

Regn. No.....

Paper Code: BOT-301

B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, JULY-2018
ADVANCED AND CRITICAL CARE
PAPER - I

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. Write treatment of hyperkalemia.
- Q. 2. Draw labelled diagram of CVP line. What is Rapid Sequence intubation and items needed for RSI?
- Q. 3. Explain indications and contraindications of using succinyl choline.
- Q. 4. Write short note on the advantage of arterial blood pressure monitoring.
- Q. 5. Classification of muscle relaxants.
- Q. 6. Draw a well labelled diagram of endotracheal tube.
- Q. 7. Enumerate and discuss the duties and responsibilities of an OT assistant.
- Q. 8. Write about CSSD procedures in Hospital.
- Q. 9. Write a short note on bed sores in ICU.

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B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
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ADVANCED AND CRITICAL CARE
PAPER - I (MCQ)

Time allotted for MCQ-15 minutes

(½ x 14 = 7)

B : MCQs (Single response type):

Select the most appropriate answer and **encircle** the alphabet against it.

1. Most common site for cannulation for arterial blood pressure monitoring is:
 - a. Ulnar artery
 - b. Femoral artery
 - c. Radial artery
 - d. Umbilical artery
2. Normal left ventricular ejection fraction is:
 - a. More than 65 %
 - b. More than 40 %
 - c. More than 55 %
 - d. More than 75 %
3. The most common site of placement of CVP line is:
 - a. Right internal jugular vein
 - b. Left internal jugular vein
 - c. Right external jugular vein
4. Left external jugular vein is reversed by:
 - a. Inj. aprotinin
 - b. Inj. protamine
 - c. Inj. tranexamic acid
 - d. Inj. hemostat
5. The most commonly used ventilatory mode for weaning a patient from ventilator is:
 - a. SIMV mode
 - b. CPAP mode
 - c. CMV mode
 - d. Inverse ratio ventilation
6. The primary pacemaker of the heart is:
 - a. SA node
 - b. AV node
 - c. Fibres of Purkinje
 - d. Bundle of HIS
7. The most commonly used drug for relief of angina pectoris is:
 - a. Lasix
 - b. Betaloc
 - c. Salbutamol
 - d. Sorbitrate
8. DC shock is **not** indicated in case of:
 - a. Ventricular tachycardia
 - b. Ventricular fibrillation
 - c. Asystole
 - d. None of the above
9. Cardiac output is mostly measured by:
 - a. CVP line
 - b. PA Catheter (TD)
 - c. Arterial invasive line
 - d. ETCO₂ measurement
10. Normal cardiac output is:
 - a. 2 - 3 lit/min
 - b. 3 - 4 lit/min
 - c. 3 - 5 lit/min
 - d. 6 - 7 lit/min
11. Which of the following is a vasoconstrictor?
 - a. Dobutamine
 - b. Norepinephrine
 - c. Milrinone
 - d. Nitroglycerine
12. The most common reason for respiratory acidosis is:
 - a. Hypoxia
 - b. Hypercarbia
 - c. Hypocarbia
 - d. All of the above
13. Which of the following is **not** a part of aortic valve?
 - a. Right coronary cusp
 - b. Anterior leaflet
 - c. Non coronary cusp
 - d. Left coronary cusp
14. Allen's test judges the patency of:
 - a. Radial artery
 - b. Femoral artery
 - c. Dorsalis pedis artery
 - d. Ulnar artery

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B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, JULY - 2018
SPECIAL PROCEDURES & STERILIZATION TECHNIQUES
PAPER - II

[Time allotted : Three hours]

[Max Marks : 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

Write notes on the following :

- Q. 1. Chemical sterilization.
- Q. 2. Sterilization of linen for OT.
- Q. 3. Physiological changes due to pneumoperitoneum.
- Q. 4. Different types of drains & their uses.
- Q. 5. Write in detail about dressing & bandages.
- Q. 6. Write about different type of retractors. Discuss in detail any one of them.
- Q. 7. Role of OT technician in laparoscopic surgery.
- Q. 8. Common I.V.F. (Normal saline, Ringer lactate, 5% dextrose).
- Q. 9. Preparation of an elective case from PAC to operating room.

