

# Question Paper

Exam Date & Time: 23-May-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

**SIXTH SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - MAY/JUNE 2024**  
**SUBJECT: BRES 306 - MECHANICAL VENTILATION II**  
**(2016 SCHEME)**

**Marks: 50**

**Duration: 120 mins.**

**Answer all the questions.**

- |     |   |      |
|-----|---|------|
| 1)  | Explain the effects of Positive Pressure ventilation on Heart and Thoracic Vessels  | (10) |
| 2)  | Write a short note on Heliox Therapy  | (10) |
| 3A) | List the conditions appropriate for long-term mechanical ventilation                | (5)  |
| 3B) | Explain the Ventilator-associated pneumonia (VAP) bundle used in the ICU            | (5)  |
| 3C) | Briefly explain the types of high-frequency ventilation.                            | (5)  |
| 3D) | List the advantages and disadvantages of Airway Pressure Release Ventilation (APRV) | (5)  |
| 4A) | List any TWO causes for ventilation-perfusion mismatch                              | (2)  |
| 4B) | List any TWO indications for Neutrally Assisted Ventilator Assist (NAVA)            | (2)  |
| 4C) | List any TWO low-pressure alarms on the ventilator                                  | (2)  |
| 4D) | Define weaning from Mechanical Ventilation  | (2)  |
| 4E) | List the indications for the use of sedatives                                       | (2)  |

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# Question Paper

Exam Date & Time: 03-Jun-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. (RRT & DT/RESPIRATORY THERAPY) / EIGHTH SEMESTER BOT DEGREE EXAMINATION -  
MAY/JUNE 2024  
SUBJECT: PSYC 402 - CLINICAL PSYCHOLOGY  
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

Write essay on:

- |    |   |      |
|----|---|------|
| 1) | Describe any three models of normality          | (10) |
| 2) | Discuss the different subtypes of schizophrenia | (10) |

3. Write a short note on:

- |     |                                 |     |
|-----|---------------------------------|-----|
| 3A) | Supportive therapy              | (5) |
| 3B) | Borderline personality disorder | (5) |
| 3C) | Alcohol Dependence              | (5) |
| 3D) | Survey method                   | (5) |

4. Write very short answers on:

- |     |                              |     |
|-----|------------------------------|-----|
| 4A) | Psychological rehabilitation | (2) |
| 4B) | Shaping                      | (2) |
| 4C) | Coping                       | (2) |
| 4D) | Aphasia                      | (2) |
| 4E) | Specific Phobia              | (2) |

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# Question Paper

Exam Date & Time: 30-May-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

**SIXTH SEMESTER BPT/BOT/B.Sc. (ESS/ RRT & DT / RT / MIT) / FOURTH SEMESTER B.Sc. (PFT / CVT / CND / MLT / HIM / BOPT / BAOTT / RT / EMT / PHYSICIAN ASSISTANT / PSYCHOLOGY / NMT) / EIGHT SEMESTER (BPT / BOT) / SECOND SEMESTER BASLP DEGREE EXAMINATION - MAY/JUNE 2024**  
**SUBJECT: BST3201 / STAT 402 / BST 3202 - BIOSTATISTICS AND RESEARCH METHODOLOGY / BIOSTATISTICS / BASIC BIOSTATISTICS AND RESEARCH METHODOLOGY**  
**(2016/2020/2022 SCHEME)**

**Marks: 50**

**Duration: 120 mins.**

**Answer all the questions.**

- |     |  |     |
|-----|--|-----|
| 1A) | Elaborate graphical representation with examples.  | (5) |
| 1B) | Explain the properties of normal distribution with diagram.  | (5) |
| 2A) | Describe different types of clinical study designs.  | (5) |
| 2B) | Write short notes on non-probability sampling.   | (5) |
| 3A) | The triglycerides (serum) (in mg/dL) of 10 patients were as follows:<br>155, 150, 106, 89, 63, 68, 144, 125, 130, 74<br>Calculate mean, and standard for the above data. | (5) |
| 3B) | Define the following: (i) Incidence rate (ii) prevalence rate.   | (5) |
| 3C) | Discuss about regression analysis and its two equations.   | (5) |
| 3D) | Write short notes on research process.   | (5) |
| 4A) | Define skewness.   | (2) |
| 4B) | The following are the weights for 10 patients. Calculate range and mode 60, 54, 74, 82, 59, 63, 72, 89, 58, 85.  | (2) |
| 4C) | What is meant by systematic sampling?  | (2) |
| 4D) | Define scatter plot.   | (2) |
| 4E) | Define case report.  | (2) |

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# Question Paper

Exam Date & Time: 23-May-2024 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

