

Question Paper

Exam Date & Time: 16-May-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. ESS/B.Sc. MLT/ B.Sc. MRT/ B.Sc. MIT / B.Sc. RRT & DT/EIGHTH SEMESTER BPT/BOT
DEGREE EXAMINATION - MAY 2022

SUBJECT: STAT 402 - BIOSTATISTICS & RESEARCH METHODOLOGY /BASIC BIOSTATISTICS & RESEARCH
METHODOLOGY/BIOSTATISTICS
(2016 SCHEME/2016 RV SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

1. Briefly explain the following:

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|-----|--------------------------------|-----|
| 1A) | Ordinal scale. | (2) |
| 1B) | General Fertility Rate (GFR). | (2) |
| 1C) | Infant Mortality Rate (IMR). | (2) |
| 1D) | Maternal Mortality Rate (MMR). | (2) |
| 1E) | Ecological Fallacy. | (2) |

2. Write short notes on the following:

- | | | |
|-----|--------------------|-----|
| 2A) | Types of variables | (5) |
| 2B) | Census | (5) |

- 3) Erythrocyte Sedimentation Rate (ESR) readings (in mm) of 12 tuberculosis patients are given below. (10)
12 8 11 9 8 14 8 12 8 9 11 10
Calculate the value of Coefficient of variation and Range of the data.
((2+5)+3 = 10 marks)

- 4) A random sample of 150 children had a mean urinary lead concentration of 3.15 $\mu\text{mol}/24\text{hr}$, with standard deviation 0.75. Construct reference range which includes 95% of the observations. (5)

5. A researcher wants to predict vital capacity of lungs (i.e. is the maximum amount of air a person can expel from the lungs after a maximum inhalation, measured in litres) using height of the individuals (measured in cms). A simple linear regression model was fit and it was found that the slope for height was 0.2. The intercept for the model was -0.5. Using the model obtained from this study, answer the following questions:

- | | | |
|-----|---|-------|
| 5A) | State the dependent variable and independent variable of the fitted model. | (3) |
| 5B) | Write the form of simple linear regression model using the slope and intercept. | (3.5) |

5C) Interpret the value of slope. (3.5)

6) 'Correlation does not imply causation'. Explain this statement with an example. (5)

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Question Paper

Exam Date & Time: 18-May-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. RESPIRATORY THERAPY / B.Sc. RENAL REPLACEMENT THERAPY & DIALYSIS
TECHNOLOGY / B.Sc. CARDIO VASCULAR TECHNOLOGY / B.Sc. EMERGENCY MEDICAL TECHNOLOGY/VIII
SEMESTER BOT DEGREE EXAMINATION - MAY 2022
SUBJECT: PSYC 402 - CLINICAL PSYCHOLOGY
(2016/2019 SCHEME)

Marks: 50

Duration: 120 mins.

Write essays on :

- 1) Elaborate on the different perspectives of the concepts of normality and abnormality (10)
- 2) Explain in detail, any two techniques used in behaviour therapy (with examples) (10)

3. Write short notes on:

- 3A) Psychotic Disorders (5)
- 3B) Supportive Psychotherapy (5)
- 3C) Psychodynamic model of mental disorders (5)
- 3D) Impact of stress on mental illness. (5)

4. Write very short notes on:

- 4A) Coping (2)
- 4B) Anxiety (2)
- 4C) Borderline personality disorder (2)
- 4D) Counselling (2)
- 4E) Unconditional positive regard (2)

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Question Paper

Exam Date & Time: 20-May-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. RRT & DT DEGREE EXAMINATION - MAY 2022

SUBJECT: BDT 304 - ADVANCED EXTRACORPOREAL BLOOD THERAPIES FOR RENAL AND NON RENAL CASES
(2016 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1A) Define continuous renal replacement therapies (CRRT). Discuss the indications for CRRT and complications related to these procedure. (20)
- 1B) Describe the membrane separation method of plasmapheresis with circuit diagram. Discuss the complications associated with this method and their management. (20)
- 2A) Explain alcohol poisoning management methods. (10)
- 2B) List the advantages and disadvantages of MARS and SPAD. (10)
- 3A) Define plasmapheresis. List the clinical applications of plasmapheresis. (5)
- 3B) What are pre dilution and post dilution methods in continuous hemofiltration? Discuss the advantages and disadvantages of these methods. (5)
- 3C) What is peritoneal dialysis? What are the indications to use this method in poisoning cases? (5)
- 3D) Write a note on continuous arterio venous therapies. (5)
- 3E) Write the formula to calculate plasma volume removal. Why calculating plasma volume is important? (5)
- 3F) Briefly discuss the anticoagulation in plasmapheresis. (5)
- 4A) Define adsorption. (2)
- 4B) Write any two causes for liver failure. (2)
- 4C) What is the importance of glucose rinse for hemadsorption filter? (2)
- 4D) What is reverse osmosis? (2)
- 4E) Expand and define CRBSI. (2)

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