

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA
MATRICULATION EXAMINATION
INTERMEDIATE LEVEL
MAY 2017

SUBJECT:	PHYSICAL EDUCATION
DATE:	26 th May 2017
TIME:	9:00 a.m. to 11:35 a.m.

This examination paper has four sections. Answer **ALL** sections. Follow instructions given in each section.

Section A: Rules, Tactics and techniques:

You will be shown a total of **five** short clips in the following order:

- ✓ *2 clips on Rules*
- ✓ *2 clips on Tactics*
- ✓ *1 clip on Technique*

The clips are taken from a women's handball game from the Handball National League. The teams competing are La Salle Handball Club, playing in red against Kavallieri Handball Club who are playing in black.

Step 1: Read through all the questions.

Step 2: The first clip on rules is played. The same clip is replayed immediately after.

Step 3: One minute is given to answer the question between clips.

Step 4: On a signal, the second clip is played, and re played. The other clips will follow the same pattern.

Step 5: One minute is given to answer each clip. The same procedure is used throughout Tactics and Techniques. After the clips are all played, and the answering time is over, all the clips are replayed one last time. Candidates are given a final 4 minute period to make changes and finalise answers.

Section B: Answer ALL questions.

Section C: Answer ALL questions.

Section D: Answer TWO out of three questions.

SECTION A: RULES, TACTICS AND TECHNIQUES

Answer ALL the questions. This section carries 10 marks.

Rules

1. In this action, player no. 20 of Kavallieri (blacks) takes a shot. The keeper saves the shot attempt and the ball goes out. How does the game resume? (2)
2. In this action, Kavallieri are on offence. No. 3 of Kavallieri receives a pass and tries to take a shot at goal.
 - (a) Describe the outcome of this action? (1)
 - (b) What was the violation called by the official? (1)

Tactics

3. This action shows the La Salle team in possession of the ball. They are building an offensive action which leads to a goal. Describe the tactic used. (2)
4. This action shows Kavallieri in possession of the ball. Their offensive tactic is successful. Describe the tactic used in this action. (2)

Technique

5. In this action, La Salle win the ball and go on fast break. The ball is finally passed to no. 13 who takes a shot at goal.
 - (a) What is the type of shot attempted? (1)
 - (b) Name **TWO** advantages of using this type of shot. (1)

(Total: 10 marks)

SECTION B: ANATOMY AND PHYSIOLOGY

Answer ALL questions. This section carries 35 marks.

6. (a) The muscular system is a very important component when studying human movement. In fact, skeletal muscles are responsible for the body's mechanical movement. However, skeletal muscles also have two other functions. Mention and briefly explain these **TWO** functions. (4)
- (b) Charles is at the gym and is doing some bicep curls. He wants to learn about the types of contractions that his muscles are doing. Use the movements in this exercise to explain:
 - i) isotonic Eccentric Contraction; (1)
 - ii) isotonic Concentric Contraction. (1)
- (c) A cool-down involves performing light but continuous exercise which lowers the heart rate. Explain what happens in the body during the cool-down. (1)
- (d) DOMS is characterised by tender and painful muscles, often experienced in the days following heavy exercise and overload. Explain what is causing this feeling of pain in the muscles. (1)
- (e) Mary is a 70 year old woman who has severe osteoporosis.
 - i) What is Osteoporosis? (2)
 - ii) How could Mary have reduced the risk for osteoporosis? (2)

7. (a) The cardiac cycle explains the sequence of events that takes place during one complete heartbeat. Each heartbeat has four phases.
- i) Mention the **FOUR** different phases of a heartbeat as they happen after each other. (2)
 - ii) Explain in some detail what happens to the blood flow (within the heart) during these four phases, and how different valves help in the process. (5)
- (b) An athlete's blood flow at rest is different to when he is performing exercise. For example, when at rest, only around 20% of cardiac output is directed towards skeletal muscles. On the other hand, this can go up to 80% when doing vigorous exercise.
- i) What is the process called? (1)
 - ii) How do chemoreceptors and sympathetic nerves help in this process? (2)
- (c) A human being produces carbon dioxide, both at rest and during exercise. The carbon dioxide produced is also transported in the blood. About 8% is dissolved in the blood plasma. Mention **ONE** other way through which carbon dioxide is transported. (2)
8. (a) Alveoli are very important structures forming part of the respiratory system.
- i) What is the main function of alveoli? (1)
 - ii) Explain the structure of an alveolus. (3)
 - iii) How do alveoli, with the help of surrounding capillaries, perform their main function? (3)
- (b) Marco breathes 15 times per minute and his tidal volume is 500ml.
- i) Explain tidal volume. (1)
 - ii) Not all inspired air makes it to the alveoli. Explain what happens to the air that does not reach the alveoli. (2)
 - iii) Give a brief definition of minute ventilation and calculate Marco's minute ventilation. (1)
- (Total: 35 marks)**

