DCK-9534

Seat No. _____

Third Year B. Physiotherapy Examination

July - 2022

Biostatistics & Research Methodology

(Old Course)

Time : **2** Hours] [Total Marks : **50**

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

1 Write comprehensive notes on any TWO of the following: **20**

(a) Cohort study

(b) Describe research process

(c) Define sampling. Describe its various methods.

2 Calculate any **two** of the following : **10**

(a) Define Null hypothesis. From the data. given in the following table, test whether the prevalence of scabies, in two different sexes is significantly different. (X2 = 3.84, df = 1, p = 0.05)

Sex	No. with scabies	No. without scabies	Total
Male	1173	10411	11584
Female	547	7644	8191
Total	1720	18055	19775

(b) Blood serum cholesterol levels of 10 subjects are as under :

240, 260, 290, 245, 255, 288, 272, 263, 277, 250.

Calculate mean and standard deviation with the help of assumed mean.

(c) A group of 30 normal children in a study had a mean bilirubin level of 1.10 μg% and SD of 0.37. Another group of 30 children with infantile cirrhosis of liver had mean bilirubin level of 4.99 μg% and SD of 2.83. Is the difference between the two means statistically significant?

3 Write in two-three sentences any **five** of the following: **10**

(a) Odds ratio
(b) Longitudinal study
(c) Error
(d) Epidemiology
(e) Correlation
(f) Incidence

4 Write most appropriate single answer in below mentioned MCQs : **10**

(1) Data can be presented in
(a) Distribution (b) Frequency
(c) All of above (d) None of above

(2) A numerator is a part of denominator in
(a) Rate (b) Ratio
(c) Both (d) None

(3) Descriptive epidemiology includes all except
(a) Time (b) Person
(c) Frequency (d) Place

(4) In case control study, what will not be the case : control ratio?
(a) 1:0.1 (b) 1:1
(c) 1:2 (d) 1:3

(5) In statistics, mode is
(a) value of middle observation
(b) arithmetic average
(c) most commonly occurring value
(d) difference between highest & lowest value

(6) Degree of freedom in 2×3 contingency table is
(a) 4 (b) 2
(c) 3 (d) 1

(7) Null hypothesis is
(a) Rejection of hypothesis
(b) Acceptance of hypothesis
(c) Both of above
(d) None of above

(8) Relative risk is calculated in
(a) Case control study (b) Cross sectional study
(c) Cohort study (d) None of the above

(9) Qualitative data is presented in form of
(a) Pictogram (b) Spot diagram
(c) Bar diagram (d) Histogram

(10) Measures of central tendency includes all except
(a) Mean (b) Regression
(c) Median (d) Mode