

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.

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| 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:
155, 150, 106, 89, 63, 68, 144, 125, 130, 74
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: 03-Jun-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

**FOURTH SEMESTER B.Sc. (RRT & DT/RT/EMT/HIM/MIT/BOATT/CND/PHYSICIAN ASSISTANT) DEGREE EXAMINATION -
MAY/JUNE 2024
SUBJECT: GPY2201 - GENERAL PSYCHOLOGY
(2020/2022 SCHEME)**

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Define Psychology. Summarize the schools of Psychology | (10) |
| 2) | Explain the different theories of Forgetting | (10) |
| 3A) | Personality Assessment | (5) |
| 3B) | Maslow's theory of motivation | (5) |
| 3C) | Schedules of reinforcement | (5) |
| 3D) | Types of Perceptual constancy | (5) |
| 4A) | Independent variable | (2) |
| 4B) | Negative emotions | (2) |
| 4C) | Chunking | (2) |
| 4D) | Algorithm | (2) |
| 4E) | Two factor theory of intelligence | (2) |

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Question Paper

Exam Date & Time: 31-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MIT / BOT / RRT & DT / PFT / CVT / BAOTT / EMT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: PHC2203 - PHARMACOLOGY
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Describe the terms "Generic name of a drug", "Dependence" and "Competitive antagonist" with suitable examples. List two advantages and two disadvantages of sublingual route of drug administration. Define bioavailability and plasma half-life. (10)
- 2) i) List three cholinergic receptors and mention one action mediated through each of them. Mention two uses and two adverse effects of atropine. (10)
ii) Explain any two pharmacological actions of morphine and list its two uses and two contraindications.

3. Short notes:

- 3A) List three classes of drugs with an example for each used in peptic ulcer. Explain the mechanism of action of any one class. (5)
- 3B) List two drugs used in chronic gout and explain the mechanism of action of any one of them. List two each local anaesthetics and peripherally acting skeletal muscle relaxants. (5)
- 3C) Explain the mechanism of action of loop diuretics and list their two adverse effects. List two classes of drugs with an example for each used in angina. (5)
- 3D) Define antitussives with an example. List two inhaled glucocorticoids and explain their antiasthmatic action. (5)

4. Very short answers:

- 4A) Mention two examples and two uses of anticoagulants. (2)
- 4B) List two drugs each used to treat malaria and cancer. (2)
- 4C) List two oral antidiabetic drugs and two antithyroid drugs. (2)
- 4D) List two first-line antitubercular drugs and mention one adverse effect of each of them. (2)
- 4E) Mention two differences between aspirin and paracetamol. (2)

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Question Paper

Exam Date & Time: 05-Jun-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. ANAESTHESIA & OPERATION THEATRE TECHNOLOGY DEGREE EXAMINATION -
MAY/JUNE 2024
SUBJECT: AOT2201 - MEDICINE-II
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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|-----|--|------|
| 1) | Explain ulcer. Mention the types, clinical features, diagnosis, and outline the diagram of ulcer management. | (10) |
| 2) | Explain the investigations in pulmonology. | (10) |
| 3A) | Explain the symptoms & management of pneumothorax. | (5) |
| 3B) | Explain the clinical features & medical management of hypertension. | (5) |
| 3C) | Outline the types of valve disease. Mention the clinical features of aortic regurgitations. | (5) |
| 3D) | Define angina pectoris. Name the types. Mention the angina pain features. List the cardiovascular clinical features of the same. | (5) |
| 4A) | List the causes of ARDS. | (2) |
| 4B) | Name the components of echocardiogram. | (2) |
| 4C) | Explain the causes of emphysema. | (2) |
| 4D) | List the non-pharmacological management of MI. | (2) |
| 4E) | Explain Deep Vein Thrombosis. | (2) |

