

Course No:  
Course Title: Biostatistics  
Date: 00/00/2017  
No. of Questions: (4)  
Time: 1hours  
Using Calculator (yes)

University of Palestine



Second Mid. Exam  
2017/2018  
Total Grade: 30

Instructor Name: Dr.Khaled  
Almghari  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: \_\_\_\_\_  
Dep. / Specialist: \_\_\_\_\_  
Using Dictionary (No)

**Question One:**

**(8 Marks)**

Choose the correct answer:

1. In screening tests our achieves are:
  - a) High sensitivity and low specificity.
  - b) High sensitivity and high specificity.
  - b) High sensitivity and low (1-specificity)
  - d) (b+c)
2. Probability of an event is defined as:
  - a) Frequency
  - b) Relative frequency.
  - c) Percentage of the event.
  - d) Not of the above.
3. Table of random numbers can be used to select a sample :
  - a) Simple random sample.
  - b) Stratified sample.
  - c) (a+b)
  - d) (Not a nor b)
4. Calculation of Odds ratio when X and Y variables are:
  - a) Dependent variable.
  - b) Independent variable.
  - c) ( a + b ).
  - d) (Not a nor b)
5. If  $\Pr(X + | Y+) \neq \Pr(X +)$  then the statistical relationship between X and Y are:
  - a) Strong.
  - b) Week.
  - c) Not strong.
  - d) Not week.
6. Characteristics of standard normal distribution are:
  - a)  $\mu = 1, \sigma = 0$ .
  - b)  $\sigma = 1, \mu = 0$
  - c)  $\mu = 0, \sigma = 0$ .
  - d) Not of above.
7. Standard normal distribution  $z$  is:
  - a) Discrete value.
  - b) Continuous value.
  - c) (a+b)
  - d) Not of above.
8. In screening test:
  - a) The present of disease always positive.
  - b) The present of disease may be negative
  - c) The present of disease may be positive.
  - d) ( b + c)

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**Question Two:**

**(8 Marks)**

You have the table below:

Disease Y	Test Results X	
	+	-
+	130	200
-	320	2500

Calculate the following:

1. Sensitivity.

2. Specificity.

3. Odds Ratio.

4.  $\Pr(X+,Y+)$

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**Question Three:**

**(8 Marks)**

What is the probability of obtaining a z value between -0.8 and 1.9?

**Question Four:**

**(8 Marks)**

A) If the total glucose values for a certain target population are approximately normally distributed with a mean of 120 (mg/100 mL) and a variance of 100 (mg/100 mL).

What is the probability that a person picked at random from this population will have a glucose value greater than 150 (mg/100 mL)? (5 Marks)

B) Find a z value such that the probability of obtaining a larger z value is only 0.2514?

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