1. Which one of these performance enhancing drugs is taken to reduce heart rate?

A  Beta blockers
B  Diuretics
C  Peptide hormones (EPO)
D  Stimulants

(Total 1 mark)

2. In 2016, 136 Russian track and field athletes were banned from competing at the Rio Olympics due to evidence of widespread use of performance enhancing drugs (PEDs) and blood doping.

Describe the process of blood doping.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

(Total 3 marks)

3. Explain how blood doping could improve the performance of a marathon runner.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

(Total 3 marks)
4 State **three** negative side effects that an athlete may suffer as a result of blood doping.

1. _____________________________________________________________________
   _____________________________________________________________________

2. _____________________________________________________________________
   _____________________________________________________________________

3. _____________________________________________________________________
   _____________________________________________________________________

(Total 3 marks)

5 Suggest the negative impacts that Russia's ban at the Olympics may have had on the sport of athletics.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

(Total 4 marks)

6 Hooliganism is often associated with the game of football.

Evaluate the effectiveness of strategies that are being used to combat hooliganism at football matches.

(Total 6 marks)
Which one of these types of drug is taken to mask the pain caused by injury?

A  Anabolic agents
B  Diuretics
C  Narcotic analgesics
D  Peptide hormones

(Total 1 mark)

Suggest three possible **negative** effects of having spectators at a sporting event.

1. _____________________________________________________________________

2. _____________________________________________________________________

3. _____________________________________________________________________

(Total 3 marks)

Which one of these is an effect of blood doping?

A  A decreased red blood cell count
B  A decreased white blood cell count
C  An increased red blood cell count
D  An increased white blood cell count

(Total 1 mark)

Define gamesmanship.

_______________________________________________________________________

_______________________________________________________________________

(Total 1 mark)
Many performance enhancing drugs (PEDs) are not allowed in sport. However, some performers still take them because of the positive effect that they have on their bodies. Taking PEDs can also cause negative side effects.

Complete the table to identify one positive effect of anabolic agents on the performer’s body and one possible negative side effect of diuretics on the performer’s body.

**Performance enhancing drugs and their effects**

<table>
<thead>
<tr>
<th>Performance enhancing drug</th>
<th>One positive effect on the performer’s body</th>
<th>One possible negative side effect on the performer’s body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anabolic agents</td>
<td></td>
<td>High blood pressure</td>
</tr>
<tr>
<td>Diuretics</td>
<td>Increased amount of water excreted in urine</td>
<td></td>
</tr>
</tbody>
</table>

(Total 2 marks)

Performers face lengthy bans from competing if they are caught taking a performance enhancing drug.

Identify two possible non-physiological reasons why a performer may risk taking a performance enhancing drug.

1. _____________________________________________________________________
   _____________________________________________________________________

2. _____________________________________________________________________
   _____________________________________________________________________

(Total 2 marks)

Using a sporting activity of your choice, suggest why performers may use beta blockers.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

(Total 2 marks)
1. **AO1 = 1**
   
   A – Beta blockers

2. **AO1 = 3**
   
   Award one for each of the following points up to a maximum of three marks.
   
   - Removal of blood from an athlete several weeks before a competition and is frozen (1)
   - The body makes more blood (red blood cells) to replace the amount taken out (1)
   - 1-2 days before the competition the frozen blood is thawed and injected back into the athlete (1)

   Accept any other suitable description of the process of blood doping.

3. **AO2 = 3**
   
   Award one for each of the following points up to a maximum of three marks.
   
   - The marathon runner’s blood has more red blood cells (1)
   - This results in an increased aerobic capacity / a greater oxygen carrying capacity in the body (1)
   - Allows the marathon runner to run faster for longer before fatigue sets in (1)

   Accept any other suitable explanation of how blood doping could improve the performance of a marathon runner.

4. **AO1 = 3**
   
   Award one for each of the following points up to a maximum of three marks.
   
   - Thickening of blood (increased viscosity) (1)
   - Potential for heart attacks / heart disease (1)
   - Potential risk of blood-borne diseases such as HIV and hepatitis (1)
   - A blockage of the blood vessel (embolism or stroke) (1)

   Accept any other possible side effect that an athlete may suffer as a result of blood doping.

