

International Islamic University Chittagong
Department of Business Administration
Mid-Term Examination
Semester: Summer-2022
Program: MBA

Course Code: STAT-4201

Course Title: Business Statistics

Time: 2.00 hours

[Answer any three (3) questions]

Full Marks:30

(2+2+6=10)

1.

- (a) What are the characteristics features of statistics?
(b) Define variable with suitable example. Distinguish between qualitative and quantitative variable.
(c) The daily sale (in hundred Tk.) of 40 shops in a market is given below:
19, 40, 48, 89, 82, 42, 65, 86, 48, 35, 56, 79, 32, 95, 27, 32, 65, 90, 32, 62, 32, 59, 41, 20, 69, 25, 70, 40, 45, 72, 33, 73, 88, 52, 56, 52, 53, 59, 57, 52
(i) Construct a frequency distribution taking a suitable class interval
(ii) Draw a histogram and a frequency curve.

(2+3+5=10)

2.

- (a) What do you mean by average? In the light of ideal properties of central tendency, which average is the best and why?
(b) Show that $A.M > G.M > H.M$ using following observations
X: 2, 4, 8, 12, 16, 24
(c) The profit (in 000 Tk.) of 100 companies in Bangladesh is given below:

Profit (in 000 Tk.)	0-20	20-40	40-60	60-80	80-100
No. of companies	5	15	40	30	10

- Calculate (i) mean profit
(ii) median profit graphically.

(2+2+6=10)

3.

- (a) State the desirable properties of good measures of dispersion.
(b) Define coefficient of variation and mention some of its uses.
(c) Daily wages of workers of two factories A & B are as follows:

Daily wages (Tk.)	60-69	70-79	80-89	90-99	100-109
No. of workers of factory A	7	13	20	6	4
No. of workers of factory B	4	8	29	4	5

- i) Which factory has more wages?
ii) Wages of which factory has less variability?

4.

(4+6=10)

(a) Define the terms with example: (i) Experiment (ii) Mutually exclusive events (iii) Independent events (iv) Sample space

(b) A survey of engineers in a large organization regarding gender and academic qualification is given below:

Gender	Academic qualification		
	Diploma	B.Sc.	M.Sc.
Male	350	250	100
Female	180	70	50

An engineer is selected randomly

- What is the probability of selecting a female engineer?
- What is the probability of selecting an M.Sc. engineer given that he is a male?
- What is the probability that selected engineer is either female or B.Sc.?

* The End *