

RRT&DT

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MANIPAL UNIVERSITY

**THIRD YEAR BASLP (NR)/B.Sc. M.L.T./B.Sc. R.T./B.Sc. C.V.T./B.Sc. M.R.T/
B.Sc. R.R.T. & D.T. DEGREE EXAMINATION – JUNE 2014**

**SUBJECT: BASIC STATISTICS & SCIENTIFIC ENQUIRY IN AUDIOLOGY AND
SPEECH LANGUAGE PATHOLOGY/BIOSTATISTICS/RESEARCH METHODOLOGY
AND STATISTICS/BIOSTATISTICS AND RESEARCH METHODOLOGY**

Monday, June 02, 2014

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. What is the role of Statistics in Health Sciences?
(5 marks)
2. What do you mean by reliability and validity? Distinguish the two.
(5 marks)
3. Describe quantitative variables.
(5 marks)
4. Classify the following into different scales of measurements (Nominal, Ordinal, Interval and Ratio).
4A. Marital status
4B. Age
4C. Blood pressure
4D. Temperature (°C)
4E. Stages of cancer
(5 marks)
5. List the reasons for sampling.
(5 marks)
- 6A. Construct a frequency polygon for the fasting blood glucose levels of 30 children given in the following table:

Blood glucose level in mg/dl	Number of children
55 – 60	5
60 – 65	10
65 – 70	8
70 – 75	4
75 – 80	3

6B. Given below are the weights in grams of 30 oysters. Construct frequency table taking class intervals 5 – 7, 7 – 9, 9 – 11, and so on and calculate relative and cumulative frequencies.

12.92	6.79	9.66	12.49	12.99	10.73	5.22	7.91	7.67	8.87
11.4	9.62	7.02	10.12	8.09	15.17	7.75	6.93	11.27	13.68
17.42	15.5	12.56	10.64	14.09	15.5	10.71	13.63	10.98	14.27

(5+5 = 10 marks)

7A. Define coefficient of variation. Mean and standard deviation of height of a group of girls is 64 and 2 inches respectively. The mean and standard deviation of their Hb level is 12 and 1 gm% respectively. Find out which variable data is more consistent.

7B. Calculate the three measures of central tendency for the following data:

Weight (in kg): 55 59 56 55 61 54 64 55 53 57

(5+5 = 10 marks)

8. Hemoglobin levels (in gm %) of medical students in a city follows normal distribution with mean 13 and standard deviation 2. What is the proportion of students who have hemoglobin level:

8A. Above 11 gm%

8B. Between 13 and 17gm%

(5 marks)

9. Describe various types of correlation with the help of scatter diagrams.

(5 marks)

10. Enumerate the uses and sources of health information system.

(5 marks)

11A. Explain the terms prevalence and incidence with examples.

11B. Define crude birth rate and infant mortality rate.

(6+4 = 10 marks)

12. What is descriptive epidemiology? Discuss the different types of descriptive epidemiological studies with merits and demerits of each one.

(10 marks)



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THIRD YEAR B.Sc. RRT & DT DEGREE EXAMINATION – JUNE 2014

SUBJECT: BDT 301 – ADVANCED HD, SPECIAL EXTRACORPEAL TREATMENTS AND PATIENT EDUCATION

Wednesday, June 04, 2014

Time: 10.00-13.00 Hrs.

Max. Marks: 80

1. **Long essay questions:**

- 1A. Describe the membrane plasma separation method of plasmapheresis.
- 1B. Discuss the CRRT modalities.
- 1C. What are the standard measures recommended for prevention of hepatitis B transmission in the HD unit?

(10 marks × 3 = 30 marks)

2. **Short essay questions:**

- 2A. Discuss hemadsorption.
- 2B. What is single pass albumin dialysis?
- 2C. What are the advantages of acute PD for AKI in the ICU?
- 2D. What are the prescribed standards for the dialyzer reprocessing area?
- 2E. What are the indications for Plasmapheresis?
- 2F. Discuss anticoagulation in CRRT.

(5 marks × 6 = 30 marks)

3. **Write short notes on:**

- 3A. What is SCUF?
- 3B. What are the disadvantages of postdilution CVVHF?
- 3C. Which drugs are well removed by HD?
- 3D. What are the advantages of daily dialysis?
- 3E. Name four complications of plasmapheresis.
- 3F. How will you manage the problem of repeated clotting of the filter in CVVHF?
- 3G. Draw the circuit for isolated UF.
- 3H. What are the disadvantages of using FFP in plasmapheresis?
- 3I. What electrolyte abnormalities can you expect in CRRT?
- 3J. What are the standards for HD water purity?

(2 marks × 10 = 20 marks)

