



SUBJECT:	Physical Education
DATE:	2 nd September 2022
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
- ✓ 1 clip on Technique
- ✓ 2 clips on Tactics

The clips are taken from Maltese Premier League 2019.

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 replayed. 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 four minute period to make changes and finalise answers.

Section B: Anatomy & Physiology – Answer all questions.

Section C: Acquiring Movement Skills – Answer all questions.

Section D: Socio-Cultural Studies – Answer TWO out of three questions.

Section A: RULES, TACTICS AND TECHNIQUES

Answer **ALL** the questions. This section carries **10** marks.

Rules

1. Valletta FC (in white) are trying to penetrate Hamrun's FC (in red) defence through passing and trying to find an open space. During this action Valletta FC player (in white) was fouled by Hamrun FC player (in red)
 - a) Which rule is violated here? (1)
 - b) Briefly describe this rule. (1)

2. In this action, Hamrun's FC player (in red) tackles the opposing player, and the referee stops the game.
 - a) Identify the violation in this action. (1)
 - b) Briefly describe the rule. (1)

Techniques

3. Valletta FC player (in white) managed to dribble past the Hamrun FC player (in red). Mention **TWO** technical components used to perform this skill. (2)

Tactics

4. Valletta FC (in white) are in possession of the ball. Describe the tactic they are using to move the ball upfield. (2)
5. In this action, Hamrun FC (in red) temporarily lost possession of the ball, but then won it back. Describe the tactic used to regain possession. (2)

(Total: 10 marks)

SECTION B: ANATOMY AND PHYSIOLOGY

Answer **ALL** the questions. This section carries **35** marks.

- 6 a. Skeletal muscles possess three properties that are essential for body actions like movement. Mention the **THREE** properties essential for movement. (3)

- b. Different types of synovial joints allow different types of movements.
 - i) Which type of synovial joint allows the widest range of movement? (1)
 - ii) Mention the type of movement allowed by the type of synovial joint mentioned in part b (i). (1)

- c. Lara is an elite sprinter who specialises in the 100m event. Fast-twitch glycolytic muscle fibres are very important for her main event.
 - i) Mention **TWO** characteristics of fast-twitch glycolytic fibre that make this type of muscle fibre important for Lara. (2)
 - ii) What is the main difference between fast-twitch glycolytic fibre and fast oxidative glycolytic fibre? (2)

- d. i) Define isotonic contractions. (1)
- ii) Describe the **TWO** main types of isotonic contractions. (2)

- 7 a. The heart's main function is to pump blood throughout the body.
- i) Briefly explain what is pulmonary circulation. (2)
 - ii) Name the main blood vessel carrying oxygenated blood in pulmonary circulation. (1)
 - iii) Explain how the sympathetic nervous system works. (4)
- b. A proper cool-down after exercise is very important. Explain how a good cool-down affects capillaries and other blood vessels. (2)
- c. Luke is marathon runner. Towards the end of the race he started to experience dehydration.
- i) What effect can dehydration have on plasma content? (1)
 - ii) How will this also affect blood viscosity? (1)
 - iii) How will the effects mentioned in part c (i) and c (ii) impact Luke's ability to transport oxygen to the muscles? (1)
- 8 a. Inspiration is an active process by which air enters our body.
- i) Explain why inspiration is an active process while expiration is a passive process. (2)
 - ii) Mention the **TWO** main respiratory muscles. (1)
- b. When oxygen enters the muscle cell, it attaches to a substance. This substance transports oxygen to the mitochondria.
- i) Name the substance which attaches itself to oxygen, when it enters the muscle cell. (1)
 - ii) Why is the substance mentioned in part b (i) more present in slow-twitch muscle fibres? (2)
- c. Sara and Jake are two Maltese athletes who have recently competed in an athletics meet in Mexico City, which is situated 2,240m above sea level (high altitude).
- i) Sara, who specialises in the 100m and 200m sprinting events, managed to significantly improve her personal best time. Give a possible reason for this. (2)
 - ii) During the same meeting in Mexico, Jake, who specialises in long distance running performed much worse than was expected. How was this possible? (2)
 - iii) What could Jake have done differently in order to prepare himself better to compete at this altitude? (1)

(Total: 35 marks)

Please turn the page.

SECTION C: ACQUIRING MOVEMENT SKILLS

Answer ALL questions. This section carries 20 marks.