**SIXTH SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - MAY/JUNE 2024**  
**SUBJECT: RES3222 - MECHANICAL VENTILATION - II**  
**(2020 SCHEME)**

**Marks: 100**

**Duration: 180 mins.**

**Answer all the questions.**

- 1) List the indications, advantages, disadvantage and complications of APRV mode and explain the initiation, monitoring, and weaning from APRV mode. (20)  
(4+2+2+2+10 = 20 marks)
- 2) Define ventilator-associated pneumonia (VAP). Explain the pathophysiology, diagnostic criteria, and management of ventilator-associated pneumonia. Add a note on VAP bundle used in the ICU. (20)  
(2+5+5+5+3 = 20 marks)
- 3) Explain in detail about the beneficial and adverse effects of PPV on heart and thoracic vessels. (10)
- 4) List the weaning criteria and weaning indices. (10)
- 5A) List the different patient-related and ventilator-related problems. (5)
- 5B) List the complications of using Noninvasive positive pressure ventilation (NIPPV). (5)
- 5C) List the goals for long-term mechanical ventilation. (5)
- 5D) List the indication for High-frequency oscillatory ventilation (HFOV). (5)
- 5E) Explain the use of Heliox in different clinical conditions. (5)
- 5F) Explain normal ventilation-perfusion matching in the pulmonary system. (5)
- 6A) List the indications for Neutrally adjusted ventilator assist (NAVA). (2)
- 6B) List any TWO condition that causes increase in dead space. (2)
- 6C) List any TWO non-Respiratory factors for weaning. (2)
- 6D) List any TWO low pressure alarm. (2)
- 6E) List any TWO indications for the use of sedatives. (2)

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# Question Paper

Exam Date & Time: 25-May-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

**SIXTH SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - MAY/JUNE 2024**  
**SUBJECT: RES 3241 - PROGRAM ELECTIVE - II : END OF LIFE ISSUES AND BIOETHICS**  
**(2020 SCHEME)**

**Marks: 50**

**Duration: 120 mins.**

**Answer all the questions.**

- |     |  |      |
|-----|--|------|
| 1)  | When should CPR be administered and withheld? Identify the scenarios where CPR is not benefiting? Explain the two general approach if the patient is unable to express their wish.<br>(4+2+4 = 10 marks) | (10) |
| 2)  | Explain the Robert buckman's six step protocol for breaking bad news.  | (10) |
| 3A) | Identify who has the authority to decide for children. Identify the circumstances when a minor can take the medical decision for themselves.<br>(2½+2½ = 5 marks)  | (5)  |
| 3B) | Explain how much details (truth) should be told to the patient.  | (5)  |
| 3C) | Explain the fiduciary relationship.  | (5)  |
| 3D) | Identify the situation where confidentiality can be breached.  | (5)  |
| 4A) | Identify the staff members who may be able to help in case of patients with AIDS.  | (2)  |
| 4B) | What is the risk associated with disclosing information about the mistake?   | (2)  |
| 4C) | What is good death?  | (2)  |
| 4D) | List the goals of an ethics committee.   | (2)  |
| 4E) | What is informed consent?  | (2)  |

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# Question Paper

Exam Date & Time: 25-May-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

**SIXTH SEMESTER B.Sc. RESPIRATORY DEGREE EXAMINATION - MAY/JUNE 2024**  
**SUBJECT: RES3242 - PROGRAM ELECTIVE - REGISTRY REVIEW**  
**(2020 SCHEME)**

**Marks: 50**

**Duration: 120 mins.**

**Answer all the questions.**

- 1) You observe a middle-aged man standing near you clutch his chest in pain and collapse. The man is now lying on the ground. As a respiratory therapist, how will you approach and manage this case? (10)
- 2) A 37 week term baby has been diagnosed with Persistent pulmonary hypertension who failed SIMV mode of ventilation. As a respiratory therapist, how will you further manage this case with High frequency oscillatory ventilation? (10)
- 3A) List the different type heat and moisture exchanger. Write a short note on hygroscopic condenser humidifier. (5)
- 3B) Write in details the steps of performing an open suction. (5)
- 3C) With a neat labelled diagram explain the mechanism of action of adrenergic bronchodilators. (5)
- 3D) Write a short note on nitrogen washout technique. (5)
- 4A) List the different complications of oxygen therapy. (2)
- 4B) Draw a neat labelled diagram of sinus rhythm. (2)
- 4C) Mention the gram staining colors for gram positive and gram negative bacteria. (2)
- 4D) List the physiological effects of intermittent positive pressure breathing. (2)
- 4E) Write two examples for endurance training techniques. (2)

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