



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(OTT)-2021

Course Name – Specialized Surgery and Anesthesia

Course Code - BOTT601

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the recommended angle of insertion for radial artery cannulation
- a) 30-45 degrees
 - b) 60-90 degrees
 - c) 90 degrees
 - d) 120 degrees
- (ii) Select the following best defines Central Venous Pressure (CVP)
- a) Pressure in the peripheral veins
 - b) Pressure in the pulmonary arteries
 - c) Pressure in the superior vena cava near the right atrium
 - d) Pressure in the arteries supplying the heart
- (iii) Select the normal range for end-tidal carbon dioxide (EtCO₂) in an adult at sea level
- a) 35-45 mmHg
 - b) 25-35 mmHg
 - c) 45-55 mmHg
 - d) 15-25 mmHg
- (iv) Select the main function of a transducer in an echocardiography machine
- a) To transmit sound waves into the body
 - b) To receive and convert returning sound waves into electrical signals
 - c) To amplify the electrical signals
 - d) To display the images on the monitor
- (v) Judge the common complication associated with the prone position during neurosurgery
- a) Hypotension
 - b) Venous air embolism
 - c) Ocular compression neuropathy
 - d) Ventilator-associated pneumonia
- (vi) Express the statements regarding the knee-chest position is correct
- a) The patient is positioned on their knees and chest with the hips flexed
 - b) It is primarily used for lumbar spine surgeries
 - c) It is contraindicated in patients with cardiovascular diseases
 - d) The head is elevated on the heart level
- (vii) Explain the uncommon complication associated with the prone position in spine surgery
- a) Neurological deficit
 - b) Respiratory compromise

- c) Peripheral nerve injury
d) Venous thromboembolism
- (viii) Select the uncommon technique for awake intubation
Fiberoptic bronchoscopy
a) Fiberoptic bronchoscopy
b) Video laryngoscopy
c) Blind nasal intubation
d) Rapid sequence intubation
- (ix) Explain the adjunct may be used to facilitate awake intubation in patients with severe airway distortion
a) Magill forceps
b) Stylet
c) Laryngeal mask airway
d) Bougie
- (x) Select the purpose of intraoperative hypothermia during aneurysm surgery
a) To reduce blood loss
b) To decrease cerebral metabolism and protect against ischemic injury
c) To speed up the recovery process
d) To reduce the risk of infection
- (xi) Choose the type of camera is commonly used for microscopic photography in micro-neurosurgery
a) DSLR camera
b) Polaroid camera
c) Smartphone camera
d) Endoscope camera
- (xii) Discover the common intraoperative complication associated with laparoscopic surgery
a) Hypothermia
b) Hypotension
c) Hyperkalemia
d) Hypercarbia
- (xiii) Write the technique involves placing the blood pressure cuff around the upper arm
a) Auscultatory method
b) Auscultatory method
c) Oscillometric method
d) Invasive method
- (xiv) Discover the potential complication of inadequate perioperative glycemic control
a) Hypernatremia
b) Hypokalemia
c) Surgical site infection
d) Hypertension
- (xv) Explain the Arthroscopy is primarily used for
a) Joint replacement
b) Joint fusion
c) Joint repair and diagnosis
d) Joint amputation

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define the cell saver technique, and how does it work (3)
3. Explain respiratory monitor (3)
4. Examine the intraoperative monitoring contribute to the safety and efficacy of aneurysm surgery (3)
5. Discover the postoperative care requirements following thyroid surgery (3)
6. Evaluate the specific challenges posed by conditions such as subdiaphragmatic hernia and foreign body ingestion in pediatric patients (3)

OR

- Conclude the anesthetic and surgical approaches differ for major abdominal and thoracic procedures in pediatric patients (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the steps involved in performing a pulmonary function test. (5)
8. Select the procedure of arterial blood gas (ABG) analysis performance (5)
9. Evaluate the indication and advantages of Femoral Artery/Venous Cannulation (5)
10. Justify the Functions of a Transesophageal Echocardiography Machine (5)
11. Estimate the the anesthetic requirements during renal transplant surgery for both the donor and recipient (5)

12. Write the Management of Massive Obstetrical Hemorrhage (5)

OR

Design the surgical management integrate with other aspects of burn care (5)
