

## Syllabus 3.B.18

### CMAS Oxygen Administration Training Programme

#### 1. Required theoretical knowledge

##### 1.1 **Subject Area 1: Introduction**

1.1.1 The participant shall be provided with all such information, as provided for in **Clause 4.2 of Chapter 1** in order to enable him to take an informed decision about his participation in the CMAS Oxygen Administration Training Programme.

1.1.2 The participant shall be provided with the information about the CMAS as provided for in **Clause 4.3 of Chapter 1**.

##### 1.2 **Subject Area 2: Oxygen and the Diver**

1.2.1 The participant shall have an appropriate knowledge of the gas “oxygen” including the following:

1.2.1.1 What is oxygen? (description and characteristics)

1.1.1.1 Overview of the benefits of breathing high oxygen concentrations in the treatment of diving disorders.

##### 1.2 **Subject Area 3: Anatomy and Physiology**

1.2.1 The participant shall have an appropriate knowledge of the human anatomy as it relates to oxygen administration, including the following:

1.2.1.1 The heart

1.2.1.2 The thorax

1.2.1.3 The circulatory system

1.2.1.4 The lungs

1.2.2 The participant shall have an appropriate knowledge of the human physiology as it relates to oxygen administration, including the following:

1.2.2.1 Mechanism of breathing

1.2.2.2 Control of breathing

1.2.2.3 Lung functions

1.2.2.4 Gas transport

1.2.2.5 Hypoxia and shock

##### 1.3 **Subject Area 4: Diving Disorders and Oxygen Therapy**

1.3.1 The participant shall have an appropriate knowledge of the causes, signs and symptoms, on-site first aid measures and the benefits of oxygen administration for the following diving disorders:

1.3.1.1 Shock

1.3.1.2 Decompression sickness

- 1.3.1.3 Pulmonary barotrauma
- 1.3.1.4 Arterial gas embolism
- 1.3.1.5 Near drowning
- 1.3.1.6 Carbon monoxide toxicity

## 1.4 **Subject Area 5: The Examination of a Diving Casualty**

- 1.4.1 The participant shall have an appropriate knowledge of the diving casualty assessment technique in order to identify and treat any life threatening conditions that may be endangering the life of the diving casualty before oxygen can be provided to him. The technique would include the following:
  - 1.4.1.1 The immediate general assessment (Hazards, Hello and Help)
  - 1.5.1.2 The Primary Assessment (Airway, Breathing and Circulation)

## 1.5 **Subject Area 6: Basic Life Support Techniques**

- 1.5.1 The participant shall have an appropriate knowledge of the following Basic Life Support techniques:
  - 1.5.1.1 The rescue breathing technique
  - 1.5.1.2 Rescue breathing with a pocket mask
  - 1.5.1.3 One rescuer CPR technique
  - 1.5.1.4 Two rescuer CPR technique
  - 1.5.1.5 Complications when resuscitating a diving casualty

## 1.6 **Subject Area 7: Oxygen Administration Equipment**

- 1.6.1 The participant shall have an appropriate knowledge of the following oxygen administration equipment suitable for the treatment of a diving casualty:
  - 1.6.1.1 Oxygen cylinders and valves
  - 1.6.1.2 The pressure regulator
  - 1.6.1.3 The connecting hoses
  - 1.6.1.4 Oxygen delivery masks, including the oro-nasal demand valve face mask and the oro-nasal pocket mask
  - 1.6.1.5 Watertight protective case
- 1.6.2 The participant shall have an appropriate knowledge of the preparation of oxygen administration equipment for emergency use.

## 1.7 **Subject Area 8: Oxygen Administration Techniques**

- 1.7.1 The participant shall have an appropriate knowledge of the following techniques of providing oxygen to a breathing diving casualty:
  - 1.7.1.1 Oxygen administration via a demand system to a conscious breathing diving casualty
  - 1.7.1.2 Oxygen administration via a constant flow pocket mask to conscious breathing diving casualty

- 1.7.1.3 Oxygen administration via a demand system to an unconscious breathing diving casualty
- 1.7.1.4 Oxygen administration via a constant flow pocket mask to an unconscious breathing diving casualty
- 1.7.2 The participant shall have an appropriate knowledge of the following techniques of providing oxygen to a non-breathing diving casualty:
  - 1.7.2.1 Oxygen administration via a constant flow pocket mask to an unconscious, non-breathing diving casualty
  - 1.7.2.2 Oxygen administration via a demand system to an unconscious, non-breathing diving casualty

## 1.8 **Subject Area 9: Special considerations for Oxygen Providers**

- 1.8.1 The participant shall have an appropriate knowledge concerning the problems associated with oxygen administration, including the following:
  - 1.8.1.1 Limitations of oxygen therapy
  - 1.8.1.2 Dangers in the use of Entonox in the treatment of diving disorders
  - 1.8.1.3 Rescuer health and safety

## 1.9 **Subject Area 10: Career development**

- 1.9.1 The participant shall be provided with the career development information as provided for in **Clause 4.4 of Chapter 1**.

## 2. Required oxygen administration skills

- 2.1 The participant shall demonstrate and be assessed with regard to the following skills:
  - 2.1.1 The preparation of oxygen administration equipment for emergency use;
  - 2.1.2 The conducting of an immediate general assessment to ensure the safety of both the rescuer and the diving casualty, to determine whether the diving casualty is conscious and to summon assistance;
  - 2.1.3 The performing of a primary assessment on a diving casualty;
  - 2.1.4 The provision of Basic Life Support to a diving casualty; and
  - 2.1.5 The provision of oxygen to a diving casualty by means of various oxygen administration techniques