks of the question/ Sub-question.

1. (A) Obtain an inclusive continuous frequency distribution from the following data : **5**

Lower boundary point or More than that	Cumulative frequency
44.5	500
49.5	470
54.5	390
59.5	290
64.5	240
59.5	90
74.5	70
79.5	0

- (B) Draw a histogram for the following data : **5**

Weight (kg)	Number of men
40-45	8
45-50	14
50-55	21
55-60	18
60-65	10

OR

1. (A) The data regarding the number of mobile phones produced during last 60 days by a mobile phone manufacturing company is given below. Distribute it into 10 classes :

5

699	380	625	653	452	763	385	959	485	970
749	595	1029	500	499	453	525	621	465	565
103	785	286	1060	760	355	645	775	825	235
390	399	530	540	695	999	849	550	720	430
752	389	1070	701	875	552	351	265	199	370
1025	825	783	225	603	553	503	663	385	465

- (B) Represent the following data by a multiple bar diagram :

5

Factory	Workers (Male)	Workers (Female)
A	125	100
B	210	165
C	276	212

2. (A) Find median and mode for the following data :

5

Age (Years)	Number of people
20-25	50
25-30	70
30-35	100
35-40	180
40-45	150
45-50	120
50-55	70
55-60	59

- (B) The persons participated in a shooting competition and were duel to hit the target correctly out of fifteen as given below :

5

<b>Competitor-A</b>	6	12	12	10	7
<b>Competitor-B</b>	12	15	7	7	4

Find the competitor, who is more consistent in shooting performance.

**OR**

2. (A) The first quartiles of following data is 21.5. Find the missing frequencies : 5

Class	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
<i>f</i>	24	–	90	122	–	56	20	33

- (B) Find the Standard deviation for the following table containing the distribution of monthly expenditure per head of the residents of the village : 5

Monthly expenditure	Number of persons
75-71	20
70-66	17
65-61	15
60-56	14
55-51	13
50-46	12
45-41	14
40-36	15
35-31	10

3. Attempt any **five** of the followings in short : 5

- (1) Which of the following is a property of quantitative data ?
  - (2) Which central tendency measured to represents the intersection point of 'less than' and 'more than' ogives ?
  - (3) Which axis typically represents the class intervals in a histogram ?
  - (4) What is plotted against the upper or lower class boundaries when ogive is drawn ?
  - (5) Which type of diagram is best suited for representing proportions of a whole ?
  - (6) How can the points be joined in a frequency curve ?
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# NQ-119

November-2025

B.Sc., Sem.-III

SEC-236 : Mathematics

(Basics of Python Programming)

(NEP 2020)

Time : 1:00 Hour]

[Max. Marks : 25

- Instructions :** (1) All questions are compulsory.  
(2) Figures in right indicate marks.

1. (A) Write note on arithmetic operators and its hierarchy. **5**  
(B) Write a program to demonstrate While loop with else. **5**

**OR**

1. (A) Write a python program to check the smallest among the given three numbers. **5**  
(B) Write python program to find sum of 1 to 100 numbers. **5**

2. (A) Write a program to find the HCF (Highest Common Factor) of two numbers given using function. **5**  
(B) Write a function to find the factorial of natural number using recursion. **5**

**OR**

2. (A) What do you mean by mathematical functions and how can they be used in Python ? Explain with the help of example. **5**  
(B) Write python program to find area of circle. **5**

3. Attempt any **five**. **5**
- (1) What is the output of  $50\%3$  in python ?
  - (2)  $a@3$  can be a variable name in python. (True/False)
  - (3) Which character is used for commenting in python ?
  - (4) Which library required to call while using square root function  $\text{sqrt}$  in python program ?
  - (5) Which word (python function) used for asking user to enter value ?
  - (6) What is the difference between user-defined function and built-in function ?