[LB 0212] **AUGUST 2012** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions in the same order.

I. Elaborate on:

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Write in detail about main function of statistics.	7	20 min.	10
2. Find out Mean & standard deviation (SD) for the following data	7	20 min.	10

X	2	5	7	8	9
Y	10	8	5	12	7

3. Draw a bar diagram for the following data.	7	20 min.	10			

Year	1989	1990	1991	1992	1993	1994
Patients ('000s)	10	12	18	25	42	35

II. Write notes on:

1. Write the limitation of statistics.	4	9 min.	5
2. Define Median & Mode and their advantages & disadvantages.	4	9 min.	5
3. How to collect the primary data.	4	9 min.	5
4. Explain range and Mean deviation.	4	9 min.	5
5. Explain two-dimensional diagram?	4	9 min.	5
6. State and prove of addition theorem on probabilities for not mutually exclusive events.	4	9 min.	5
7. Explain with an example of histogram.	4	9 min.	5
8. Distinguish between census and sampling method?	4	9 min.	5
9. Define correlation and explain it.	4	9 min.	5
10. Write the limitation of hospital statistics.	4	9 min.	5

III. Short Answers on:

1. Define Statistics.	1	3 min.	2
2. Definition of Mean.	1	3 min.	2
3. What do you mean by line diagram?	1	3 min.	2
4. Define co-efficient of range.	1	3 min.	2
5. Define trial.	1	3 min.	2
6. What is population and sample?	1	3 min.	2
7. Define the goodness of fit in x^2 distribution.	1	3 min.	2
8. What is Null hypothesis and Alternative hypothesis?	1	3 min.	2
9. What do you mean by data?	1	3 min.	2
10. Define Perinatal Mortality rate.	1	3 min.	2

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[LC 0212] **FEBRUARY 2013** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Write Elaborate on Measures of central tendency.
2. Draw a bar diagram for the given data :

Centre :	Madurai	Salem	Pondy	Tirunelveli	Coimbatore
No. of. MLOP:	1212	550	965	1050	1118

3. Write in detail about student ‘t’- distribution.

II. Write notes on: **(10 x 5 = 50)**

1. Write about limitation of statistics.
2. Explain about standard deviation.
3. Explain about systematic random sampling method.
4. What do you meant by scatter diagram.
5. Explain with an example of frequency curve.
6. Explain one-dimensional diagram.
7. Write notes on primary source of data.
8. State and prove of addition theorem on probabilities for not mutually exclusive events.
9. Define correlation and explain it.
10. Write the limitation of hospital statistics.

III. Short Answers on: **(10 x 2 = 20)**

1. Definition of Mean.
2. Define co-efficient of range.
3. Definition of Bio-statistics.
4. Define probability.
5. What do you meant by frequency.
6. What are the two types of sampling error.
7. List out the names of probability sampling technique.
8. What id fetus?
9. Define regression.
10. Definition of quartile deviation.

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[LD 0212] **AUGUST 2013** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain probability sampling methods
2. Describe the methods of presentation of data.
3. Discuss the need for normal Distribution.

II. Write notes on: **(10 x 5 = 50)**

1. Median and Mode.
2. Mean Deviation.
3. Histogram.
4. Define Probability with examples.
5. Binomial Distribution.
6. Test of significance.
7. Uses of Hospital Statistics.
8. Analysis of Hospital Services.
9. Test of significance.
10. Discuss correlation.

III. Short Answers on: **(10 x 2 = 20)**

1. Define Biostatics.
2. List the sources of Hospital statistics.
3. Bar diagram.
4. Large Sample.
5. Simple random sampling.
6. Scatter Diagram.
7. Rates and Ratios.
8. Misuse of chisquare test.
9. Regression Equation.
10. Range.

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[LE 0212] **FEBRUARY 2014** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Describe Measures of Central Tendency.
2. Explain the procedure for Test of significance.
3. Discuss Stratified and Systematic random sampling.