   **NB** Do not accept responses relating to being banned / ruining reputation

   Max 3 marks
Award one for each of the following points up to a maximum of four marks.

• Reputation of the sport of athletics is damaged (1)
• Successful performers may be suspected of cheating giving the sport of athletics a negative image (1)
• Could lose income due to loss of sponsorship (1)
• Reduced numbers of spectators wanting to attend athletics events (1)
• Participation levels may fall as people think it is impossible to achieve without taking drugs or doping (1)
• The sport of athletics has to invest more and more money into drug testing, rather than helping elite or grass-roots athletes, therefore standards can drop (1)
• Loss of trust in results – results lose reliability (1)
• Need to re-visit previous scores / results / records and re-distribute titles and medals (1)
• ‘Honest’ athletes are tarred with the same brush and lose credibility (1)
• ‘Honest’ athletes lose opportunities through no doing of their own (1)

Accept any other suitable suggestions of the negative impact that Russia’s ban at the Olympics may have had on the sport of athletics.

Max 4 marks
<table>
<thead>
<tr>
<th>Level</th>
<th>Mark</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5-6</td>
<td>Knowledge of the strategies used to combat football hooliganism is accurate and generally well detailed. Application of the strategies is mostly clear and effective. Evaluation is thorough, reaching valid and well-reasoned conclusions to the effectiveness of the strategies. The answer is generally clear, coherent and focused, with appropriate use of terminology throughout.</td>
</tr>
<tr>
<td>2</td>
<td>3-4</td>
<td>Knowledge of the strategies used to combat football hooliganism is evident but more detailed for some strategies than others. There is some appropriate and effective application of the strategies although not always presented with clarity. Evaluation is clear but reaches valid and well-reasoned conclusions to the effectiveness of one strategy more than the others. The answer lacks coherence in places, although terminology is used appropriately on occasions.</td>
</tr>
<tr>
<td>1</td>
<td>1-2</td>
<td>Knowledge of the strategies used to combat football hooliganism is limited. Application of the strategies is either absent or inappropriate. Evaluation is poorly focused or absent with few or no reasoned conclusions. The answer as a whole lacks clarity and has inaccuracies. Terminology is either absent or inappropriately used.</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>No relevant content.</td>
</tr>
</tbody>
</table>

Possible content may include:

**AO1 – Knowledge of the strategies used to combat football hooliganism:**

- Travel restrictions / banning orders
- Alcohol restrictions
- All seater stadia
- Segregation of fans
- Early kick-offs
- Improved security
- Education/promotional activity / campaigns and high profile endorsements
- Sharing of intelligence between different police forces and different police forces in different countries
AO2 – Application of the strategies used to combat football hooliganism:

- Travel restrictions / banning orders – prevents known hooligans from attending / travelling to matches by reporting to police stations / handing in passports
- Alcohol restrictions – Alcohol is not allowed to be consumed whilst watching matches in stadiums and many stadiums do not sell alcohol, in an attempt to reduce disorderly behaviour. Police can also apply for pubs close to stadiums to not serve alcohol on match days.
- All seater stadia – reduces the ability of people to move within a stand and allows better control over ticket distribution, which stops troublemakers congregating together or actually attending matches
- Segregation of fans – travelling to the match and within grounds which means rival fans are kept apart reducing the chance of violence or disorder
- Early kick-offs – to prevent excessive alcohol consumption which may reduce disorderly behaviour
- Improved security – by increased levels of policing and stewarding and the introduction of CCTV at stadiums to identify troublemakers. Improved surveillance of known troublemakers who may behave if they know they’re being watched
- Education / promotional activity / campaigns and high profile endorsements – to appeal to spectators to behave such as ‘Kick Racism out of Football’ which attempted to lessen the influence of racist movements among football supporters.

