

SKILL ACQUISITION

PAST PAPER QUESTIONS

2.1.2 Skill Acquisition

Skill, skill continuums and transfer of skills

Characteristics of skill.

1. Describe the characteristics of skilled performance. [3 marks]

 2. Skilful performances are usually:
 - goal directed
 - follows technical model
 - aesthetically pleasingDescribe practical examples of the performance of movement skills to show what is meant by each of these characteristics. [3 marks]

 3. State the characteristics of skilful performance. [3 marks]

 4. Skilled movements are learned and efficient; they do not waste energy. Identify three other characteristics of skill. [3 marks]
- Three marks for 3 of:*
5. Skilful performances:
 - are learned
 - are goal directed
 - follow technical models
 - are aesthetically pleasingUsing practical examples, describe what is meant by each of these characteristics. [4 marks]

Use of skill continua - Impact of skill classification on structure of practice for learning

6. Explain, using examples of motor skills, the terms: gross, fine, open, closed, high organisation and low organisation skills. [6 marks]

7. Identify three characteristics of an open skill. [3 marks]

8. Explain, using practical examples, what is meant by externally and internally paced skills. [4 marks]

9. Explain using a suitable practical example for each, the terms simple skill and complex skill. [4 marks]

10. Motor skills can be classified as discrete, serial or continuous. Describe, using a practical example for each, these classifications. [3 marks]
11. One way of classifying movement skills uses the open-closed continuum. Describe three characteristics of a closed skill. [3 marks]

Justification of skill placement on each of the continua.

12. Skills such as javelin throwing may be classified on continua as open or closed, self-paced or externally-paced, gross or fine and discrete or continuous. Classify the javelin throw according to the above four continua and justify your selection for the open-closed and the discrete-continuous continua. [4 marks]

13. A profile can be used to represent certain characteristics of skilled movement, as shown below:

Continuous	Discrete
Gross	Fine
Self-paced	Externally-paced
Closed	Open

Identify where the shot putt should be placed on each continuum. [2 marks]

14. Front crawl is a style of swimming and may be classified on continua as open or closed, self-paced or externally-paced, gross or fine and discrete or continuous. Classify the front crawl according to the four continua, justifying your selection on the self-paced / externally-paced and discrete / continuous continua. [4 marks]

15. Performers in the women's heptathlon compete in the 100m sprint, high jump, long jump, shot put, javelin, 800m and 100m hurdles. Name, giving a reason for your choice, one heptathlon event that is an

- open;
- continuous;
- serial;
- self-paced skill. [4 marks]

16. The diagram shows a suggested skills profile of a hockey dribble within a game.

Continuous	*	Discrete
Gross ... *	Fine
Self Paced	*	Externally Paced
Closed	*	Open
Intrinsic Feedback	*	Extrinsic Feedback
Simple	*	Complex

Justify the selection of each aspect of the profile. [6 marks]

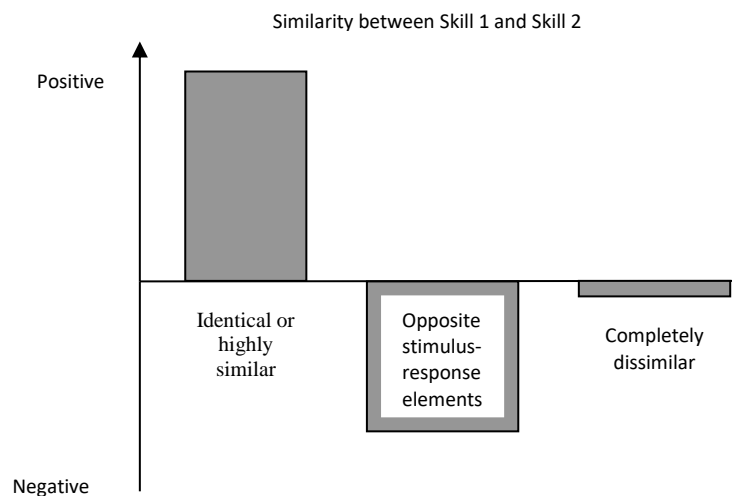
17. Classify the long jump according to the following four continua and justify each of your choices.