II. Write notes on: **(10 x 5 = 50)**

1. Pie Diagram.
2. Frequency curve.
3. Mean deviation.
4. Probability.
5. Poisson distribution.
6. Sampling distribution.
7. Chi Square Test.
8. Power of the test.
9. Coefficient of Variation.
10. Sources of Hospital Statistics.

III. Short Answers on: **(10 x 2 = 20)**

1. Define Biostatistics.
2. Percentages.
3. Inter Quartile Range.
4. Bar diagram.
5. Scatter diagram.
6. Regression.
7. Define Hospital Statistics.
8. Prevalence.
9. Random number.

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[LF 0212] **AUGUST 2014** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss about the common measures of central tendency.
2. What are the sources of hospital statistics and bring out their limitations?
3. Describe the characteristics of Normal Distribution.

II. Write notes on: **(10 x 5 = 50)**

1. Bring out differences between Bar Diagram and Histogram.
2. Show the main features of Frequency Polygon and Frequency Curve.
3. Write on three measures of variation.
4. What is addition theorem of Probability? Give an example.
5. Write about simple random sampling.
6. List the procedures for test of significance?
7. How will you determine correlation between two variables?
8. How is the test for Association done?
9. Define Hospital Statistics and two important Hospital Terms.
10. How will you analyse Hospital Services?

III. Short Answers on: **(10 x 2 = 20)**

1. Define Statistics.
2. What is grouped data?
3. What is Line diagram?
4. Define Probability.
5. Define Population.
6. Draw a scatter diagram.
7. Write a linear regression equation.
8. How is Null Hypothesis stated?
9. Interpret correlation coefficient.
10. Define Bed Occupation Rate.

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[LG 0215] **FEBRUARY 2015** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. What do mean, median and mode measure? Bring out their relative merits.
2. Discuss the various methods of sampling.
3. Write on important Rates, Ratios and Percentages obtained from Hospital Statistics.

II. Write notes on: **(10 x 5 = 50)**

1. Define Statistics and Biostatistics.
2. Write on the need for presentation of data by charts and diagrams.
3. Define coefficient of variation and mention its uses.
4. How is the addition theorem on probability stated?
5. What are the properties of Normal Distribution?
6. How is the linear correlation measured?
7. What are steps in Test of Significance?
8. Write on misuse of Chi-square test.
9. Define Bed Occupation Rate and bring out its uses.
10. Write about limitations of Hospital Statistics.

III. Short Answers on: **(10 x 2 = 20)**

1. What is grouped data?
2. What is frequency curve?
3. Draw a Pie Diagram.
4. Define a Quartile.
5. What is Probability?
6. What is Binomial Distribution?
7. Define Population.
8. How will you interpret regression coefficient?
9. How is Null Hypothesis stated?
10. Define Hospital Statistics.

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[LH 0815] **AUGUST 2015** **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code: 841303

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Define correlation and explain its type with neat diagram.
2. Explain about hospital statistics related to admission, discharge and death.
3. Explain different types of diagram.

II. Write notes on: **(10 x 5 = 50)**

1. What are the advantages of sampling techniques?
2. Normal distribution.
3. Calculate coefficient of variation:

   Mean length of stay Urban = 7.43 with Standard Deviation 3.0

   Mean length of stay Suburban = 8.92 with Standard Deviation 2.3
4. Write formula for Range, Quartile deviation, Mean deviation, Standard deviation and Correlation.
5. Explain the uses of hospital statistics.
6. State and prove multiplicative theorem of probability.
7. Chi square test.
8. Limitations of hospital statistics.
9. Procedure for test of significance.
10. Define Equally likely events and mutually exclusive events with example.

III. Short Answers on: **(10 x 2 = 20)**

1. Define Mode.
2. Define Biostatistics.
3. Probability.
4. Regression.
5. Cluster sampling.
6. Fetal death rate.
7. Bed turn over interval.
8. Caesarean-Section Rate.
9. Daily ward census.
10. Rates and ratio.

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[LJ 0816] **AUGUST 2016** **Sub. Code : 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FRIST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code: 841303

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions.