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B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, JULY - 2018
SPECIAL PROCEDURES & STERILIZATION TECHNIQUES
PAPER - II (MCQ)

Time allotted for MCQ-15 minutes

B : MCQs (Single response type):

(½ x 14= 7)

Select the most appropriate answer and encircle the alphabet against it

1. Complication of TPN includes:
 - a. Hyperglycemia
 - b. Hypokalemia
 - c. Hypo osmolar dehydration
 - d. All
2. Procedure to stop bleeding from scalp is:
 - a. Cautery
 - b. Ligature
 - c. Eversion of galea apo neurotica
 - d. None
3. Ideal substitute in a patient with burns is:
 - a. Plasma
 - b. Whole blood
 - c. Pack cells
 - d. Ringer lactate
4. Daily requirement of sodium in an average male patient is:
 - a. 50 mmol
 - b. 100 mmol
 - c. 150 mmol
 - d. 300 mmol
5. Maximum rate of which blood can be transfused is:
 - a. 20 ml / minute
 - b. 500 ml / 10 minutes
 - c. 1000 ml / hrs
 - d. 1500 ml / minute
6. Which of the telescope is used in a difficult laparoscopic cholecystectomy?
 - a. 0°
 - b. 15°
 - c. 30°
 - d. 70°
7. Trendelenberg's position means:
 - a. 15 degree head down
 - b. 15 degree head up
 - c. Right side up 15 degree
 - d. Left side up 15 degree
8. Internal fixation of fracture is done in all except:
 - a. Compound fracture
 - b. Old age
 - c. Multiple fractures
 - d. Pathological fracture
9. Loss of blood of more than 500 ml is sensed by:
 - a. Carotid baroreceptors
 - b. Arterial receptors
 - c. Juxtaglomerular apparatus
 - d. All
10. For a haemorrhoidectomy operation, the position of the patient would be:
 - a. Supine
 - b. Lithotomy position
 - c. Lateral
 - d. Prone
11. Which gas is used for laparoscopic procedures?
 - a. Nitrogen
 - b. Oxygen
 - c. Ether
 - d. Carbon dioxide
12. Examples of mono filament suture material are all except:
 - a. Biosyn
 - b. Monocryl
 - c. Vicryl
 - d. Maxon
13. Where would you place the TV monitor for a laparoscopic cholecystectomy?
 - a. Near right foot end
 - b. Near right shoulder
 - c. Near left shoulder
 - d. Near left foot end
14. Intra abdominal pressure during laproscopic cholecystectomy is set at:
 - a. 2 mm Hg
 - b. 8 mm Hg
 - c. 12 mm Hg
 - d. 20 mm Hg

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B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, JULY - 2019
ADVANCED AND CRITICAL CARE
PAPER - I

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. What arrangements will you make to prevent heat loss in pediatric patient in OT?
- Q. 2. Write briefly about the monitoring of a critically ill patient.
- Q. 3. What is an ETT? Classify them and name special types of tubes.
- Q. 4. Classify Mapelson's breathing circuits. Write in brief about Bain's circuit.
- Q. 5. Write a note on sterilization of OT equipments.
- Q. 6. How will you prepare a patient for MRI?
- Q. 7. What is LMA? Classify them and write about sizes of LMA .
- Q. 8. What is informed consent? Write briefly about the importance of it.
- Q. 9. Discuss the routes and equipments of nutrition to be given in a critically ill patient.

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ADVANCED AND CRITICAL CARE
PAPER - I (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and encircle the alphabet against it.

1. ARDS stands for:
 - a. Adult Respiratory Distress Syndrome
 - b. Acute Respiratory Distress Syndrome
 - c. Anaemic Respiratory Distress Syndrome
 - d. None of the above
2. CPR ratio is :-
 - a. 15 compressions : 2 breaths
 - b. 15 compressions : 15 breaths
 - c. 30 compressions : 2 breaths
 - d. 30 compressions : 30 breaths
3. ABG stands for:
 - a. Arterial Blood Gas
 - b. Artificial Blood Gas
 - c. Artificial Breathing Gas
 - d. None of the above
4. CVP means:
 - a. Cardiac Venous Pressure
 - b. Central Venous Pressure
 - c. Combined Venous Pressure
 - d. All of the above
5. Adrenaline ampoule contains:
 - a. 1ml of 1:10000
 - b. 1ml of 1:1000
 - c. 2ml of 1:10000
 - d. 2ml of 1:1000
6. TPN stands for :
 - a. Toxic Parenteral Nutrition
 - b. Total Parenteral Nutrition
 - c. Temperature, Pain, Neuromuscular block
 - d. None of the above
7. In closed circuit, the following is used :
 - a. Calcium gluconate
 - b. Soda lime
 - c. Sodium bicarbonate
 - d. All of the above
8. Patient is put on ventilator to give:
 - a. Vasopressors
 - b. Fluids
 - c. Blood
 - d. Artificial respiration
9. Vasopressors are given by :
 - a. Drip set
 - b. Microdrip set
 - c. Infusion pump
 - d. All of the above
10. Before doing endotracheal suctioning in a patient on ventilator:
 - a. 50% Oxygen is administered
 - b. 100% Oxygen is administered
 - c. 70% Oxygen is administered
 - d. 21% Oxygen is administered
11. For one lung ventilation, the following tube is used:
 - a. Double lumen tube
 - b. Flexometallic tube
 - c. Combitube
 - d. Preformed tube
12. The laryngoscope blade to be used in cervical injury patient :
 - a. Macintosh
 - b. Miller's
 - c. Mc Coy
 - d. All of the above
13. Critically ill patients are those with:
 - a. Poisoning
 - b. Snake bite
 - c. ARDS
 - d. All of the above
14. Ultrasound is used in ICU for :
 - a. Central venous cannulation
 - b. Arterial cannulation
 - c. Both a and b
 - d. None of the above