- open to closed
- self-paced or externally paced
- discrete to continuous
- gross to fine

[4 marks]

Transfer of learning - Understanding of how transfer of learning impacts on skill development

18. When learning a new skill, transfer may occur. The graph shows the extent of transfer in different situations, A, B and C.



Explain the meaning of the terms positive and negative transfer in the context of learning a new sports skill. [2 marks]

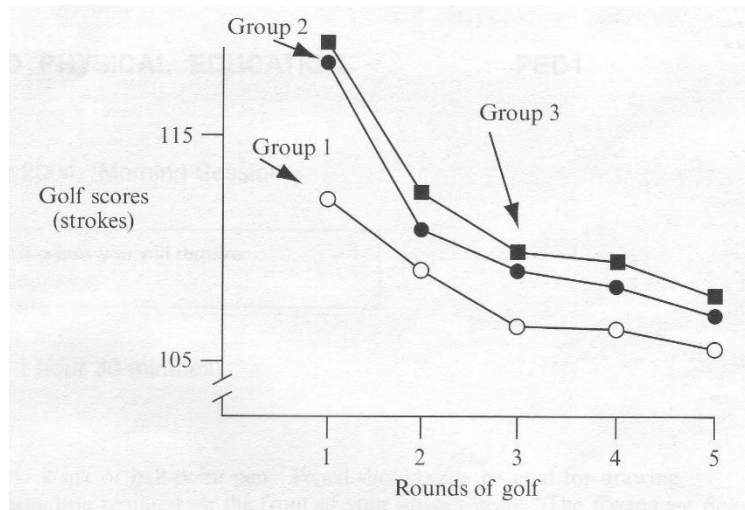
19. Suggest an example of a skill, for each of the situations A, B and C in the graph, which illustrates the type of transfer shown. Give reasons for your answers. [6 marks]

20. A squash player spends several weeks during the summer playing tennis in the hope that it will improve her squash skills. When she returns to squash, she finds that some of her skill levels have deteriorated. Her coach suggests that transfer of learning may be the cause of her problem.

Explain, using examples from the situation described above, what is meant by the terms positive, negative and bilateral transfer. [6 marks]

21. Suggest how a coach could ensure that positive transfer was likely to occur during the learning of a sports skill. [3 marks]

22. In golf, the player with the lowest score wins. The following graph shows the golf scores achieved by three groups of students.
- Group 1 – practised at a golf driving range
 - Group 2 – did not receive any practice
 - Group 3 – practised on a miniature golf course



The graph shows that Group 1 had experienced positive transfer of learning. State what you understand by the term transfer of learning. Explain the other forms that transfer can take. [4 marks]

23. Explain, using the graph, the effects of transfer on Groups 2 and 3. [2 marks]

24. Suggest how could a coach ensure that positive transfer of learning will take place in future sessions. [3 marks]

25. The action of throwing can be transferred from one sport to another. Describe what is meant by the term transfer of learning and explain the other forms that transfer can take. [5 marks]

26. Suggest factors that may lead to successful transfer of learning taking place? [4 marks]

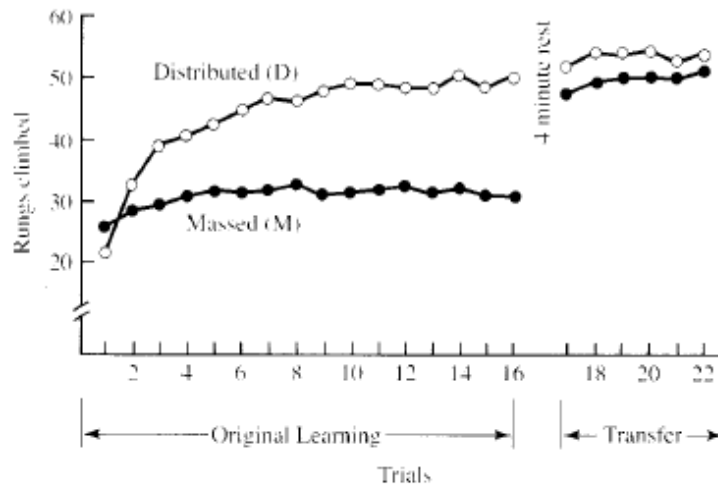
27. Because of the dangerous nature of the implement, a novice shot putter has to practise using a soft ball. Explain how practising in this way could still improve performance. [3 marks]