I. Elaborate on: **(3 x 10 = 30)**

1. What are Methods of Sampling?
2. What are the procedure for the test of significant for small samples?
3. What are the Diagrammatic presentation of data?

II. Write notes on: **(8 x 5 = 40)**

1. Explain simple random sampling.
2. Scatter Diagram.
3. What are the uses of Hospital Statistics?
4. Explain Poisson distribution.
5. What are the important rates of Hospital Statistics?
6. What are the uses of Arithmetic Mean?
7. Explain Inter Quartiles.
8. Find out the Mean Height of the Students:

Age	10 - 12	12 - 14	14 - 16	16 -18	18 - 20
Height	138	140	142	144	146

9. Find the Median for the following data:

Age	10 - 12	12 - 14	14 - 16	16 -18	18 - 20
Hemoglobin	11	12	13	14	12

Find the Mode

Age	10 - 12	12 - 14	14 - 16	16 -18	18 - 20
Hemoglobin	11	12	13	14	12

III. Short answers on: **(10 x 3 = 30)**

1. Define frequency.
2. Define probability.
3. Define Sample.
4. Define Range.
5. Define Population.
6. Define Chi-square Test.
7. Write any two important Hospital Terms.
8. Define Maternal Mortality Rate.
9. Define Bed Occupancy Rate.
10. Define Frequency Polygon.

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[LL 0817] AUGUST 2017 **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE
FRIST YEAR
PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code: 841303

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Measures of Central Tendency.
2. Correlation and Rank Correlation.
3. One hundred and thirty six breast cancer survivors participate in a community walk to raise money for fighting the disease. Construct a Simple bar diagram

Miles	No. of women
5	18
4	23
3	54
2	19
1	8

II. Write notes on: **(10 x 5 = 50)**

1. Presentation of Data.
2. Formation of Frequency Distribution.
3. Calculate mean and standard deviation for a series of serum albumin levels (gm%) of 15 preschool children.
   2.90, 3.57, 3.72, 2.98, 3.61, 3.75, 3.30, 3.62, 3.76, 3.38, 3.66, 3.76, 3.69, 3.43, 3.76
4. Normal Distribution.
5. Stratified Random Sampling.
6. Sources of Hospital Statistics.
7. Reporting Hospital Statistics.
8. Scatter Diagram.
9. Hypothesis Testing.
10. Collection of Primary Data and its sources.

III. Short answers on: **(10 x 2 = 20)**

1. Statistics.
2. Coefficient of Variation.
3. Inter Quartile range.
4. Rate and Ratio.
5. Probability.
6. Sampling Error.
7. Large Sample.
8. Find Range and its coefficient for systolic BP of normal subjects have been recorded below (in mm of hg) 130, 134, 132, 130, 128, 142, 131, 140, 133, 140, 120, 135,142, 150, 160.
9. Null and Alternative Hypothesis.
10. Random Number.

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[LN 0818] AUGUST 2018 **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FRIST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code: 841303

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Normal Distribution.
2. Sampling Methods.
3. Below given the data of protein intake of 150 families. Construct a Histogram

Protein intake	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of families	10	18	20	26	30	28	18

II. Write notes on: **(10 x 5 = 50)**

1. Tabulation of Data.
2. Correlation.
3. Type I and Type II Errors.
4. Find the mean, median and mode of eosinophils encountered in 100 WBC from the following data.

No. of eosinophils (x)	0	1	2	3	4	5	6
No of smears (f)	11	20	20	7	3	4	5

5. Chi square Test.
6. Analysis of Hospital services.
7. Census and Sample Survey.
8. Statistics and Biostatistics.
9. Measures of Variation.
10. Regression and interpretation of Regression coefficient.

