



DCP-202112

Seat No. _____

Fourth Year B. Physiotherapy Examination

July - 2022

Biostatistics & Research Methodology

(New Course)

Time : 2 Hours]

[Total Marks : 40

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

- 1 Write comprehensive notes on any **one** of the following: **10**
(a) Cohort study
(b) Describe research process in detail.

- 2 Calculate any **three** of the following : **15**
(a) Following stillbirth rates per 1000 total births were reported by 30 towns in 2021.
27, 28, 40, 32, 30, 36, 25, 29, 30, 29, 26, 30, 20, 35, 32, 36, 37, 29, 29, 42, 32, 27, 35, 36, 29, 33, 27, 41, 49, 34.

Determine the range, mean deviation, variance of above data.

- (b) In two groups of infants at the 8th month of age the following values were observed.

Group	Number of Infants	Mean weight (kg)	Standard deviation of weights (kg)
1	100	6.9	1.10
2	169	7.3	0.94

Test whether mean birth weights are significantly different.

- (c) Define standard error of mean. Mean Hb% of the population is 14.3. Can a sample of 15 individuals with a mean of 13.5% and SD 1.5 be from the same population?

- (d) A group of 30 normal children in a study had a mean bilirubin level of $1.10 \mu\text{g}\%$ and SD of 0.37. Another group of 30 children with infantile cirrhosis of liver had mean bilirubin level of $4.99 \mu\text{g}\%$ and SD of 2.83. Is the difference between the two means statistically significant?

3 Write short notes on any **five** of the following : **15**

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