Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.

Information

- The total mark for this paper is 40.
- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.
- Questions labelled with an asterisk (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.
Answer ALL questions.

Some questions must be answered with a cross in a box ☑️. If you change your mind about an answer, put a line through the box ☑️ and then mark your new answer with a cross ☑️.

1 Which one of the following is a leadership role in physical activity?

☐ A Player  
☐ B Manager  
☐ C Linesman  
☐ D Secretary  

(Total for Question 1 = 1 mark)

Questions 2 and 3 relate to the components of health-related exercise. For each question read the statements and decide whether A, B, C or D is correct.

Four GCSE PE students identified areas for improvement in their performance. The statements below are taken from their Personal Exercise Programmes (PEPs).

2 Which student would benefit most from an increase in cardiovascular fitness?

☐ A I can play for the full 90 minutes but my legs get tired and it is more of an effort to run.
☐ B I always seem to knock the bar off because I can’t get enough height.
☐ C I have difficulty clearing the first hurdle as I can’t get my trailing leg in the correct position.
☐ D I’m always substituted in the second half as I am too tired to continue.

(Total for Question 2 = 1 mark)

3 Which student would benefit most from an increase in flexibility?

☐ A I can play for the full 90 minutes but my legs get tired and it is more of an effort to run.
☐ B I always seem to knock the bar off because I can’t get enough height.
☐ C I have difficulty clearing the first hurdle as I can’t get my trailing leg in the correct position.
☐ D I’m always substituted in the second half as I am too tired to continue.

(Total for Question 3 = 1 mark)
Which component of fitness can be tested using the equipment shown in Figure 1?

☐ A  Power  
☐ B  Coordination  
☐ C  Cardiovascular fitness  
☐ D  Flexibility  

(Total for Question 4 = 1 mark)

Questions 5 and 6 relate to fitness testing. For each question read the statements and decide whether A, B, C or D is correct.

5  Which fitness test would be used to assess a student’s ability to dodge an opponent?
☐ A  Illinois Agility Run test  
☐ B  Harvard Step test  
☐ C  30-metre sprint  
☐ D  Sit and reach test  

(Total for Question 5 = 1 mark)

6  Which fitness test would be used to assess a student’s suitability for long jump?
☐ A  Treadmill test  
☐ B  Standing stork test  
☐ C  Cooper’s 12-minute run test  
☐ D  Standing broad jump  

(Total for Question 6 = 1 mark)
The FITT principle is a principle of training. Which part of the FITT principle overlaps with the principle of specificity?

- A Type
- B Time
- C Frequency
- D Intensity

(Total for Question 7 = 1 mark)

When should a PAR-Q be completed?

- A At the end of an exercise session
- B After a warm-up before beginning the main session
- C Before planning a Personal Exercise Programme (PEP)
- D At the end of the playing season

(Total for Question 8 = 1 mark)

Ben and Jake are cross country runners. They both take part in a series of fitness tests. After completing the Harvard Step Test, Ben recovers to his resting heart rate after 5 minutes. Jake recovers after 10 minutes. Which one of the following statements, A, B, C or D, correctly assesses Ben’s fitness?

- A Ben is not as fit as Jake as Jake must have worked at a higher intensity.
- B Ben is not as fit as Jake as Jake could get his heart rate higher than Ben.
- C Ben is twice as fit as Jake.
- D Ben is fitter because his heart rate recovers to his resting heart rate first.

(Total for Question 9 = 1 mark)
10 Which one of the following is a correct statement about the start of a suitable warm-up?

- A  A very vigorous activity to get you ready for the activity ahead, e.g. short sprints.
- B  Moderate activity to increase heart rate, e.g. jogging.
- C  Static stretches, focusing mainly on the head and neck to increase blood flow to the brain.
- D  A talk from the coach so the team is aware of the game plan.

(Total for Question 10 = 1 mark)

11 Target zones are used to make sure training is at the correct intensity.

Which line on the graph (Figure 2) shows the upper training threshold for a 20 year old?

Figure 2

- A  Line A (90%)
- B  Line B (80%)
- C  Line C (70%)
- D  Line D (60%)

(Total for Question 11 = 1 mark)
12 You are planning the next weight training session for your Personal Exercise Programme (PEP). You currently easily lift 20kg.

How much do you plan to lift in the next session to apply the principle of progressive overload?

- A 15kg
- B 20kg
- C 25kg
- D 45kg

(Total for Question 12 = 1 mark)

13 Which one of the following nutrients builds and repairs muscle?

- A Carbohydrates
- B Proteins
- C Fats
- D Minerals

(Total for Question 13 = 1 mark)

Questions 14 and 15 relate to the requirements of a balanced diet. For each question read the statements and decide whether A, B, C or D is correct.

14 ‘These nutrients provide the body with energy, but should only be eaten in relatively small quantities.’

Which nutrient is being described?

- A Carbohydrates
- B Proteins
- C Fats
- D Minerals

(Total for Question 14 = 1 mark)
15 ‘These nutrients only need to be consumed in small quantities but help the body to function, for example calcium and iron.’

Which nutrient is being described?

☐ A  Vitamins
☐ B  Proteins
☐ C  Fibre
☐ D  Minerals

(Total for Question 15 = 1 mark)

16 Adrianna is a basketball player. Due to a lack of time she often eats her dinner just before playing basketball.

Which one of the following statements is correct?

Eating her dinner just before playing will have:

☐ A  no effect on her performance because food will be digested whilst playing.
☐ B  a positive effect because she will have plenty of energy to play in the game.
☐ C  a negative effect due to abdominal pain because food is not digested.
☐ D  a positive effect because blood will be shunted to the digestive system.

(Total for Question 16 = 1 mark)
17  Participation in physical activity can bring about many health benefits.

(a) Serotonin levels increase when we take part in physical activity.

Briefly explain why an increase in serotonin is a health benefit.  

(b) Joe has a disability and has recently started to play wheelchair rugby.

(i) Complete the following statement.

Joe has made a lot of new friends at his rugby club. This is a  

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(ii) Explain how starting to play rugby at a club could increase Joe’s self-esteem.

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The statements in the table below give reasons why Joe and his friends joined the rugby club.

(c) For each reason, identify the key influence.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Key Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Joe started to play rugby because his friends did.</td>
<td>(1)</td>
</tr>
<tr>
<td>(ii) Joe's friends found out about the rugby club from an advert in the local newspaper.</td>
<td>(1)</td>
</tr>
<tr>
<td>(iii) Joe started to play rugby because the club was close to his home.</td>
<td>(1)</td>
</tr>
</tbody>
</table>

(Total for Question 17 = 9 marks)

18 Some initiatives are developed to increase participation by providing opportunities to become or remain involved in physical activity.

Describe another common purpose of these initiatives.

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(Total for Question 18 = 2 marks)
Figure 3 shows a gymnast during her routine on the balance beam.

(a) Briefly explain how the gymnast has used power and coordination to achieve the position shown in Figure 3.

(i) Power

(ii) Coordination
(b) Give an example of when the gymnast shown in Figure 3 would need a good reaction time in the routine.

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(Total for Question 19 = 5 marks)

20 Tai and Aran both play hockey. Tai plays for the girls’ 1st team and Aran plays in the boys’ 2nd team. Tai also plays for a team outside of school.

State two reasons why Tai and Aran’s school coach applies the principle of individual differences to their Personal Exercise Programmes (PEPs).

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(Total for Question 20 = 2 marks)
*21* You need to be skilful and fit to play a game well.

Discuss whether **circuit training** would be the most effective method of training to improve performance in games.

(6)