INTERNATIONAL ISLAMIC UNIVERSITY CHITTAGONG

Department of Business Administration

BBA Midterm Examination, Autumn-2023

Course Title: **Introduction to Statistics** Course Code: **STAT-2301**

Time: 1 hour 30 min Marks: 30

[Answer the following questions. All parts of a question answer serially]

QN	Description of questions	Marks	CLOs
1.	a) What do you mean by statistics? Bring out clearly the functions of statistics in business.	2	**CLO-1**
	b) Statistics is a population of facts rather than a single fact-Justify.		
	c) The following are the daily sales (in taka) of 40 shops.	1	**CLO-1**
	44, 57, 54, 45, 62, 51, 38, 62, 49, 41, 36, 56, 42, 36, 40, 43, 37, 47, 50, 46, 43, 65, 49, 55, 32, 48, 35, 46, 44, 46, 41, 38, 63, 54, 51, 41, 44, 57, 46, 45		
	(i) Prepare a frequency distribution taking suitable class interval.	7	**CLO-2**
	(ii) Draw histogram and frequency polygon.		
2.	a) What are the different types of data? Distinguish between Histogram and Bar-diagram.	3	**CLO-1**
	b) The mean of marks in Statistics of 100 students of a class was 72. The mean of marks of boys was 75, while their number was 70. Find out the mean marks of girls in the class.	3	**CLO-2**
	c) Prices (in Tk.) of five pens are as follows: 5, 10, 6, 10, 5		
	Show that i) A.M.>G.M.>H.M. ii) $\sum(x-\bar{x})=0$		
	iii) $\sum(x-\bar{x})^2=\sum(x-A)^2$	4	**CLO-2**

3.	a) What are the characteristics of arithmetic mean? When harmonic mean cannot be calculated?	3	CLO-1
	b) The daily production (in units) of 100 industries in Bangladesh is given below:	7	CLO-2

Daily production(in units)	0-20	20-40	40-60	60-80	80-100
No. of industries	5	15	40	30	10

Calculate i) mean production
ii) modal production graphically
iii) Production of 80 percent industries and comment.

OR

	a) Which measure of variation is best and why? Mention some uses of coefficient of variation.	3	CLO-1
	b) The frequency distribution of the length of life of two models of Television is given below:	7	CLO-2

Length of life (in years)	No. of Television of model A	No. of Television of model B
0-5	7	13
5-10	10	15
10-15	25	26
15-20	10	5
20-25	8	1

(i) Which of the two makes give a higher average life?
(ii) If prices are same of both models, which one will be you preferred and why?