

Question Paper

Exam Date & Time: 08-Aug-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B. Sc. RESPIRATORY THERAPY/ANAESTHESIA & OPERATION THEATRE TECHNOLOGY
DEGREE EXAMINATION - AUGUST 2024
SUBJECT: RES1201 - CLINICAL EXAMINATION IN RESPIRATORY CARE
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Outline procedures for obtaining an arterial blood sampling. List any FOUR indications of blood gas. (20)
Identify the common pre-analytic, analytic and post-analytic errors in blood gas sampling.
(10+4+6 = 20 marks)
- 2) Describe various lung volumes and capacities with a help of a neat labelled diagram. Write any TWO indications and any TWO contraindications for basic spirometry. Explain the use of peak flow meter. (20)
(10+4+6 = 20 marks)
- 3) Define nasal flaring and diaphoresis. Explain the four components of physical examination. (10)
(2+8 = 10 marks)
- 4) Explain the normal ECG and its physiological correlation. (10)
- 5A) Explain APGAR scoring system. (5)
- 5B) Write a note on standard infection control procedures needed during patient interaction. (5)
- 5C) Write a note on Henderson-Hasselbach equation. (5)
- 5D) Write a note on Glasgow coma scale. (5)
- 5E) Explain Oxygen transport. (5)
- 5F) Explain the normal stages of sleep. (5)
- 6A) Define Pectus Carinatum and Pectus Excavatum. (2)
- 6B) Define Pulsus Paradoxus and Pulsus Alternans. (2)
- 6C) Mention any FOUR respiratory equipment commonly used to assess and treat patients at home. (2)
- 6D) List any TWO general reasons why documentation is important. (2)
- 6E) Define Stroke Volume Index and Cardiac Index. (2)

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Question Paper

Exam Date & Time: 09-Aug-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B. Sc. RESPIRATORY THERAPY/ANAESTHESIA & OPERATION THEATRE TECHNOLOGY
DEGREE EXAMINATION - AUGUST 2024
SUBJECT: RES1202 - RESPIRATORY CARE EQUIPMENT
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Discuss nitrogen washout and helium dilution techniques. Explain the normal capnogram. (20)
(7+7+6 = 20 marks)
- 2) Explain the single-stage and multistage regulators. List and explain the different types of flowmeters. (20)
(10+10 = 20 marks)
- 3) Explain the procedure of endotracheal Intubation. (10)
- 4) Explain the principle of incentive spirometry and List any FOUR indications. Explain the mechanical insufflation and exsufflation device. (10)
(2+4+4 = 10 marks)
- 5A) Explain different types of flows. (5)
- 5B) Discuss the process of pasteurization. (5)
- 5C) Explain the components of the bulk oxygen and liquid oxygen system. (5)
- 5D) Describe the basic principles of electrocardiography. (5)
- 5E) Write a short note on central sleep apnea. (5)
- 5F) Explain the four-phase variables. (5)
- 6A) Define Boyle's law. (2)
- 6B) What is high-frequency ventilation? (2)
- 6C) Determine how long a G cylinder of O₂ with a gauge pressure of 800 psi set to deliver 8 L/min will last until empty. (2)
- 6D) List any TWO indications for humidity therapy. (2)
- 6E) List the various sites for arterial blood gas. (2)

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