AO3 – Evaluation of the strategies used to combat football hooliganism:

- Overall the strategies have significantly reduced the amount of violence at football matches compared to the 1970s and 1980s. It is a lot safer for people attending matches but this has come at a significant cost. However, football hooliganism still exists and troublemakers are always looking to get around restrictions
- (Travel restrictions / banning orders). This has reduced the number of hooligans travelling / attending matches but costs a lot of money and police time to create a list of known troublemakers, their location and their intentions. Banned troublemakers still risk attending matches as they have to be spotted for their banning order to be enforced
- (Alcohol restrictions / Early kick offs) Means loss of income for local pubs and many spectators drink elsewhere (home) which means that excessive consumption occurs earlier in the day which can lead to disorder later in the day
- (All-seater stadia) Significant cost to clubs who get promoted to higher divisions and groups of supporters can still sit / congregate in the same area. It is also possible for people to buy tickets for known hooligans so that the authorities are not aware of their attendance
- (Improved security / Segregation of fans) This has significantly reduced the amount of disorder within football stadiums but at a significant cost to clubs. The fear of being identified being involved in violence means hooligans are moving away from stadiums and looking to cause disorder with rival supporters in town centres / railway stations.

Credit other suitable responses relevant to the question.

Max 6 marks

[6]
[AO1 = 3]

Award one mark for each of the following points up to a maximum of three marks.

- Negative effect on performance of performer(s) / team(s) as a result of increased pressure from the spectators (1)
- Potential for crowd trouble / hooliganism / violence / unruly behaviour (1)
- Safety costs / concerns / policing / CCTV (1)
- Negative effect on participation numbers amongst younger performers who have been put off by crowd / spectator behaviour (1)
- Creation of a negative atmosphere (1)

Accept any other suitable outline of a possible negative effect of having spectators at a sporting event.

Max 3 marks

[AO1 = 1]

C

[AO1 = 1]

(a) Award one mark for each of the following points up to a maximum of one mark.

- Attempting to gain an advantage by stretching the rules to the limit (1)

Accept any other suitable definition of gamesmanship.

1

[AO2 = 2]

(b) Award one mark for each of the following points up to a maximum of two marks.

- Grunting in tennis to put an opponent off a shot (1)
- Pretending to be injured in football so that the ball is kicked out of play, thus stopping the momentum of the opposition (1)
- Calling a timeout in basketball to put off an opposition player before they take a free-throw / icing the shooter (1)
- Coming out to bat in cricket with two right handed gloves and then wasting time to sort out the problem (1)

Accept any other suitable example of gamesmanship. Examples must be related to named sporting activities.

2

[3]
[AO1 = 2]
Award up to one mark for each positive effect on the performer’s body and up to one mark for each possible negative side effect on the performer for each PED, up to a maximum of four marks.

<table>
<thead>
<tr>
<th>Performance enhancing drug</th>
<th>One positive effect on the performer’s body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anabolic agents</td>
<td>One mark for one of the following: • Increase muscle size / strength of muscle (1)</td>
</tr>
<tr>
<td></td>
<td>• Faster recovery from exercise (1)</td>
</tr>
<tr>
<td></td>
<td><strong>Maximum 1 mark</strong></td>
</tr>
<tr>
<td>Diuretics</td>
<td>One mark for one of the following: • Sodium / potassium salts excreted as well (1)</td>
</tr>
<tr>
<td></td>
<td>• Muscle weakness (1)</td>
</tr>
<tr>
<td></td>
<td>• Heart damage (1)</td>
</tr>
<tr>
<td></td>
<td><strong>Maximum 1 mark</strong></td>
</tr>
</tbody>
</table>

[2]

[AO1 = 2]
Award one mark for each of the following points up to a maximum of two marks.

- Increased chances of success (1)
- Fame (1)
- Wealth (1)
- Level playing field (1)

Accept any other suitable reason why a performer may risk taking a performance enhancing drug. Answers must refer to non-physiological reasons.

[2]
Award one mark for each of the following points up to a maximum of two marks.

- To reduce heart rate / muscle tension / blood pressure, e.g. more relaxed on the tee in golf (1)
- To reduce the effects of adrenaline, e.g. greater control over shot distances in golf (1)
- To improve fine control/preciseness, e.g. will assist putting/chipping in golf (1)

Accept any other suitable suggestions of why a performer may use beta blockers. The suggestion must be linked to a suitable sporting activity.