HealthCare Training Service

Advanced Life Support

Theoretical Examination C

Exam Time: **20 minutes**

Perusal Time: **5 minutes**

Total Marks: **25**

Instructions:

Read each question carefully. Using a pencil, record your response to each question on the examination answer sheet. When answering each multiple-choice question place an 'X' over the box containing the letter which corresponds to the most correct response for the question you are answering, as displayed below.

Question 1	A	B	C	D

If you wish to change your response to a multiple-choice question erase the initial response and place an obvious 'X' over the letter you have selected as the correct response.

Question 1	A	B	C	D

Place your name on the top right hand corner of the examination answer sheet.

Attempt all questions. The **pass mark** for this examination **is 80%**, this equates to **20/25** correct responses.

Do not place any marks on this paper.

Indicate your response to the following multiple-choice questions on the examination answer sheet by placing an 'X' over the box containing the letter which corresponds to the most correct response for the question you are responding to.

Section One

1. A person has collapsed, you have established the area is safe and sent for help. The victim is unresponsive to your verbal and tactile stimulation. What is the next priority for this victim?

   A. Connecting the victim to a monitor to assess rhythm.

   B. Immobilisation of the cervical spine to prevent damage.

   C. Clearing and opening the victim's airway.

   D. Connecting oxygen and turning the flow meter fully on.

2. What is the recommended CPR ratio (compressions to ventilations) for two rescuers on an adult without an advanced airway insitu?

   A. 30 : 2

   B. 15 : 2

   C. 15 : 1

   D. 5 : 1

3. When providing rescue breaths via a bag-valve-mask device, how is the operator to ventilate the victim?

   A. Ventilate at a rate of 22 breaths per minute.

   B. Ventilate with just enough to make the chest rise and fall.

   C. Ventilate slow and long to ensure full lung capacity is being achieved with each breath.

   D. The full contents of the bag-valve-mask device is to be pushed into the victim with each breath given.

4. During the intubation procedure, what is the maximum time that CPR should be interrupted if at all?

   A. 5 seconds

   B. 20 seconds

   C. 30 seconds

   D. 45 seconds

5. With regard to oxygen (O_2) administration during resuscitation, which of these statements is correct?

   A. Oxygen (O_2) is administered with an Oxygen (O_2) and Air mix at a 1 : 1 ratio of each gas, that is 50% Oxygen (O_2) and 50% Air.

   B. 100% Oxygen (O_2) is administered as soon as possible to maximise arterial blood Oxygen (O_2) saturation.

   C. Oxygen (O_2) is not administered during resuscitation to avoid hyperoxaemia.

   D. Ventilation is not performed during resuscitation to prevent the risk of hyperventilation and barotrauma.

6. With regard to defibrillation, which one of the following statements is correct?

   A. Defibrillation is most successful when preceded by IV Adrenaline.

   B. Defibrillation delivers an electrical current to the myocardium and by doing so initiates sinus rhythm to commence by simulating the sino-atrial node.

   C. Defibrillation is always required when a pulseless rhythm is present.

   D. Defibrillation is most successful when delivered as soon as possible following collapse of a victim who is in a shockable rhythm.

7. During defibrillation, following the 'single shock protocol', what is the maximum time chest compressions should be stopped to deliver the shock and resume compressions?

   A. < 5 seconds

   B. < 15 seconds

   C. < 20 seconds

   D. < 30 seconds

8. Complete the following statement. Whilst the defibrillation charge is being <u>delivered</u> to the patient,

   A. it is important that the patient is still receiving oxygen via the bag-valve-mask device or face mask.

   B. neither the person performing the defibrillation or others are to be touching the patient or the bed.

   C. chest compressions are to be continued throughout shock delivery, only oxygen is to be removed.

   D. All personnel need to stand 2 metres away from the patient/bed/trolley and defibrillator.

9. If intravenous (IV) cannulation is delayed or cannot be achieved, what is the next choice for drug administration during cardiac arrest?

   A. Intubate the victim and deliver drugs via the endotracheal tube.
   B. Insert a subclavian central line and deliver drugs via central access, it is easy and drugs are quickly absorbed into the circulation.
   C. Obtain intraosseous (IO) access and deliver drugs via the intraosseous route.
   D. Deliver all drugs intramuscularly (IM), it is easy and drugs are quickly absorbed into the circulation.

