

Philadelphia University Faculty of Engineering

## **Marking Scheme**

Examination Paper

Department of Communication & Electronics Engineering

## **Probability and Random Variables**

(650364)

Second Exam

First semester

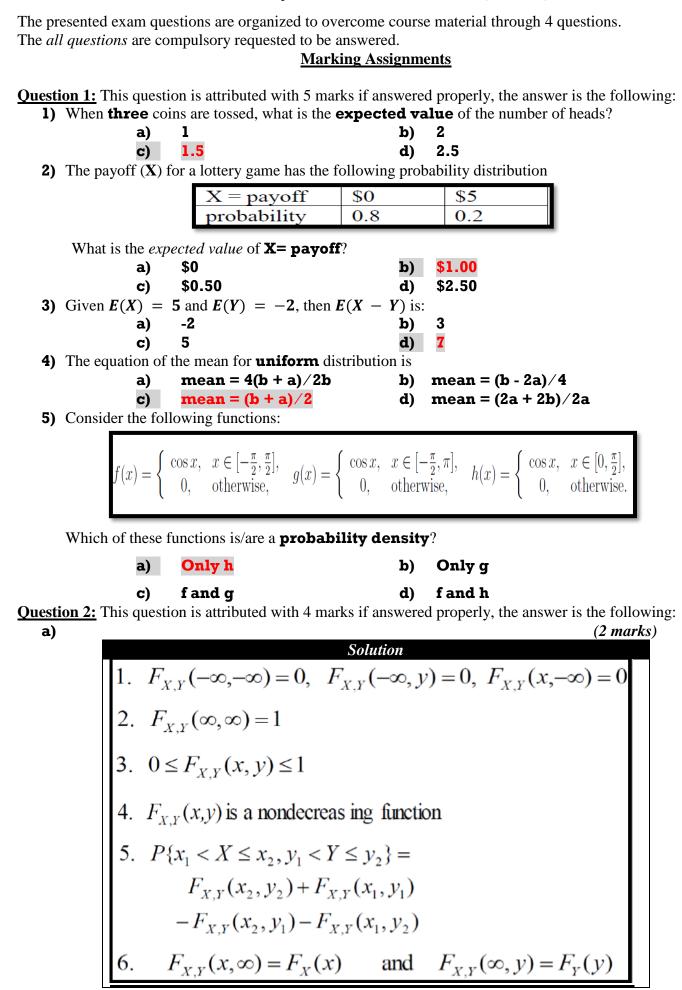
Date: 23/12/2019

Section 1

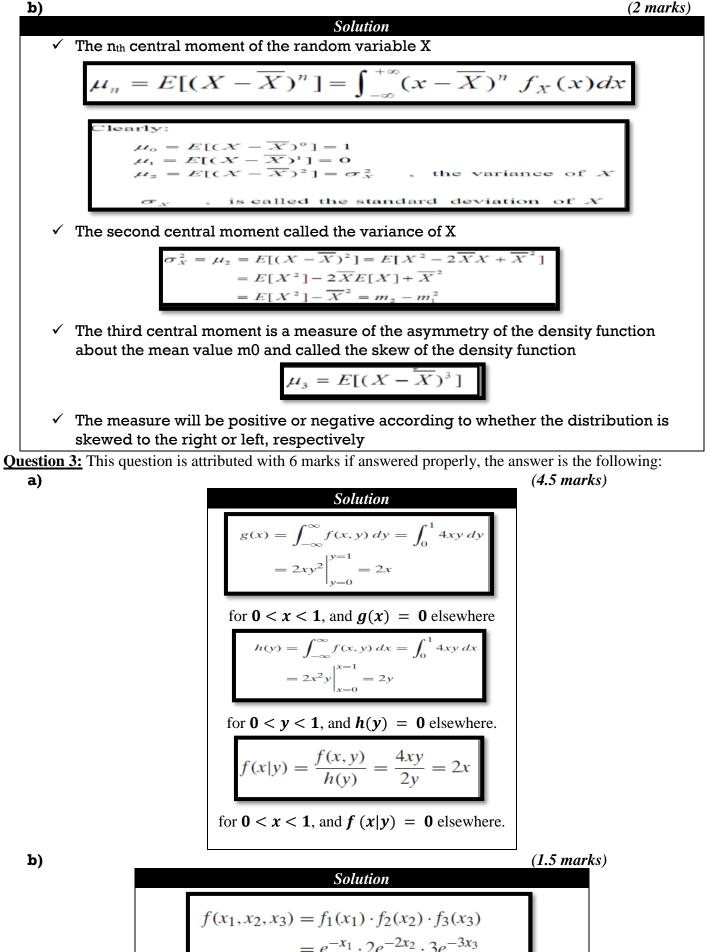
Weighting 20% of the module total

Lecturer: Coordinator: Internal Examiner: Dr. Qadri Hamarsheh Dr. Qadri Hamarsheh Dr. Omar Daoud

## Marking Scheme Probability and Random Variables (650364)



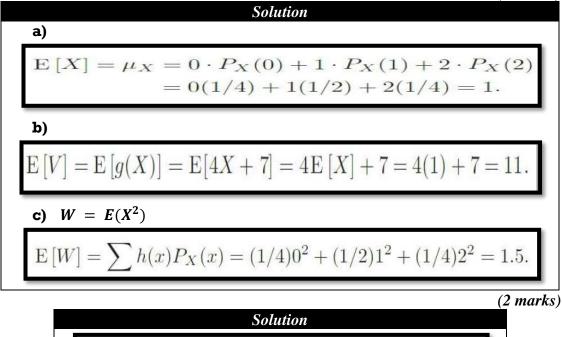
(2 marks)



for x1 > 0, x2 > 0, x3 > 0, and f(x1, x2, x3) = 0 elsewhere.

 $=6e^{-x_1-2x_2-3x_3}$ 

<u>Question 4:</u> This question is attributed with 5 marks if answered properly, the answer is the following: **a)**(3 marks)



Solution				
$P_{X,Y}(x,y)$	y = 0	y = 1	y = 2	$P_X(x)$
x = 0	0.01	0	0	0.01
x = 1	0.09	0.09	0	0.18
x = 2	0	0	0.81	0.81
$P_Y(y)$	0.10	0.09	0.81	

b)