Impact of skill classification on structure of practice for learning
Methods of presenting practice

28. Explain how the nature of the task and the characteristics of the learner might lead you to decide whether to use whole or the part method of learning a skill. [4 marks]
29. Suggest which method, whole or part learning, would be most appropriate to use when coaching an activity such as shot putt to beginners. Give reasons for your answers. [3 marks]
30. Describe the advantages of using the whole method to teach swimming. [3 marks]
31. Describe the advantages of using the part method to teach swimming. [4 marks]
32. The service action of tennis can be taught using either the whole or the part method of learning. Identify three advantages and three disadvantages of using the part method of learning to teach a tennis serve. [6 marks]
33. Suggest factors that a coach should consider when deciding to use whole or part methods of practice [3 marks]
34. Suggest why the part method of practice may be more effective with some performers. [3 marks]

Types of practice

35. Distinguish between massed practice and distributed practice. [2 marks]
36. Suggest two aspects of the task and two characteristics of the learner that might help you decide whether to use massed or distributed practice to improve learning. [4 marks]
37. The graph shows the performance on a ladder task (rungs climbed) performed under massed and distributed conditions.



Describe and explain the results of both the massed and distributed practice groups before the 4 minute rest period. [3 marks]

38. Suggest reasons why, after the 4 minute rest period, the number of rungs climbed are similar for both groups. [2 marks]

39. State two characteristics of the task and two characteristics of the learner that might lead a coach to use massed practice to improve learning. [4 marks]

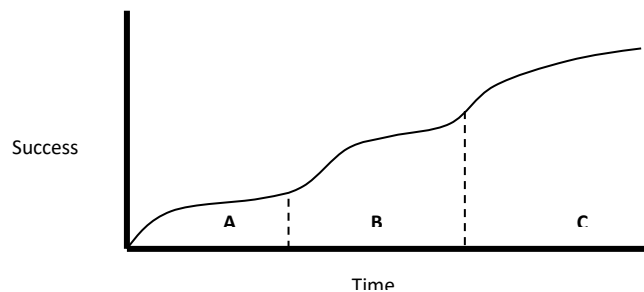
40. Suggest how could a coach use the rest periods involved in distributed practice. [3 marks]

Understanding how knowledge of skill classification informs practice structure (presentation and type) to allow learning / development of skills

Principles and theories of learning and performance

Stages of learning and how feedback differs between the different stages of learning.

41. The diagram shows the improvement in learning and performance of a performer over a period of time. Name the phase A, B and C shown on the graph and identify two characteristics of a performer in phase C. [3 marks]



42. State the three stages of learning and describe how the method of guidance might change as a performer moves from one stage of learning to the next. [3 marks]

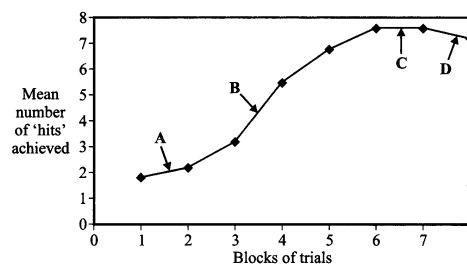
43. Describe how feedback should change as a performer moves from the early stage of learning through to the final stage of learning. [4 marks]

44. Describe the characteristics of a performance at the associative stage of learning. [4 marks]

45. Suggest strategies a coach could use to help the performer progress from the associative to the autonomous stage. [4 marks]

Learning plateau.