SECTION C: ACQUIRING MOVEMENT SKILLS

Answer ALL questions. This section carries 20 marks.

9. Fig. 1 shows an athlete coming out from the blocks in the sprint start.

(a) Identify the stimulus which makes the athlete start to react. (1)

(b) Describe the terms 'Reaction Time', 'Movement Time' and 'Response Time' in the 100m sprint. (1.5)

(c) Mention **TWO** factors which affect Reaction Time. (1)

(d) Refer to the Self-Paced/External Skill Continuum and the Perceptual Motor Abilities to compare between the 100m sprint start and the return of a tennis serve. (4)

(e) Using Whiting's model of Information Processing, identify the receptor system used by the performer in the sprint start. (1)

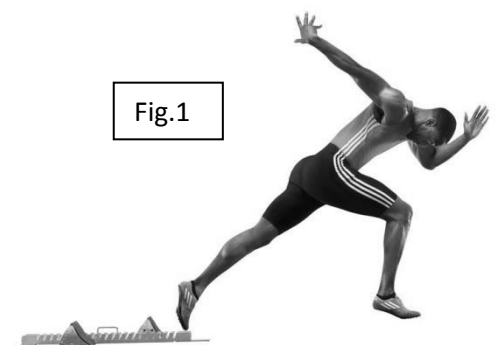


Fig.1

10. Memory plays an important role when interpreting information as we rely on our previous experiences. Give an example from sport of a strategy which improves our retention and retrieval of information. (2.5)

11. A beginner group of twenty students is learning how to play Volleyball.
- Mention **TWO** fundamental motor skills students should have already acquired in order to play volleyball. (1)
 - Give a suitable practice method for the learning of volleyball in the above context, giving reasons for your answer. (2)
 - Give a practical example from volleyball where the Psychological Refractory Period is used to make the opponents take a wrong decision. (2)
12. Identify **TWO** characteristics from the cognitive phase of learning. (2)
13. Using Bandura's Social Learning Theory, explain how a child learns norms and values by being involved in a football environment; eg. goes to nurseries as a player, watches football games on TV. (2)

(Total: 20 marks)

SECTION D: SOCIO-CULTURAL STUDIES

Answer **TWO** questions. Each question carries 7.5 marks. This section carries 15 marks.

14. The GSSE are being held in San Marino this June 2017.
- What does GSSE stand for? (1)
 - Give **ONE** reason why it is important for Malta to compete in such games. (1.5)
 - Which organisation sends athletes to GSSE? (1)
 - Mention another role of a National Olympic Committee as stated by the Olympic Charter. (2)
 - Mention **ONE** reason why doping is not acceptable. (1)
 - Mention a programme run by the MOC which promotes anti-doping. (1)
15. Malta has an aging population.
- Give **ONE** reason why it is important that our senior citizens keep physically active. (1)
 - Sportmalta offers programmes and sessions to promote physical activity among senior citizens. Give **ONE** example of such programmes. (1)
 - What **THREE** strategies would you implement further to get senior persons more interested in active physical participation? (3)
 - Masters Age Group Categories are increasing in popularity. What does this say about the way our adults and elders look at physical movement? (2.5)
16. (a) Define 'physical activity'. (1)
- What are the recommended amounts of physical activity for children and adolescents for an active and healthy lifestyle? (2)
 - Mention **TWO** possible barriers to regular participation in physical activity by young people. (1)
 - Which part of the mission statement of SportMalta consolidates the global recommendations on physical activity for health as stated by WHO? (2)
 - SportMalta is hosting a number of events due to the Malta EU Presidency 2017. What benefits can Malta get from hosting such events? (1.5)



(Total: 15 marks)