REV-01
BOT/16/21

2025/12

SET A

B.Sc. OPERATION THEATRE TECHNOLOGY
THIRD SEMESTER
BASIC AND ADVANCE LIFE SUPPORT
BOT-304

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs. **Full Marks: 70**

(Objective)

Time: 30 mins. **Marks: 20**

Choose the correct answer from the following: ***1×20=20***

1. What is the main difference between Basic Life Support and Advanced Life Support?
   a. BLS includes advanced airway management, ALS does not
   b. ALS includes advanced interventions such as intubation and medication, BLS does not
   c. BLS is only for non-medical personnel, ALS is for family members
   d. ALS is performed outside hospital settings only

2. Which of the following interventions is emphasized first in the Chain of Survival?
   a. Early recognition of cardiac arrest and activation of emergency response
   b. Early defibrillation
   c. Early medication administration
   d. Early advanced airway placement

3. The primary purpose of Basic Life Support is to:
   a. Perform surgery on a patient
   b. Maintain airway, breathing and circulation until advanced help arrives
   c. Diagnose medical conditions
   d. Provide medication to patients

4. Which of the following best describes Advanced Life Support?
   a. Only chest compressions
   b. Solely providing oxygen
   c. Includes medication administration, defibrillation, and advanced airway management
   d. Only for patients above 60 years

5. What does the acronym DRCAB stand for in Basic Life Support?
   a. Danger, Response, Circulation, Airway, Breathing
   b. Danger, Response, Airway, Breathing, CPR
   c. Danger, Response, Call for help, Airway, Breathing
   d. Danger, Response, Call for help, Blood pressure, Airway

6. In adult CPR, what is the recommended compression to ventilation ratio for a single rescuer?
   a. 15 compressions to 2 breaths
   b. 100 compressions to 30 breaths
   c. 2 compressions to 30 breaths
   d. 30 compressions to 2 breaths

7. Which airway maneuver is preferred to open the airway in an unresponsive patient without suspected spinal injury?
   a. Jaw thrust
   b. Head tilt-chin lift
   c. Recovery position
   d. Heimlich maneuver

8. What is the primary purpose of an AED in Basic Life Support?
   a. To perform chest compressions automatically
   b. To analyze the heart rhythm and deliver a shock if needed
   c. To monitor blood pressure continuously
   d. To assist in airway clearance

9. What is the main advantage of supraglottic airway devices over endotracheal intubation?
   a. They provide definitive airway protection
   b. Easier and quicker to insert
   c. Require advanced training to place
   d. More invasive than ETT

10. What is the correct compression-ventilation ratio when an advanced airway is in place?
   a. 30:2
   b. 15:2
   c. 20:2
   d. Continuous compressions with 1 breath every 6 seconds

11. What rhythm is considered shockable in cardiac arrest?
   a. Ventricular fibrillation and Pulseless ventricular tachycardia
   b. Atrial fibrillation and atrial tachycardia
   c. Asystole and PEA
   d. Sinus bradycardia and sinus tachycardia

12. What complication can result from hypercapnia if untreated?
   a. Metabolic alkalosis
   b. Hyperkalemia
   c. Respiratory acidosis
   d. Hypoglycemia

13. Which drug is preferred for refractory ventricular fibrillation after initial defibrillation and adrenaline?
   a. Amiodarone
   b. Magnesium sulfate
   c. Lidocaine
   d. Atropine

14. In pulseless electrical activity, what is the priority intervention?
   a. Immediate defibrillation
   b. Administration of calcium
   c. Immediate pacing
   d. High-quality CPR and treat reversible causes

15. What is the primary indication for synchronized cardioversion?
   a. Pulseless ventricular tachycardia
   b. Normal sinus rhythm
   c. Asystole
   d. Hemodynamically unstable supraventricular tachycardia

16. What is the recommended initial dose and frequency of epinephrine in cardiac arrest?
   a. 0.01 mg/kg every 30 seconds
   b. 5 mg every 1 minute
   c. 1 mg every 3-5 minutes
   d. 10 mg every 1 hour

17. Why is documentation important after resuscitation?
   a. To record interventions and patient response for continuity of care
   b. To avoid debriefing
   c. To delay patient transfer
   d. To critique team members publicly

18. Pediatric life support differs from adult support by:
    a. Earlier emphasis on ventilation due to respiratory causes
    b. No use of AEDs
    c. Same compression depth and rate as adults
    d. Avoiding oxygen therapy

19. Which team behavior is critical during resuscitation efforts?
    a. Clear communication and role clarity
    b. Silence during procedures
    c. Individual decision-making only
    d. Avoiding eye contact

20. Life support modifications in pregnancy primarily focus on:
    a. Left lateral tilt to reduce aortocaval compression
    b. Immediate cesarean delivery during CPR
    c. Avoiding chest compressions
    d. Using only BVM without advanced airway

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Descriptive

Time : 2 hr. 30 mins. **Marks : 50**

[Answer question no.1 & any four (4) from the rest]

1. What is the difference between Basic Life Support and Advanced Life Support? Explain the Chain of Survival and discuss why it is important in improving a patient's chances of survival. 5+5=10
2. Explain what airway maneuvers are and discuss the commonly used maneuvers including their indications, contraindications, and possible complications. 1.5+8.5=10
3. Define CPR, explain its clinical significance, discuss possible complications and criteria for terminating CPR, and describe the procedure for performing CPR in adults. 1+2+2+5=10
4. What is ET intubation? Explain the indications, contraindications, and procedures of orotracheal intubation. 1+2+2+5=10
5. Differentiate between ET Tube and supraglottic airway devices. Explain in details about LMA and Combitube. 3+3.5+3.5=10
6. What are the potential reversible factors that can cause cardiac arrest, and how can each of these factors be identified and appropriately treated during emergency resuscitation? 10
7. What is cardiac arrest, and how is it managed in adults according to the AHA guidelines? 1+9=10
8. What is drowning, and how should a drowning patient be assessed and managed in an emergency situation? 10

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