10. A bolus dose of IV/IO Adrenaline 1mg will cause which of the following actions?

   A. Block the alpha and beta receptors
   B. Block the parasympathetic stimulation
   C. Stimulate the alpha receptors to cause vasoconstriction
   D. Raise the fibrillation threshold

11. In which of the following cardiac arrest situations may calcium chloride be considered?

   A. For hypokalaemia
   B. Digitalis toxicity
   C. For hypercalcemia
   D. For hyperkalaemia

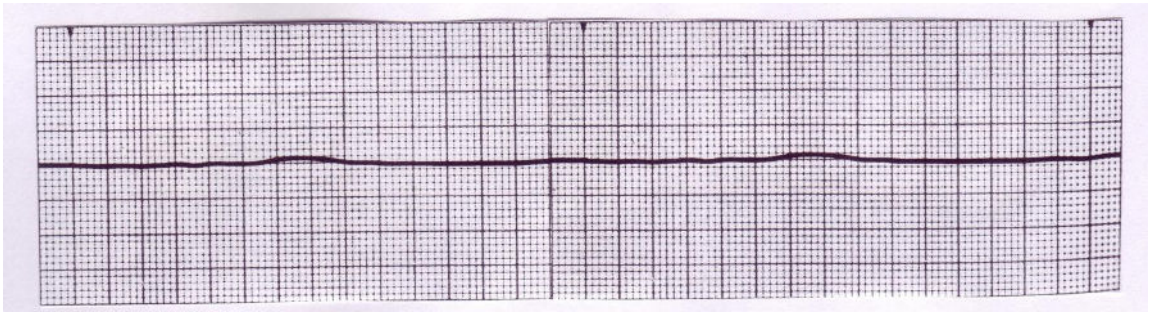
12. What is meant by the term 'pacing threshold'?

   A. The minimum output (milliamps) the patient is able to tolerate without sedation.
   B. The maximum number of patients to be externally paced in any organisation at the same time.
   C. The maximum output the pacemaker is able to generate, which is always used for externally pacing patients.
   D. The minimum output from the pacemaker that results in capture.

13. During post resuscitation care, what level should the patient's arterial blood oxygen saturation (SaO_2) be maintained between?

   A. 94 – 98%.
   B. 84 – 88%.
   C. 97 – 100%
   D. >98%

Section Two



An elderly male, believed to be a visitor, was found collapsed in the corridor of your facility. His medical history is unknown. Following assessment of the man, staff commenced CPR. You are part of the ALS response team and on arrival attach the defibrillator to the victim.

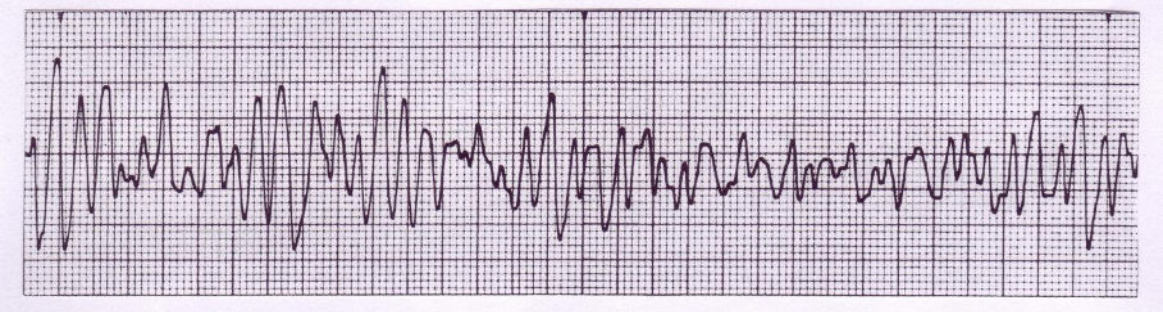
14. What is the above rhythm that is being displayed on the defibrillator?
    A. Ventricular Fibrillation
    B. Third degree heart block
    C. Idioventricular rhythm
    D. Asystole

15. The ALS Team Leader requests for CPR to be stopped so the patient's rhythm (and pulse) can be analysed. The patient is unresponsive (and pulseless), which of the following is the **initial** management of this event?
    A. Defibrillate
    B. Immediately continue CPR
    C. Administer IV/IO Atropine 1mg
    D. Administer IV/IO Amiodarone 300mg in 5% Dextrose

16. While the initial management is being instigated, the patient remains unresponsive, indicate the **next** step in the management of this event.
    A. Defibrillate
    B. Cannulate and administer IV/IO Lignocaine 1mg/kg
    C. Cannulate and administer IV/IO 10% Calcium Chloride 10mL
    D. Cannulate and administer IV/IO Adrenaline 1mg

17. Following a further 4 minutes of CPR (i.e. 2 loops of 5 cycles x [30 compressions to 2 breaths]) the victim remains unresponsive (and pulseless). The rhythm remains unchanged. The ALS Team Leader would now request which drug to be administered?
    A. IV/IO Adrenaline 1mg
    B. IV/IO Amiodarone 300mg
    C. IV/IO 10% Calcium Chloride 10mL
    D. IV/IO Sodium bicarbonate ($NaHCO_3$)

Section Three



A 69 year old female patient being monitored via telemetry has collapsed at the cafeteria. CPR has been commenced.