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B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)

THIRD YEAR EXAMINATION, JULY - 2019

SPECIAL PROCEDURES & STERILIZATION TECHNIQUES

PAPER - II

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. Define sterilization. Classify types of sterilization. Describe chemical sterilization. (1+2+4)
- Q. 2. Describe commonly used crystalloid IV fluids in surgery. Write in detail about Ringer lactate. (2+5)
- Q. 3. Write a short note on maintenance of OT for pediatric patients.
- Q. 4. Explain open cholecystectomy: Indications, steps of Surgery and instruments used. (1+3+3)
- Q. 5. Make a table showing color coding for hospital waste. Describe in detail the importance of proper hospital waste management. (2+5)
- Q. 6. Write a short note on instruments used for craniotomy & preparation of OT for neurosurgery. (3+4)
- Q. 7. Describe proper technique for:
- a. Hand washing (3)
 - b. Gown & glove wearing. (4)
- Q. 8. Write a short note on electrocautery: monopolar & bipolar.
- Q. 9. Describe proper care for:
- a. Laparoscopic instruments (3)
 - b. Endocamera & monitor (4)

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THIRD YEAR EXAMINATION, JULY - 2019

SPECIAL PROCEDURES & STERILIZATION TECHNIQUES

PAPER – II (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and encircle the alphabet against it

1. All are crystalloid IV fluids **except**:
 - a. Normal saline
 - b. Hydroxyethyl starch
 - c. Ringers lactate
 - d. Dextrose saline
2. Blood loss during surgery is best estimated by:
 - a. Visual estimate
 - b. Measurement of cardiac output
 - c. Suction bottles + soiled swabs
 - d. Transesophageal USG doppler
3. Best guide for assessing shock & adequacy of fluid resuscitation clinically is:
 - a. Central venous pressure
 - b. Blood pressure
 - c. Oxygen saturation
 - d. Urine output
4. Minimal access surgery include all **except**:
 - a. Craniotomy
 - b. Cystoscopy
 - c. Arthroscopy
 - d. Laparoscopy
5. Ideal intra-abdominal pressure for laparoscopy:
 - a. 5-10 mm of Hg
 - b. 10-15 mm of Hg
 - c. 15-20 mm of Hg
 - d. 20-25 mm of Hg
6. Blood spills in the OT are cleaned with:
 - a. Phenol
 - b. Alcohol
 - c. Povidone iodine
 - d. Sodium hypochlorite
7. Sharp instruments should be sterilized by:
 - a. Ethylene oxide
 - b. Gluteraldehyde
 - c. Autoclaving
 - d. Boiling
8. Conditions required for autoclaving are:
 - a. 150°C temp & 10 lb pressure for 30 min
 - b. 121°C temp & 15 lb pressure for 1 hour
 - c. 121°C temp & 15 lb pressure for 30 min
 - d. 120°C temp & 20 lb pressure for 1 hour
9. Which is **not** an energy based device?
 - a. Harmonic scalpel
 - b. Humby's knife
 - c. Electrocautery
 - d. Gamma knife
10. Triangle is associated with Lap cholecystectomy:
 - a. Triangle of safety
 - b. Sherrren's triangle
 - c. Hesselback triangle
 - d. Calot triangle
11. Which instrument is used to hold the appendix during appendicectomy?
 - a. Babcock's forceps
 - b. Allis forceps
 - c. Kocher's forceps
 - d. Tooth forceps
12. Which suture is preferred in vascular anastomosis?
 - a. Prolene
 - b. Silk
 - c. Vicryl
 - d. Steel wire
13. Surgical safety checklist is used to:
 - a. Prepare OT staff in case of emergency
 - b. List equipment required for surgery
 - c. Reduce risk of preventable complications
 - d. Determine role of staff during surgery
14. Which is a self retaining retractor?
 - a. Czerny retractor
 - b. Langenback Right angled retractor
 - c. Cat's paw retractor
 - d. Balfour retractor

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**B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, AUGUST - 2020
ADVANCED AND CRITICAL CARE
PAPER - I**

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(10 x 06 = 60)

- Q. 1.** Describe how pulmonary care is done in ICU.
- Q. 2.** Discuss about preparation and equipment needed for brachial plexus block.
- Q. 3.** How is nutritional therapy given to ICU patients?
- Q. 4.** Discuss the methods of sterilization for equipment used in airways management.
- Q. 5.** Discuss the checklist for anaesthesia machine checking.
- Q. 6.** Describe briefly invasive and non-invasive vitals monitoring.