46. Improvements in performance may be demonstrated through repeated attempts at a skill over a period of time. The image shows a typical performance curve.



Describe the main features of performance occurring at stages A-D. [4 marks]

Four marks for:

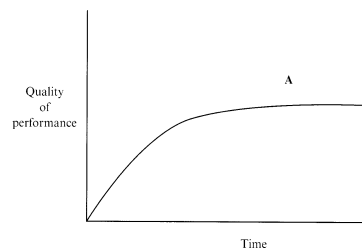
- A – slow early progression – many mistakes
- B – rapid improvements / fewer mistakes
- C – (plateau) No improvements in performance
- D – Performance deteriorates

Suggest three possible causes of stage C. [3 marks]

Suggest, using examples, three possible solutions to the problems that you previously identified. [3 marks]

A.

47. The graph shows a performance curve of a beginner learning to shoot basketballs in a massed practice session.



Identify, using the graph, phase A of the curve and suggest reasons for its occurrence [5 marks]

48. Describe four ways that a coach could overcome the problems created by phase A. [4 marks]

49. Explain what factors may cause this plateau to occur in the learning of a skill. [4 marks]

Cognitive theories.

50. Explain how insight learning could have a positive effect on performance. [4 marks]

51. Suggest reasons why a coach may decide to use insight learning when teaching a skill, rather than operant conditioning. [4 marks]

Behaviourism

52. Suggest why coaches usually prefer to use reinforcement rather than punishment when teaching skills [5 marks]

53. Briefly explain the terms positive reinforcement, negative reinforcement and punishment, using examples from a team game such as basketball or netball. [6 marks]

54. Describe operant conditioning theory and give an example of how you would use operant conditioning methods in the coaching of a game such as basketball. [3 marks]

55. Explain, using examples, how a coach would use operant conditioning. [5 marks]

56. Explain the term negative reinforcement and punishment giving examples of each from a team game. [4 marks]

A.

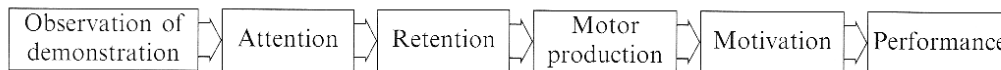
57. Explain, using examples, how a coach could use positive reinforcement to improve the performance of their players. [2 marks]

58. Reinforcement is a feature of operant conditioning. Suggest how a coach can make operant conditioning effective. [3 marks]

Social learning

59. Children may learn high jumping by watching others perform. What type of learning is this and what are the main characteristics that govern whether learning by this method is successful or not? [4 marks]
60. Bandura (1977) identified a model of observational learning. Describe, using appropriate examples, the four stages of this process. [4 marks]
61. What do you understand by the term learning? [2 marks]

62. Bandura's model of observational learning is shown below



Explain, how the terms attention, retention, motor production and motivation help the process of learning. [4 marks]

Constructivism

63. Vygotsky suggested that a sports performer could learn new skills by using the method of constructivism. Describe what you understand by the constructivism method of learning in sport. [4 marks]

Understanding of how theories of learning impact on skill development.

Use of guidance and feedback

Methods of guidance

64. Describe, using examples, the three main methods of guidance that a coach could use to aid a batsman in cricket. [3 marks]
65. Identify, using examples, the three main methods of guidance a swimming coach can use to aid a swimmer. [3 marks]
66. Define the term visual guidance and give three examples of how visual guidance may be used for a gymnast. [4 marks]
67. Demonstrations are a form of visual guidance. Identify two other forms of guidance [2 marks]

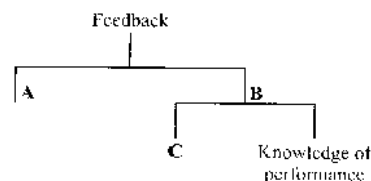
Suggest how a coach could make demonstrations as effective as possible. [4 marks]

