



MS-9534

Seat No. _____

Third Year B. Physiotherapy Examination

January - 2018

Biostatistics & Research Methodology

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) Characteristics of normal distribution curve
 - (b) Randomized controlled trial
 - (c) Types of correlation
- 2** Calculate any TWO of the following : **10**
- (a) A study was carried out by a postgraduate student to know the association between age of mother and congenital malformations. It was seen that, out of the 500 children born to women > 35 years, 50 had congenital malformations, while out of 1000 women < 35 years, there were 50 children born with congenital malformations. Interpret this data using appropriate statistical test. Write your inference in simple language.
 - (b) Serum Cholesterol levels of 10 subjects are as under :
240, 290, 245, 272, 288, 250, 263, 277, 255, 260
Calculate the mean and standard deviation with the help of assumed mean.
 - (c) Thirty micrograms of Vitamin B₁₂ were given intramuscularly every fourth week to six patients of pernicious anemia during period of remission. The results are given below. Do the data indicate real improvement in hemoglobin level ?

Hemoglobin gm		
Individual Number	Before therapy	After 3 months therapy
1	12.2	13.0
2	11.3	13.4
3	14.7	16.0
4	11.4	13.6
5	11.5	14.0
6	12.7	13.8

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

- Random Sampling
- Quantitative data
- Cohort Study
- Standard deviation
- Mode
- Pie diagram

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

- In a study of cholera, the incubation periods obtained were 2, 5, 8, 10, 25, 10 and 30. The median is calculated to be
 - 50
 - 22.5
 - 10
 - 5
- Relationship between two variables can be presented by :
 - Pie diagram
 - Scatter diagram
 - Bar diagram
 - Histogram
- Measure of dispersion is :
 - Mean
 - Mode
 - Standard deviation
 - Median
- In a standard normal curve the area between one standard deviation on either side will be :
 - 68%
 - 95%
 - 97.5%
 - 100%

