



HAW-9534

Seat No. _____

Third Year B. Physiotherapy Examination

July - 2017

Biostatistics & Research Methodology

Time : 2 Hours]

[Total Marks : 50

- Instructions :** (1) All questions are compulsory.
(2) Figures in the parenthesis to the right show the full marks of each question.

1 Write comprehensive notes on any **two** of the following : **10×2=20**

- (a) Chi-square test
- (b) Graphical Presentation of Qualitative data
- (c) Randomized control trial

2 Calculate any **two** of the following examples : **5×2=10**

- (a) Calculate Mean, Median and SD of following data of Diastolic Blood Pressure (mm of Hg) of 12 subjects :
76, 90, 78, 72, 90, 80, 82, 88, 82, 100, 94, 90
- (b) Following are the information in a study of women of 35 to 50 years of age in a village: Out of 75 women, 26 had complained of chronic Backache who have history of weight bearing. Another 75 women of the same age group who do not have history of weight bearing, 18 had chronic Backache. Is backache statistically significantly associated with weight bearing?
- (c) Calculate sample size for the study of physical disability in a community survey by assuming prevalence of physical disability as 3% with an allowable error of 10%.

- 3 Write in two-three sentences of any FIVE of the following : **2×5=10**
- (a) Null hypothesis
 - (b) Perfect positive correlation
 - (c) Median
 - (d) Characteristics of normal curve
 - (e) Relative risk
 - (f) Type I error
- 4 Write most appropriate single answer in below mentioned MCQs : **1×10=10**
- (1) Which of the following is a cross sectional study ?
 - (a) Forward looking study
 - (b) Cohort study
 - (c) Incidence study
 - (d) Prevalence study
 - (2) Numerator is a part of denominator in
 - (a) Rate
 - (b) Ratio
 - (c) Both
 - (d) None
 - (3) Degree of freedom in 3 by 2 contingency table is:
 - (a) 0
 - (b) 1
 - (c) 2
 - (d) 6
 - (4) Relative risk is calculated in
 - (a) Case control study
 - (b) Cohort study
 - (c) Cross sectional study
 - (d) Ecological study
 - (5) Measures of central tendency includes all except :
 - (a) Mean
 - (b) Correlation
 - (c) Median
 - (d) Mode
 - (6) The area under a normal distribution curve for S. D of 3 is :
 - (a) 68%
 - (b) 99.7%
 - (c) 97.5%
 - (d) 100%

- (7) Incidence rate is calculated from :
- (a) Cohort study
 - (b) Case control study
 - (c) Cross sectional study
 - (d) Ecological study
- (8) Scatter diagram show :
- (a) Trend event with passage of time
 - (b) Relationship between two variables
 - (c) Most commonly occurring value and mean
 - (d) Difference between the highest and lowest value
- (9) If Mean is 100 and SD is 5 in a sample, then 95% samples fall in which of the following range :
- (a) 90 to 110
 - (b) 95 to 105
 - (c) 100 to 105
 - (d) 5 to 100
- (10) Correlation coefficient ranges from :
- (a) -1 to 0
 - (b) -1 to 1
 - (c) 0 to 1
 - (d) -0.5 to 0.5
-