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Question Paper

Exam Date & Time: 07-Jun-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. ANAESTHESIA & OPERATION THEATRE TECHNOLOGY DEGREE EXAMINATION -
MAY/JUNE 2024
SUBJECT: AOT2202 - BASIC TECHNIQUES OF ANAESTHESIA
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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|-----|--|------|
| 1) | Explain in detail the technique of subarachnoid block and epidural analgesia | (20) |
| 2) | Classify and explain:
a) Intravenous induction agents and write a note on propofol.
b) Inhalational induction agents and write a note on isoflurane. | (20) |
| 3) | Classify IV analgesics. Write a note on morphine. | (10) |
| 4) | Explain the technique of laryngoscopy and intubation with a neat, labelled diagram of ET tube. | (10) |
| 5A) | Outline Mallampati grading with a neat, labelled diagram. | (5) |
| 5B) | Explain the airway assessment techniques. | (5) |
| 5C) | Explain in detail spinal needles. | (5) |
| 5D) | Outline the pharmacology of atracurium. | (5) |
| 5E) | What are the goals of premedication? Explain the methods of premedication. | (5) |
| 5F) | Explain in detail the stages of anaesthesia. | (5) |
| 6A) | Who was Horace Wells? | (2) |
| 6B) | Name any two reversal agents. What is the antidote of midazolam? | (2) |
| 6C) | Define succinylcholine apnea. | (2) |
| 6D) | Explain in brief about normal saline. | (2) |
| 6E) | List the drugs used in MAC. | (2) |

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Question Paper

Exam Date & Time: 27-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. ANAESTHESIA & OPERATION THEATRE TECHNOLOGY DEGREE EXAMINATION -
MAY/JUNE 2024

SUBJECT: AOT2241 - PROGRAM ELECTIVE - I : ANAESTHESIA AND OPERATION THEATRE EQUIPMENTS
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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|-----|---|------|
| 1) | Classify and elaborate suture materials based on their origin and structure. | (10) |
| 2) | Explain about a laser diode with an active medium of a gaseous state. | (10) |
| 3A) | Outline complications a patient might face if he undergoes surgery in a lithotomy position. | (5) |
| 3B) | Demonstrate how to check the integrity of an intermediate pressure system. | (5) |
| 3C) | Explain the laparoscopic procedure. Mention its advantages & complications. | (5) |
| 3D) | Explain how the ultrasound machine works, with the help of a block diagram. | (5) |
| 4A) | How do we differentiate electrocautery from electrosurgery? | (2) |
| 4B) | C-arm is a mobile X-ray device. What principle does it work on? | (2) |
| 4C) | Define the power density of a laser device. How does it vary? | (2) |
| 4D) | What does an image intensifier do? | (2) |
| 4E) | List the steps to check the proper functioning of a pneumatic tourniquet. | (2) |

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Question Paper

Exam Date & Time: 27-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. ANAESTHESIA & OPERATION THEATRE TECHNOLOGY DEGREE EXAMINATION -
MAY/JUNE 2024

SUBJECT: AOT2242 - PROGRAM ELECTIVE - I : PATIENT SAFETY INFECTION CONTROL AND BIOMEDICAL WASTE
MANAGEMENT
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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|-----|---|------|
| 1) | Summarize in detail the types of patient transfer. Discuss the steps and care of patient during transport. | (10) |
| 2) | Define sterilization and Disinfection. What are the various levels of Disinfection? Illustrate and explain Spaulding's classification of devices. | (10) |
| 3A) | Discuss the various methods of sterilization with examples, their targets and application. | (5) |
| 3B) | Explain in detail WHO surgical safety checklist. | (5) |
| 3C) | Explain in detail the source and measures to reduce infection in ORs and ICUs. | (5) |
| 3D) | Explain biomedical waste management and the steps of waste disposal. | (5) |
| 4A) | What are the common problems associated with patient care and list the preventive measures? | (2) |
| 4B) | Illustrate steps of hand hygiene. | (2) |
| 4C) | Outline the strategies to reduce hospital acquired CRBSI. | (2) |
| 4D) | Explain methods of waste minimization. | (2) |
| 4E) | Classify radioactive waste. | (2) |

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