

North Campus

Midterm Exam (Hourly-I) Spring - 2021

Subject: Business Statistics

Submission Day/Date: Saturday/10/04/2021

Instructor: M. Khurram Amin

Submission Duration: 3 Hours

Program: BBA

Max. Marks: 15 Marks

Department of Business Administration

Please follow the instructions carefully:

1. Write your answers in a file and upload the file before the due time on BlackBoard.
2. Please make sure to *mention your name and your registration number* on top of the first page of your answer file and upload the file before the due time on BlackBoard.
3. **Answer scripts can be uploaded on BlackBoard within or before its deadline. Therefore, do not wait for the last hour to avoid any unforeseen problems.**
4. **Submission of answer copy(ies) will be considered acceptable through BlackBoard only. Therefore, do not submit your document through email or any other medium.**
5. Solve the *questions in sequence* as given in the paper.
6. After solving all the answers, make the *serial numbering* on all your answer sheets.
7. After completing paper, you are required to make its *Snap Shot (or Scan)* and make *its single .pdf file* by arranging all your sheets in sequence.
8. Make the file name as per given format:
Student Name (last four digits of your Registration Number) and course title.
e.g. Muhammad Ali (2342) *Business Statistics*.pdf*
9. Please make sure that your *pdf file is sufficiently visible and readable*.
10. You must avoid any *blur or dull pictures*. It is recommended to use *black color pen* to write your answers.
11. *Don't use pencil*.
12. Recheck your answers before the submission on BlackBoard to correct any content or language related errors.
13. Double check your file before uploading it on BlackBoard to ensure that you have uploaded the correct file with your answers.

Q. No. 1	Estimated Time To Complete Question (20 Minutes)	Max Marks 05
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The random variable X has probability distribution given in the table below:

X	-1	0	1	2	3
P(X=x)	b	0.1	0.2	0.15	0.15

- Find the value of b.
- Find the Var (X)
- E (2X-4)
- Var (3-2X)

Q. No. 2	Estimated Time To Complete Question (25 Minutes)	Max Marks 06
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The random variable Y has probability function

$$P(Y=y) = \frac{2y-1}{36} \quad y = 1,2,3,4,5,6$$

- Construct a table giving the probability distribution of Y.
- $P(2 < Y \leq 5)$
- Show that Var (Y) = 1.97
- Find the probability that at least 2.
- Find the probability that at least 1 but less than 5.

Q. No. 3	Estimated Time To Complete Question (15 Minutes)	Max Marks 04
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A survey from Teenage Research Unlimited found that 40% of teenage consumers receive their spending money from part-time jobs. If 5 teenagers are selected at random:

- Find the probability that at least 3 of them will have part-time jobs.
- Find the probability that no more than 4 will have part-time jobs.
- Find the probability that less than 5 but greater than 3 will have part-time jobs.