68. Name and explain, using examples from swimming, three methods of guidance that a coach could use. [3 marks]

69. Identify two potential disadvantages of each of the different forms of guidance. [6 marks]

Understand the different purposes and types of feedback

70. The image shows the types of feedback that a soccer player might receive.



Identify the types of feedback at A, B and C. [2 marks]

71. Describe the characteristics of 'effective feedback'? [3 marks]

72. Explain how feedback differs through the associative and autonomous phases of learning. [4 marks]

73. Explain how the type of feedback being used by a performer varies as they become more skilled. [3 marks]

74. Knowledge of results and knowledge of performance are two types of feedback. Explain these two types of feedback. [2 marks]

75. Identify the three main benefits of feedback to a swimmer. [3 marks]

76. When a performer moves from the early stage of learning through to the final stage of learning, the type of feedback they use changes. Describe how feedback should differ at these two stages. [4 marks]

77. Explain the different types of feedback that a performer may experience. [4 marks]

78. Describe, using examples from a team game, the function of feedback. [3 marks]

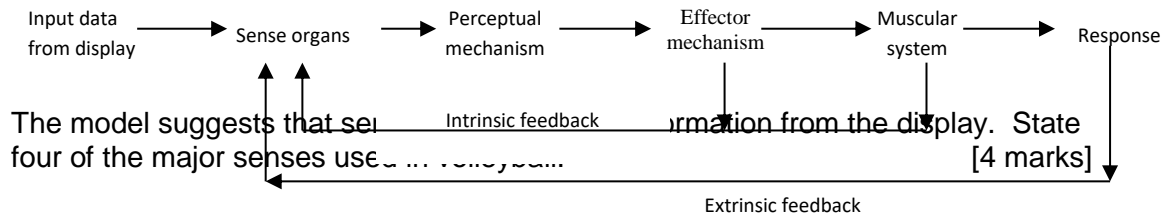
79. Describe the factors a coach should consider to ensure that feedback is effective for a javelin thrower. [4 marks]

Understanding of how feedback and guidance impacts on skill development.

General information processing model

Input

80. During a team game, performers will use their senses to detect stimuli. The diagram shows an information processing model.



The model suggests that performers use information from the display. State four of the major senses used in this model. [4 marks]

81. Briefly explain the three processes that occur as part of the perceptual mechanism. [3 marks]
82. Explain the term *selective attention* and give examples of its use from a game of your choice. [4 marks]
83. Explain how a coach could improve a player's selective attention. [4 marks]
84. Explain the role of perception within information processing. [3 marks]

Efficiency of information processing

85. For effective performance, games players require the ability to receive, interpret and use information. Explain how information processing differs between a novice performer and an experienced player in possession of a ball, when confronted by a defender. [4 marks]

Output

86. In a cricket match, the bowler is preparing to bowl and the batsman is ready to hit the ball. Identify the 3 basic stages of information processing involved in the batsman successfully hitting the ball. [3 marks]

Feedback

87. Games players will experience different types of feedback during and after a performance. Explain the different types of feedback that a performer may experience. [4 marks]
88. Describe the characteristics of effective feedback for a novice games performer. [3 marks]
89. Intrinsic feedback and knowledge of results are two types of feedback. Explain both of these types of feedback. [2 marks]

Identify the main benefits of feedback to a performer.

[3 marks]

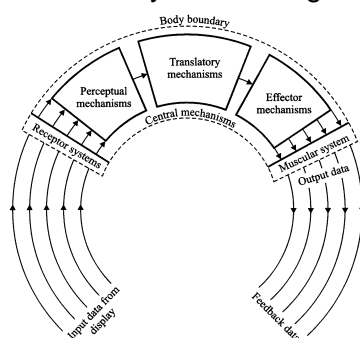
Identify the factors a coach should consider to ensure that feedback is effective.

[4 marks]

Efficiency of information processing

Application of Whiting's information processing model to a range of sporting contexts.

