3.8 Evaluating Fitness Test Results: Reliability, Validity and Normative Data: 10-minute Pack

AQA 8582 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 In the context of fitness testing, tick one box to identify the term meaning that a test's scoring is free from the personal opinion or bias of the person carrying it out.

- ☐ A) Reliability
- ☐ B) Validity
- ☐ C) Objectivity
- ☐ D) Practicality

(Total for Question 1 is 1 mark)

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2 State the meaning of 'qualitative data' as it applies to fitness testing, giving one example of a qualitative observation a coach might record.

(Total for Question 2 is 1 mark)

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3 Table B shows normative bands for female aged 17. Use Table B to rate two scores: a 30 m sprint time of 5.20 seconds and a sit-and-reach score of 33 cm.

Table B, female age 17 normative bands
30 m sprint time: Excellent ≤ 4.80 s, Good 4.81-5.10 s, Average 5.11-5.40 s, Below average > 5.40 s
Sit-and-reach flexibility: Excellent ≥ 36 cm, Good 31-35 cm, Average 26-30 cm, Below average < 26 cm

(a) For the 30 m sprint time of 5.20 seconds, state the rating from Table B for a female aged 17. **(1)**

(b) For the sit-and-reach score of 33 cm, state the rating from Table B for a female aged 17. **(1)**

(Total for Question 3 is 2 marks)

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4 State one practical consideration a PE teacher must take into account when choosing a fitness test to use with a whole year group.

(Total for Question 4 is 1 mark)

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5 Explain why comparing an athlete's fitness test score against age- and gender-specific normative data gives a more valid interpretation than comparing it against data for the whole population.

(Total for Question 5 is 3 marks)

6 A PE department is testing the muscular endurance of a whole Year 10 class using the one-minute sit-up test. Explain two ways the department could improve both the reliability and the practicality of this testing session.

(Total for Question 6 is 4 marks)

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Mark scheme · 3.8 Evaluating Fitness Test Results: Reliability, Validity and Normative Data: 10-minute Pack

Question 1

C **B1**

Answer: C (Objectivity)

Question 2

descriptive, non-numerical data based on opinion or observation, e.g. a coach's comment on technique, oe **B1**

Answer: Qualitative data is descriptive, non-numerical data, for example a coach's written comment on an athlete's running technique.

Question 3

(a) Average **B1**

(a) Answer: Average

(b) Good **B1**

(b) Answer: Good

Question 4

examples such as: available space/time, number of pupils, required equipment, safety, or the need for qualified supervision, oe **B1**

Answer: For example, available time and space to test the whole year group is a key practical consideration.

Question 5

physical capacities such as strength, speed and flexibility differ with age and between genders, oe **B1**

comparing against the whole population mixes these different groups together, giving a misleading rating, oe **B1**

applied example, e.g. a 12 year old girl's sprint time compared only against other 12 year old girls gives a fair rating, whereas comparing her against adult male data would rate her unfairly low, oe **B1**

Answer: Because strength, speed and flexibility differ by age and gender, comparing against the whole population mixes unlike groups together. Rating a 12 year old girl's sprint time against only other 12 year old girls is fair; comparing it against adult male data would rate her unfairly low.

Question 6

way one stated, e.g. pair pupils to hold feet and count for each other under one set of shouted instructions, oe **B1**

development of way one: this keeps timing and counting consistent across the class (reliability) while testing many pupils in one lesson (practicality), oe **B1**

way two stated, e.g. use a single member of staff to read out the standardised instructions and start/stop times for every group, oe **B1**

development of way two: one set of instructions removes variation between groups (reliability) and needs no extra staff or equipment (practicality), oe **B1**

Answer: Pairing pupils to hold feet and count for each other under one set of shouted instructions keeps counting consistent (reliability) while testing many pupils in one lesson (practicality). Using a single staff member to give the standardised start/stop instructions to every group removes variation between groups (reliability) without needing extra staff (practicality).

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