

First Semester 1438/1439	Student Name:	اسم الطالب:
Midterm Exam / Stat. 101	Student ID:	رقم الطالب:
Exam Time: 12:00 — 14:00	No. Section:	رقم الشعبة:
Exam day: Thursday 26/03/1439	Trainer Name:	اسم المدرب:

Make up Midterm Exam

السؤال	1	2	3	4	5	6	7	8	9	10	المجموع	توقيع المصحح	توقيع المدقق
الدرجة													

عدد صفحات الأسئلة (4)

عدد الأسئلة (10)

أجب عن جميع الأسئلة الآتية في الفراغات المخصصة لها

(1.5 marks)

Question 1: Classify each variable as Qualitative or Quantitative.	The answer
The variable that record weights of fruit boxes.	
The variable that record distance between two cities.	
The variable that record type of printers.	

(1.5 marks)

Question 2: Classify each variable as Continuous or Discrete.	The answer
The variable that record numbers of people in countries.	
The variable that record numbers of students in universities.	
The variable that record heights of trees in a garden.	

(1.5 marks)

Question 3: Determine whether of the following statements is True or False.	The answer
$\lim_{x \rightarrow -\infty} F_X(x) = 0$	
The median of data is sensitive to extreme values.	
Two events A and B are independent if $P(A \cap B) = P(A) \cdot P(B)$	

(1.5 marks)

Question 4: Put the right word or symbol in its proper position: parameter, $\Omega \subseteq \mathcal{A}$, statistic, $\emptyset \in \mathcal{A}$, permutation, combination, independent, exclusive.
Two events A and B are if they do not affect each other.
Selection r distinct objects at the same time from a set of n different objects, is a
If a \mathcal{A} is an algebra on Ω , then

(7 marks)

Question 5: Let 7, 5, 3, 1, 5, 4, 5, 9, 6, 26, 9, 3, 8 be data of a sample. Then:

a) Calculate the mean for the given data.

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b) Calculate the median for the given data.

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c) How much of modes we have in the given data, and then determine them.

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d) If the standard deviation of the given data is $S = 6.19$, then calculate the standard score for the value 7.

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e) Calculate Q_1 , Q_3 and HF for the given data.

For Q_1 :

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For Q_3 :

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For HF :

f) Construct the box plot for the given data:

(2 mark)

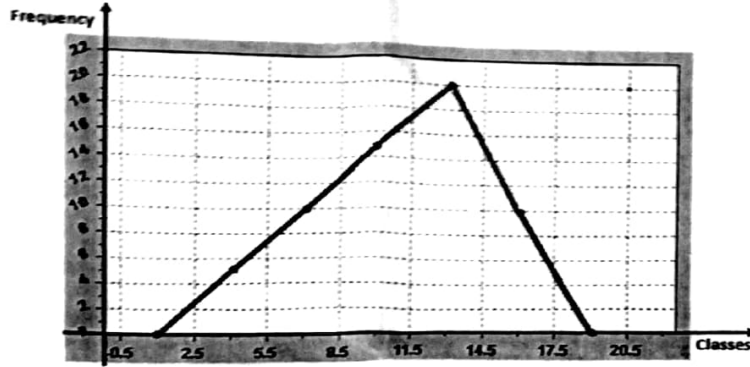
Question 6: Consider the following data:

D	B	A	D	B	A	C	A	D	C	B	B	A	A
A	C	C	B	A	A	A	C	C	A	B	C	B	A
D	B	A	B	A	D	C	B	B	C	D	B	A	B

Draw the bar graph for the given data.

(5 marks)

Question 7: If we have data with the following polygon:



Then:

a) Complete the following frequency distribution table for the given data in the previous figure:

Class Limit	Class Boundaries	Midpoint	Frequency	Relative Frequency	Percentage %	A.C.F.
Sum						

b) Calculate the mode for the given data.

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d) Calculate the range for the given data.

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(3 marks)

Question 8: If we have Ω a space of elementary events, A and $B \in 2^\Omega$ with $P(A \cup B) = 0.75$, $P(A \cap B) = 0.20$ and $P(\bar{B}) = 0.65$. Then calculate the following probabilities:

a) $P(A) =$

c) $P(A \setminus B) =$

d) $P(\bar{A} \cup \bar{B}) =$

e) $P(A|B) =$

f) Are the events A and B independent, and why?

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