90. The diagram shows Whiting's information processing model, with five arrows entering the perceptual mechanism and only one leaving



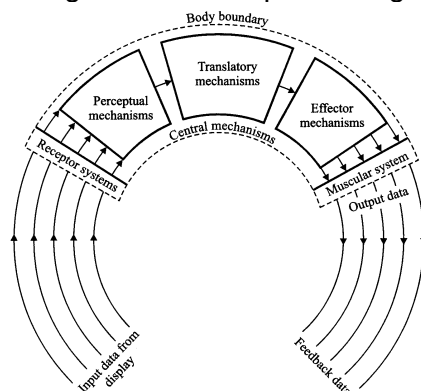
Identify the process involved and explain why is it necessary

[4 marks]

Identify three factors that help a performer with this process.

[3 marks]

91. The diagram shows Whiting's information processing model.

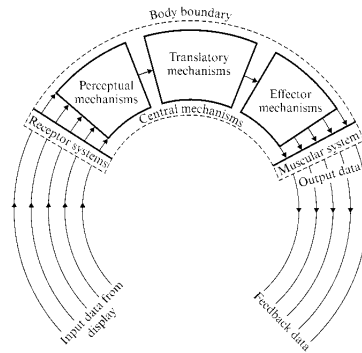


Other information processing models may use different terms to describe the different stages involved. Identify the stage in Whiting's model that is referred to as:

- Response selection stage;
- Stimulus identification stage;
- Response programming stage;

[3 marks]

92. The diagram shows Whiting's Information Processing model.



Explain the functions of each of the following stages:

- Perceptual mechanism
- Translatory mechanism

[5 marks]

Applied understanding of information processing terms within a sporting context - Strategies to improve information processing

93. In a 'two on one situation', games players are often faced with a situation where they are trying to defend against two attackers, one of whom has the ball. Describe the information processing involved as the defender decides what to do in this situation. [5 marks]

Suggest why a 'two on one situation' inevitably gives an advantage to the attackers. [2 marks]

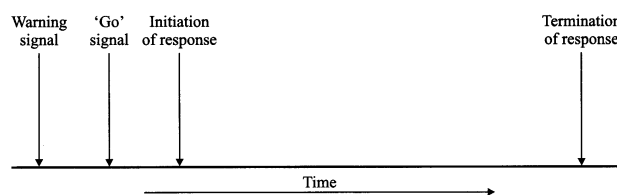
Explain why if all the players involved are beginners, then the attack often breaks down. [4 marks]

94. Explain, in terms of information processing, why a beginner may experience difficulties when learning a new skill. [3 marks]

95. A simple information processing system consists of perceptual, translatory and effector mechanisms. Explain what you understand by these terms, using appropriate examples from volleyball. [6 marks]

Definitions of and the relationship between reaction time, response time, movement time

96. The diagram show various stages that occur prior to, during and at the end of a sprint.



Redraw figure 6 and clearly label your drawing to identify reaction time, movement time and response time. [3 marks]

97. Identify an appropriate example from a team game of simple reaction time and choice reaction time. [2 marks]

98. Male professional tennis players serve very fast. It takes 0.17 seconds for the ball to reach the receiver once it has left the server's racket. The time taken by the receiver to decide on an action is approximately 0.15 seconds, and the time taken for the receiver to play the return having decided on a stroke is 0.2 seconds. Using the information provided, calculate:

- reaction time;
- response time, and;
- movement time. [3 marks]

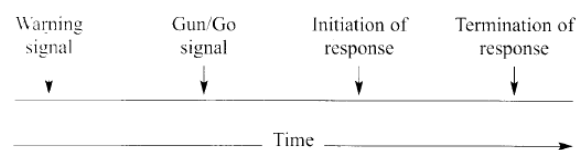
99. Suggest reasons why novice performers often find it difficult to return a serve even when it is delivered at a speed that is within their capabilities to respond to. [3 marks]

100. In cricket, a batsman is waiting to receive the ball. As the bowler bowls, the batsman begins to move. With reference to the batsman, define the terms movement time, response time and reaction time. [3 marks]