9. Volleyball is a cyclical sport where the following situation is possible. The setter of the attacking team sets the ball up to the hitter, who spikes the ball over the net into the opposition's court. A blocker from the defensive team jumps to stop the attack.
- The 'set' is derived from a fundamental motor skill. Mention this skill. (½)
 - In a volleyball context, explain **and** give an example of:
 - a discrete skill;
 - a serial skill; and
 - a continuous skill. (4½)
 - Copy and complete Figure 1 below, of a Simplistic Information-Processing Model. (1)
 - With reference to the situation given above, explain the **FOUR** stages of informational processing from the perspective of the blocker in volleyball. (4)
 - Mention **ONE** strategy the setter could have implemented to deceive the blocker in the situation provided above. (2)

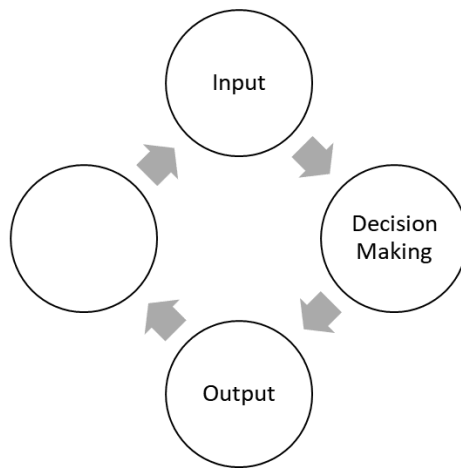


Figure 1: Simplistic Information-Processing Model.

10. Sarah is a beginner gymnast, while Kate is experienced.

Below is a diagram of the Inverted U Hypothesis Theory of Arousal (Figure 2) for Sarah who is about to compete in her first competition.

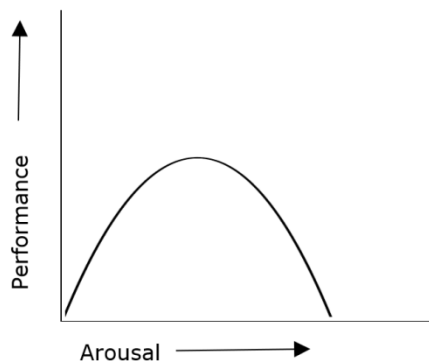


Figure 2: Inverted U Hypothesis Theory of Arousal

- a. Explain the Inverted U Hypothesis Theory of Arousal using Figure 2 as a reference. (2)
- b. Copy Figure 2 and sketch **and** label a likely curve for Kate during her competition. (3)
- c. With reference to the experience level of the gymnasts, which type of feedback is more suitable for:
 - i) Sarah; and (½)
 - ii) Kate. (½)
- d. State the phase of motor skill learning associated with:
 - i) intrinsic feedback; and (½)
 - ii) extrinsic feedback. (½)
- e. Mention **ONE** factor which influences the efficiency of the short term sensory store. (1)

(Total: 20 marks)

SECTION D: SOCIO-CULTURAL STUDIES

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

11. George is a teenager who is organising a picnic with his friends in the countryside.
 - a. Define the term "physical recreation". (1)
 - b. Suggest **ONE** way the picnic can include a physical recreation activity. (1½)
 - c. Mention **TWO** barriers teenagers face which stop them from being physically active. (2)
 - d. Being physically active has many benefits. Give an example of a:
 - i) physical benefit; (1)
 - ii) mental benefit; and (1)
 - iii) social benefit. (1)
12. The mission statement of SportMalta is "moving a nation through the promotion and development of sport for a healthy, inclusive and successful Malta."
 - a. Mention **ONE** benefit of having a healthy population. (1)
 - b. The Sport Start Programme at SportMalta is a combination of different sport activities for children between ages of 7 to 10. Explain **ONE** reason why it is important for young children to have access to varied sports programme. (1)
 - c. A definition of "sport" includes it being an institutionalised competitive activity. Define the word "institutionalised". (2)
 - d. Using practical examples for **each** game, explain the difference between an Invasion game and a Net game. (3)
 - e. Mention **ONE** other sports programme, other than Sport Start offered by SportMalta. (½)
13. The year 2022 is a Winter Olympics Year.
 - a. Mention **ONE** type of terrain these Games are played on. (½)
 - b. Identify the **THREE** main constituents of the Olympic Movement. (1½)
 - c. Mention **TWO** roles of the International Olympic Committee. (2)
 - d. What is the aim of Olympic Solidarity? (1½)
 - e. Give **ONE** practical example of gamesmanship. (1)
 - f. Give **ONE** reason fair play is still relevant today. (1)

(Total: 15 marks)