Philadelphia University

Faculty of Engineering

Student Name:	
Student Number:	
Serial Number:	

Third Quiz, First Semester: 2019/2020
Dept. of Communication & Electronics Engineering

Course Title:	Probability and Random Variables	**Date:**	08/01/2020
Course No:	650364	**Time Allowed:**	10 minutes
Lecturer:	Dr. Qadri Hamarsheh	**No. Of Pages:**	1

Instructions:

- **ALLOWED**: pens, calculators and drawing tools (**no red color**).
- **NOT ALLOWED**: Papers, literatures and any handouts. Otherwise, it will lead to the non-approval of your examination.
- **Shut down** Telephones, and other communication devices**.**

Please note:

- *This quiz paper contains 1 question totaling 5 marks.*

Question 1 ***(5 marks)***

If the joint probability density of ***X*** and ***Y*** is given by

$$f(x,y) = \begin{cases} \frac{2}{3}(x+2y) & \text{for } 0<x<1, 0<y<1 \\ 0 & \text{elsewhere} \end{cases}$$

Find the **conditional mean** and the **conditional variance** of ***X*** given ***Y=1/2***

Solution

GOOD LUCK