4.4 Sport Psychology: Arousal and the Inverted-U Theory: Test Pack

Total Marks

AQA 8582 · Calculators not allowed · about 15 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Arousal describes a performer's level of physical and mental readiness or excitement to perform.

- ☐ A) Arousal always improves performance the higher it gets
- ☐ B) Arousal always harms performance the higher it gets
- ☐ C) Performance is generally best at a moderate, optimal level of arousal, not at the extremes
- ☐ D) Arousal has no effect on sporting performance

(Total for Question 1 is 1 mark)

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2 A hockey goalkeeper facing a penalty flick reports feeling 'a racing heart, sweaty palms and difficulty focusing on the ball'. State whether these are signs of over-arousal or under-arousal, and give one reason for your answer.

(Total for Question 2 is 2 marks)

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3 A swimmer's coach notices that in training the swimmer performs their best 100 m times when they appear 'calm but focused', rather than either very relaxed or very excited. State what this observation suggests about the swimmer's optimal level of arousal for this event.

(Total for Question 3 is 1 mark)

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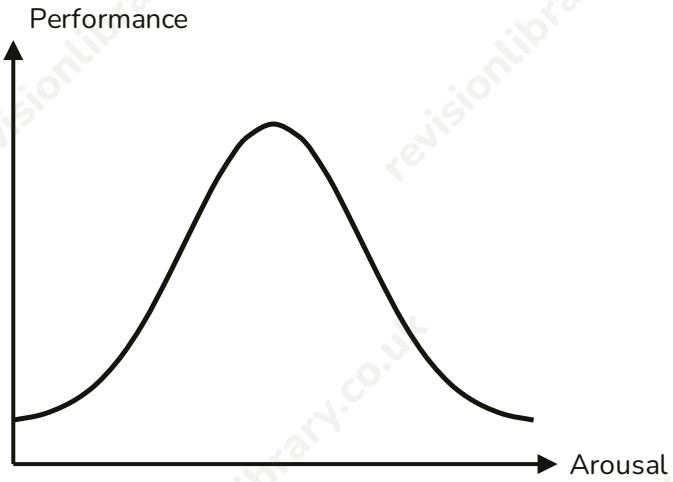
4 State two symptoms a performer might show when their arousal is too high (over-aroused).

(Total for Question 4 is 2 marks)

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5

Diagram NOT accurately drawn



Describe, in words, the shape of the graph produced when performance is plotted against arousal according to the inverted-U theory.

(Total for Question 5 is 2 marks)

6 A gymnast is learning a new balance sequence on the beam, while an experienced sprinter is practising a simple explosive start they have performed many times. Compare their likely optimal levels of arousal, and explain the reason for the difference.

(Total for Question 6 is 3 marks)

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7 Explain one similarity and one difference between controlled breathing and mental rehearsal as techniques used to lower arousal before performance.

(Total for Question 7 is 2 marks)

8 Explain one way a coach could help an over-aroused performer bring their arousal level down closer to their optimum before a competition.

(Total for Question 8 is 2 marks)

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Mark scheme · 4.4 Sport Psychology: Arousal and the Inverted-U Theory: Test Pack

Question 1

C **B1**

Answer: C

Question 2

over-arousal **B1**

because a racing heart, sweating and an inability to focus on the relevant cue (the ball) are typical physical/mental symptoms of arousal being too high, oe **B1**

Answer: These are signs of over-arousal, because a racing heart, sweating and difficulty focusing on the ball are typical symptoms of arousal being too high for the task.

Question 3

the swimmer's optimal arousal for this event is at a moderate level, not too low or too high, oe **B1**

Answer: It suggests the swimmer's optimal level of arousal for the 100 m event is moderate, rather than very low or very high.

Question 4

any one of: increased muscle tension, narrowed/panicked attention, poor decision making, rushed technique, increased heart rate/sweating, oe **B1**

a second, distinct symptom from the list above, oe **B1**

Answer: For example, increased muscle tension and rushed, panicked decision making.

Question 5

performance starts low at low arousal and rises as arousal increases, oe **B1**

performance peaks at a moderate/optimal level of arousal, then falls again as arousal increases further, forming an upside-down U (inverted-U) shape, oe **B1**

Answer: Performance starts low at low arousal, rises as arousal increases, peaks at a moderate, optimal level of arousal, and then falls again as arousal increases further, forming an upside-down U shape.

Question 6

the gymnast is likely to need a lower optimal level of arousal than the sprinter, oe **B1**

because a new/complex balance sequence needs controlled concentration and precise movement, and high arousal could disrupt balance/timing, oe **B1**

whereas a simple, well-learned sprint start is explosive/gross and can benefit from a higher level of arousal, oe **B1**

Answer: The gymnast is likely to need a lower optimal level of arousal because the new balance sequence is complex and precise, so over-arousal could disrupt concentration and balance. The experienced sprinter's simple explosive start can benefit from a higher level of arousal.

Question 7

similarity, e.g. both can help the performer focus attention and reduce anxiety/over-arousal before performing, oe **B1**

difference, e.g. controlled breathing mainly lowers physical symptoms such as breathing rate/heart rate, whereas mental rehearsal uses imagery of a successful performance to improve confidence/focus, oe **B1**

Answer: Similarity: both can help the performer focus and reduce over-arousal before performing. Difference: controlled breathing mainly lowers physical symptoms such as breathing rate, while mental rehearsal uses imagery of successful performance to improve confidence and focus.

Question 8

a valid technique, e.g. deep/controlled breathing, progressive muscular relaxation, or positive self-talk, oe **B1**

linked explanation of how it lowers arousal, e.g. slow breathing reduces heart rate and eases muscle tension, oe **B1**

Answer: For example, controlled deep breathing, which slows the heart rate and eases muscle tension, helping bring an over-aroused performer's arousal level back down towards their optimum.

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