

Question Paper

Exam Date & Time: 06-Jun-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. (RRT & DT) DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT: BDT 304 - ADVANCED EXTRACORPOREAL BLOOD THERAPIES FOR RENAL & NON RENAL CASES
(2016 SCHEME)
Thursday, June 06, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1A) Explain the factors affecting drug or poison removal by extracorporeal circuits. Discuss technical requirements for these procedures. (20)
- 1B) Continuous renal replacement therapy suits for which type of dialysis population and justify your answer. Expand SCUF and explain in detail with a neat schematic labelled diagram. (20)
- 2A) Describe the centrifugal method of plasmapheresis with its advantages and disadvantages. (10)
- 2B) List the indications for liver dialysis. Explain SPAD. (10)
- 3A) What is hemodiafiltration? Brief the procedure. (5)
- 3B) Write a note on replacement fluids used for plasmapheresis. (5)
- 3C) Expand SLED. Write the indications and its benefits over intermittent hemodialysis. (5)
- 3D) List the advantages and disadvantages of pre and post dilution in hemofiltration. (5)
- 3E) What is MARS? Draw the neat labelled schematic diagram for the same. (5)
- 3F) Discuss the principles used in hemofiltration. (5)
- 4A) Name the antidotes for methanol toxicity. (2)
- 4B) Write any four complications of continuous renal replacement therapies. (2)
- 4C) What is isolated ultrafiltration? (2)
- 4D) Name any four types of anticoagulants. (2)
- 4E) Write any two benefits of bicarb based dialysis fluid. (2)

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Question Paper

Exam Date & Time: 01-Jun-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER BASLP/ B.Sc. MRT/ B.Sc. M.I.T./ B.Sc. M.L.T./ B.Sc. RRT&DT / B.Sc. E.S.S. DEGREE EXAMINATION - MAY/JUNE 2019

SUBJECT : BASIC STATISTICS (BASLP 306)/ BIostatistics (BMRT 306/STAT 402)/ BIostatistics & RESEARCH METHODOLOGY (STAT 402) (2016 SCHEME)

Saturday, June 01, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer the following question:

1) Describe quantitative variables with examples. (5)

2) Differentiate between the following:

2A) Nominal scale vs ordinal scale (4)

2B) Sampling errors vs non-sampling errors (4)

3) Briefly explain the following:

3A) Systematic sampling (4)

3B) Theoretical and empirical research (4)

3C) Health research triangle (4)

Answer the following questions:

4) What is sampling? What are the advantages and disadvantages of sampling? (1+4 = 5 marks) (5)

5) The data given below represents the distribution of 50 people according to their socio economic status (10)

SOCIO ECONOMIC STATUS	NUMBER OF PEOPLE
Low	20
Medium	10
High	20

Present the above data diagrammatically using a

a) Simple bar diagram

b) Pie diagram

(5+5 = 10 marks)

6A) Write a short note on 'use and applications of sample median'. (4)

6B) The following data represent the blood cholesterol levels of 16 first-year students at a particular (10)

college.

213 174 193 196 220 183 194 200 192 200 200 199 178 183 188

Report the value of the range, mode and interquartile range.

- 7) The CD4 T cell counts ($\times 10^6 / l$) at base line for 10 - HIV positive subjects are as follows: (6)
230 210 313 173 158 103 181 115 301 216
Calculate variance.
- 8) Age at time of onset of a disease is approximately normally distributed with mean 12 years and standard deviation of 3 years. In a sample of 500 individuals with the disease, how many will be : (6)
a) Less than 9 years
b) Between 9 and 12 years
c) Above 15 years
(2+2+2 = 6 marks)
- 9) Enumerate the properties of correlation with the help of scatter diagrams. (8)
- 10) With the help of an example explain dependent and independent variables used in simple linear regression. Give the relationship between correlation coefficient and coefficient of determination in simple linear regression. (5)
- 11) **Define the following:**
- 11A) Crude birth rate (2)
- 11B) General fertility rate (2)
- 11C) Incidence rate (2)
- Answer all the questions.**
- 12) What is demography? Explain notification of diseases as a source of demographic data. (5)
- 13) Describe case report and cross sectional study designs with their strengths and limitations. (10)

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