**B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, AUGUST – 2020
ADVANCED AND CRITICAL CARE
PAPER – I (MCQ)**

Time allotted for MCQ - 15 minutes

(01 x 10 = 10)

B : MCQs (Single response type):

Select the most appropriate answer and **encircle** the alphabet against it.

1. Sequence of management in CPR is:
 - a. A B C
 - b. B A C
 - c. B C A
 - d. None of the above
2. Which one is an antiarrhythmic drug?
 - a. Vasopressin
 - b. Noradrenaline
 - c. Adenosine
 - d. Calcium
3. Maximum shock energy in biphasic defibrillators is:
 - a. 360 J
 - b. 120 J
 - c. 200 J
 - d. 100 J
4. How many chest compressions necessary for an effective CPR in adults?
 - a. 100
 - b. At least 100
 - c. More than 100
 - d. Less than 100
5. North pole tracheal tubes are preferred in:
 - a. Septoplasty
 - b. Craniotomy
 - c. Cataract surgery
 - d. Tonsillectomy
6. Commonly at what length is the internal jugular CVP line fixed at skin in adult patients?
 - a. 12 cm
 - b. 10 cm
 - c. 11 cm
 - d. 14 cm
7. What size of LMA is used for patients weighing 10-20 kg?
 - a. 1.5
 - b. 2
 - c. 2.5
 - d. 3
8. Which drug is used to increase blood pressure?
 - a. Nitroglycerine
 - b. Mephenteramine
 - c. Calcium
 - d. Nitroprusside
9. Which is not a ventilator mode?
 - a. SIMV
 - b. Volume control
 - c. CPAP
 - d. Spontaneous
10. Which oxygen delivery device gives 100% FiO₂?
 - a. Venturimask
 - b. Non rebreathing bag mask
 - c. Nasal prongs
 - d. None of the above

**B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE)
THIRD YEAR EXAMINATION, AUGUST - 2020
SPECIAL PROCEDURES & STERILIZATION TECHNIQUES
PAPER - II**

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(10 x 06 = 60)

- Q. 1. Sterilization techniques.
- Q. 2. Lithotomy position of patient in OT.
- Q. 3. Instruments for thoracotomy.
- Q. 4. Harmonic scalpel.
- Q. 5. Different abdominal incisions.
- Q. 6. Waste disposal in O.T.

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SPECIAL PROCEDURES & STERILIZATION TECHNIQUES
PAPER – II (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10 = 10)

Select the most appropriate answer and **encircle** the alphabet against it.

1. Which suture is used for mesh fixation in hernia surgery?
 - a. Vicryl
 - b. Silk
 - c. Prolene
 - d. PDS
2. How many ports are needed for laparoscopic appendectomy?
 - a. 3
 - b. 4
 - c. 5
 - d. 2
3. Which telescope is best in a difficult laparoscopic operation?
 - a. 0°
 - b. 30°
 - c. 45°
 - d. 70°
4. The suture with good memory is:
 - a. Nylon
 - b. Silk
 - c. Vicryl
 - d. PDS
5. For a feeding jejunostomy which tube is used?
 - a. Ryle's tube no. 14
 - b. Foley's catheter no. 14
 - c. Infant feeding tube no. 10
 - d. Malecot's catheter no. 8
6. To drain a superficial open abscess cavity which of the following is used?
 - a. Suction drain
 - b. Corrugated drain
 - c. Mini-vacuum drain
 - d. ADK drain
7. Which instrument is used to create pneumoperitoneum by open technique?
 - a. Veress needle
 - b. Trucut needle
 - c. Trocar 10 m
 - d. Hasson cannula
8. The position of patient for a laparoscopic cholecystectomy should be:
 - a. Trendelenburg right side up
 - b. Reverse trendelenburg right side up
 - c. Trendelenburg right side down
 - d. Reverse trendelenburg right side down
9. Prophylactic antibiotic should be given:
 - a. At the time of incision
 - b. Previous night in the ward
 - c. Early morning on day of surgery
 - d. At the time of induction in an adult patient
10. Consent for surgery should be taken from:
 - a. Patient
 - b. Parents
 - c. Husband / Wife
 - d. Surgeon