101. Suggest four factors that could affect the batsman's response time. [4 marks]

102. Explain, in terms of reacting quickly, the principles of Hick's Law. [2 marks]

103. The diagram shows the various stages that occur before, during and at the end of a swimming start.



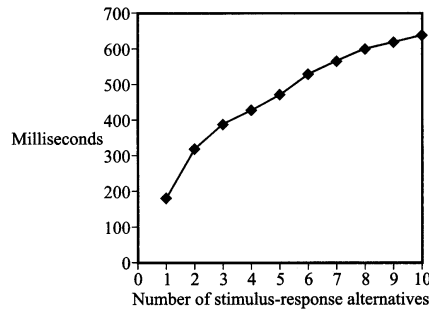
Explain the terms movement time and response time, giving examples of each in relation to a swimming start. [4 marks]

Justify the swimming racing start as an example of simple reaction time or choice reaction time. [2 marks]

104. Explain, using the single channel hypothesis how reaction time can be affected by the presence of more than one stimulus. [3 marks]

Factors affecting response time

105. The graph illustrates *Hick's Law*.

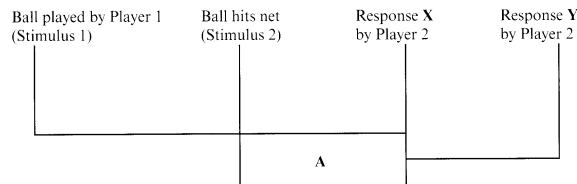


Use Hick's Law and the *psychological refractory period* to explain how an attacker in a team game may gain an advantage over a defender. [5 marks]

106. Explain, using an example from a team game, why the psychological refractory period often occurs in team games. [3 marks]

107. When playing in a racket game, the ball/shuttlecock occasionally hits the net during a rally and the receiver has to adjust their response. Explain why this causes a delay before the final response can be made. [4 marks]

108. During rallies, tennis players have to react and respond quickly as a result of the actions of their opponents. The diagram shows part of the processing that occurs as a result of an opponent's shot.



Identify, using the diagram, the period represented by area A and give an example of response X and response Y. [3 marks]

Explain, using the single channel hypothesis, why area A is created and why this may be a disadvantage for player 2. [4 marks]

Definitions of anticipation

109. Performers use anticipation to improve response time. Explain the term anticipation. [2 marks]

Strategies to improve response time.

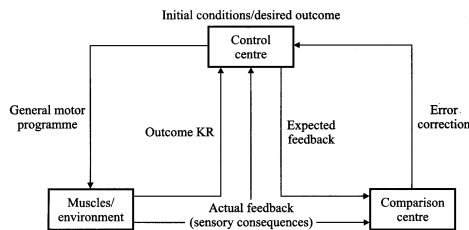
110. Explain what strategies the performer could use to return the ball successfully in situations such as that described above. [4 marks]

111. Suggest strategies that a batsman could use to achieve a faster response time. [3 marks]

112. Suggest how a swimmer could improve their response time. [3 marks]

Application of schema theory in sporting situations.

113. The diagram outlines Schmidt's schema theory of motor control.



Identify, using the diagram, the four items of information that Schmidt suggests are stored every time a movement is produced. [4 marks]

Describe how these four pieces of information are used to initiate and adapt a movement such as passing a ball in a team game. [4 marks]

114. Explain how might a coach use their knowledge of schema theory to develop practices. [3 marks]

115. Coaches will try to ensure that their practice conditions are as varied as possible, since variability of practice is supported by Schmidt's Schema Theory. Describe the main principles of Schmidt's Schema Theory. [6 marks]

116. Explain the implications of Schmidt's schema theory for the way that sports skills should be taught. [2 marks]

117. Schmidt's schema theory is based on four sources of information which are used to modify motor programmes. List the four sources of information. [4 marks]

118. Suggest how can a coach organise practices to enable a schema to develop. [3 marks]

119. Explain how a coach could enable schema to develop. [5 marks]