18 The above rhythm is being displayed, what is this rhythm?

A. Ventricular Fibrillation
B. Ventricular Tachycardia
C. Atrial flutter
D. Idioventricular rhythm

19 You are part of the ALS response team, on arrival to the scene you immediately attach the defibrillator to the patient. The above rhythm is displayed on the defibrillator and the patient is unresponsive. What is the immediate management by the ALS response team for this event?

A. Defibrillate
B. Request the CPR team to complete a further full 2 minutes of CPR {a full 5 cycles of (30 compressions to 2 breaths)}
C. Administer IV Amiodarone 300mg in 5% Dextrose
D. Administer IV Adrenaline 1mg

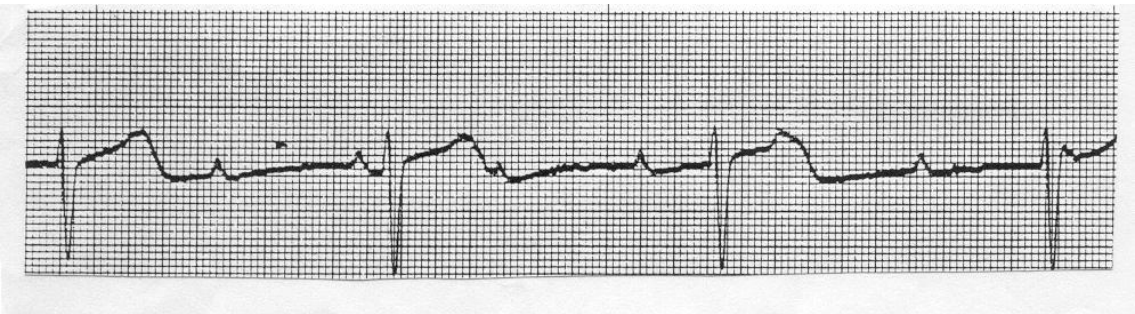
20. Having completed the above action, the patient remains unresponsive. What is the next action in the management of this event?

A. Defibrillate
B. Immediately resume CPR for 2 minutes {5 cycles of (30 compressions to 2 breaths)}
C. Cannulate and administer IV/IO Magnesium Sulphate 5 mmol
D. Cannulate and administer IV/IO Adrenaline 1 mg

21. Following completion of the above step, the patient remains unresponsive with the above rhythm displayed. What is the next action for the ALS Team to undertake?

A. Continue CPR for 2 mins {5 cycles of (30 : 2)}
B. Administer IV Lignocaine 1 mg/kg
C. Administer IV Amiodarone 300mg in 5% Dextrose
D. Defibrillate

Section Four



A 70 year old male has been referred for admission. He had a pacemaker inserted two days ago and since returning home, he has felt dizzy and nauseated. The gentleman stated he felt faint every time he stood up. Staff were taking the man's history when he suddenly collapsed and became unresponsive. CPR was commenced immediately. On arrival the ALS response team attach the defibrillator to the patient.

22. The above rhythm is being displayed on the patient's monitor. This rhythm is identified as:

    A. Ventricular Tachycardia
    B. Third degree heart block
    C. Junctional Rhythm
    D. Idioventricular rhythm

23. The ALS Team Leader requests for CPR to be stopped so the patient's rhythm (and pulse) can be analysed. The patient is unresponsive (and pulseless), which of the following is the **initial** management of this event?

    A. Set up for intubation as the person is not breathing
    B. Defibrillate
    C. Immediately continue CPR
    D. Cannulate and administer IV/IO Atropine 500 mcg

24. While this initial management is being instigated, the patient remains unresponsive, indicate the **next** step by the ALS team in the management of this event.

    A. Defibrillate
    B. Cannulate and administer IV/IO Amiodarone 300mg in 5% Dextrose
    C. Cannulate and administer IV/IO 10% Calcium Chloride 10mL
    D. Cannulate and administer IV/IO Adrenaline 1mg

25. Following the above management and after obtaining a patient history, the Team Leader should proceed to:

    A. Administer IV Adrenaline 1mg
    B. Treat the cause of the event as indicated by the history
    C. Perform a clinical examination of the patient to verify the cause as indicated by the history
    D. Administer a rapid intravenous infusion of at least 2 litres fluid replacement.