III. Short answers on: **(10 x 2 = 20)**

1. Frequency Curve and Frequency Polygon.
2. Hospital Statistics.
3. Binomial Distribution.
4. Research Hypothesis.
5. Bed Occupation Rate.
6. Daily ward census.
7. Two Hospital Terms.
8. Secondary Data.
9. Discharge Summary.
10. Draw a line diagram Sami's weight in kilograms for 5 months

Sami's Weight	
Month	**Weight in kg**
January	49
February	54
March	61
April	69
May	73

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[LP 0819] AUGUST 2019 **Sub. Code: 1303**

DIPLOMA IN MEDICAL RECORD SCIENCE

FRIST YEAR

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code: 841303

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss the sources of hospital statistics and bring out their relative merits.
2. What are the measures of central tendency? How are they calculated?
3. Write on the procedure of testing of significance between two means of large samples.

II. Write notes on: **(10 x 5 = 50)**

1. Forming of frequency distribution.
2. Bar diagram and Histogram.
3. Measures of variation.
4. It is known that 90% of records are complete in all details. If a random sample of 2 records is taken what is the probability that (a) one record is complete and the other is incomplete (b) both are complete and (c) both are incomplete?
5. Stratified sampling.
6. Correlation and Regression.
7. Test of Association.
8. Bed Occupation Rate and its uses.
9. Analysis of Hospital Services and Discharges.
10. Uses and limitations of Hospital Statistics.

III. Short answers on: **(10 x 2 = 20)**

1. Define Biostatistics.
2. Pie diagram.
3. Line diagram.
4. Calculate the Coefficient of variation using the following.
   Mean = 2.2, Standard Deviation=4.4.
5. Probability.
6. Population and Sample.
7. Sample Size.
8. Systematic Sampling.
9. Daily ward census.
10. P value.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321] **MARCH 2021** **Sub. Code: 1303**

(AUGUST 2020 EXAM SESSION)

DIPLOMA IN MEDICAL RECORD SCIENCE

FIRST YEAR (Regulation 2015-2016 & 2018-2019)

PAPER III – GENERAL STATISTICS AND BIOSTATISTICS

Q.P. Code : 841303

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss the rates and ratios used in analysis of Hospital Statistics.
2. How will you take a representative sample from a population?
3. What are the Characteristics of Normal Distribution?

II. Write notes on: **(10 x 5 = 50)**

1. Frequency distribution.
2. Calculate the measures of central tendency for the following data
   2, 3, 6, 4, 9, 4, 3, 7, 4
3. Standard deviation and Coefficient of Variation.
4. Addition and multiplication theorems of probability.
5. Binomial Distribution.
6. Linear correlation.
7. Type I and Type II errors.
8. Chi square Test of significance.
9. Sources of Hospital Statistics.
10. Discharge Analysis.

III. Short answers on: **(10 x 2 = 20)**

1. Define Statistics.
2. Define Hospital Statistics.
3. Histogram.
4. Quartiles.
5. Inter quartile range.
6. Pie chart.
7. Scatter Diagram.
8. Bias in sampling.
9. Significance Level.
10. Average daily census.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0122] JANUARY 2022 Sub. Code: 1303
(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

DIPLOMA IN MEDICAL RECORD SCIENCE
FIRST YEAR (Regulation 2015-2016 & 2018-2019)
PAPER III – GENERAL STATISTICS AND BIOSTATISTICS
Q.P. Code : 841303

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Define Hospital Statistics. Discuss their importance, uses and limitations.
2. Bring out the uses and Characteristics of Normal Distribution.
3. Discuss about measures of variation.

II. Write notes on: **(10 x 5 = 50)**

1. Calculate mean, median and mode for the following data

Age	10 - 20	20 - 30	30 - 40	40 - 50	Total
No. of patients	8	25	15	2	50

2. Frequency Distribution.
3. Scatter diagram and line diagram.
4. Define Population and Sample.
5. Systematic sampling.
6. Addition and Multiplication Theorems of Probability.
7. Cluster sampling.
8. Linear Regression.
9. Sources of Hospital Statistics.
10. Daily ward census and its uses.

III. Short answers on: **(10 x 2 = 20)**

1. Define Statistics.
2. Histogram.
3. Scatter diagram.
4. Frequency Polygon.
5. Pie diagram.
6. Correlation Coefficient.
7. Sample Size.
8. Bed Occupation Rate.
9. Hospital mortality.
10. Inpatient census.