Mark Scheme

May 2016

BTEC Level 1/Level 2 Firsts in Sport

Unit 1: Fitness for Sport and Exercise (20586_E06)

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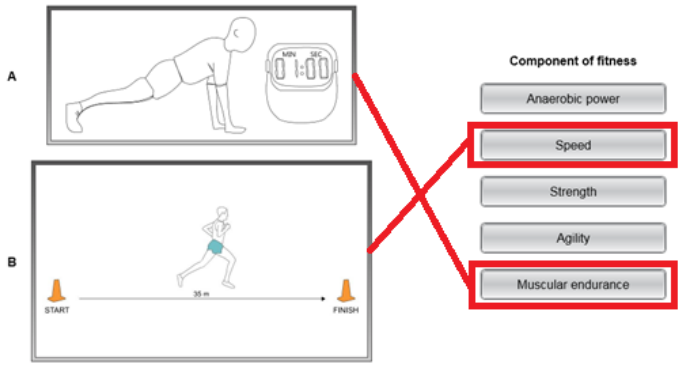
General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgment is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Accept phonetic spelling

Question Number	Answer	Mark
1	Specificity	**(1)**

Question Number	Answer	Mark
2(a)	Bioelectrical Impedance Analysis (BIA)	**(1)**
2(b)	Chest	**(1)**

Question Number	Answer	Mark
3	Picture A – muscular endurance Picture B – speed  1 mark for **each** correct answer.	**(2)**

Question Number	Answer	Mark
4	Male – Overweight (21-24) Female – Good (16-23) 1 mark for **each** correct answer.	**(2)**

Question Number	Answer		Mark
5	**Answer**	**Definition**	**(2)**
	Sit and reach test	is usually measured in cm.	
	Body Mass Index	is usually measured in kg/m^2.	
	1 mark for **each** correct answer.		

Question Number	Answer	Mark
6(a)	Award 1 mark for any of the following terms: Muscular strength Strength Maximum Strength **Do not accept endurance.**	**(1)**
6(b)	Award 1 mark for any of the following terms: Aerobic endurance/fitness Cardiorespiratory fitness/endurance Cardiovascular fitness/endurance CV fitness/endurance **Do not accept stamina** **Accept any other appropriate phonetic spelling**	(1)

Question Number	Answer	Mark
7(a)	Agility	**(1)**
7(b)	Flexibility	**(1)**
7(c)	Speed	**(1)**
7(d)	Coordination	**(1)**

Question Number	Answer	Mark
8(a)	Frequency	**(1)**
8(b)	Variation	**(1)**

Question Number	Answer	Mark
9	Static Dynamic 1 mark for **each** correct answer.	**(2)**

Question Number	Answer	Mark
10(a)	190 bpm	**(1)**
10(b)	75%	**(1)**

Question Number	Answer	Mark
11	Award 1 mark for correct explanation of the purpose of the informed consent form and an additional mark for application of its use in the multi-stage fitness test. **Informed consent form** An informed consent form makes participants aware of the test risks/ that they can withdraw from the test at any point/ legal implications (1). This is important for the multi-stage fitness test because it is a maximal test/ it may over exert participants (1). **Do not accept 'agree' as an answer unless linked to legal reference.** **Accept any other appropriate response**	**(2)**
	Award 1 mark for correct explanation of the purpose of calibration of equipment and an additional mark for application of its use in the multi-stage fitness test. **Calibration of equipment** This is carried out before testing to make sure the equipment is able to measure accurately/ the test is reliable (1). This is important to ensure reliable recordings of VO2 max are taken/ use a stopwatch to ensure correct timing of the beeps (bleeps) (1). **OR** Reliable (1) VO2 max scores (1). **Do not accept responses that only refer to set up of the test (e.g. distance between cones)**	**(2)**

Question Number	Answer	Mark
12	Proprioceptive Neuromuscular Facilitation (PNF)	**(1)**

Question Number	Answer	Mark
13	Award 1 mark for correct explanation of advantage/disadvantage, and an additional mark for application of advantage/disadvantage to assessing anaerobic power of a high jumper. Award up to 2 marks for responses related to one advantage. Award up to 2 marks for responses related to one disadvantage. Maximum of 4 marks for this question. **Advantages:** One advantage of using the vertical jump test is that it is a valid test/relevant to high jump/measures (anaerobic) power in the legs (1) which replicates the high jump action/uses the same muscle groups (1). **Disadvantages:** The vertical jump test has a two-footed take-off but the high jump has a one-footed take-off (1) therefore the results obtained may not represent their true anaerobic power (1). One disadvantage of using the vertical jump test is that the performer's jumping technique/how much the performer bends her knees can affect the score /the use of her arms can significantly affect the results (1) therefore if the performer has not practiced their test readings will not reflect their true anaerobic power (1). **Accept any other appropriate response**	**(4)**

Question Number	Answer	Mark
14	Award 1 mark for identifying the piece of equipment used and 1 mark for explaining how it is used in carrying out the test to a maximum of 4 marks. A metronome/CD is used (1) so that the participant steps at the correct rate (1). Different height bench for boys and girls (1) is used for stepping for 5 minutes (1). A stopwatch (1) is used to take a pulse reading after stepping/to time the(5 minute)test period (1). Heart rate monitor (1) to record heart rate after the stepping period has stopped (1). **Accept any other appropriate response**	**(4)**

Question Number	Answer	Mark
15	Award 1 mark for each correct explanation of a disadvantage of the skinfold test and of BIA, and an additional mark for each appropriate application to testing body composition, to a total of 4 marks. The skinfold may include muscle as well as fat (1) which makes it difficult to ensure consistency of results/avoid inaccuracy (1) The test measures only subcutaneous body fat (fat under the skin) / but does not take into account internal body fat (1) which affects the accuracy of the results (1). A disadvantage of BIA is that it relies on a person being fully hydrated (1) because if not, the body fat percentage would be overestimated/inaccurate (1). Other factors related to hydration levels such as consumption of alcoholic drinks pre-test, females' menstrual cycle and excessive exercise can be given credit in relation to BIA. **Do not accept reference to inaccuracy of test without rationale**	**(4)**

Question Number	Answer	Mark
16	Weighing scales Tape measure	**(2)**

Question Number	Answer	Mark
17	Award 1 mark for explanation of how plyometrics improves explosive power, and an additional mark for associated benefit specific to performing volleyball. Plyometrics involves lengthening then immediately contracting the muscle (1) this improves power which enables the volleyball player to be able to jump high enough to perform smashes or blocks (1). **Accept any other appropriate response**	**(2)**

Question Number	Indicative content
18	Responses may include the following. Flexibility: The fitness training methods are static active or passive, both of these will help to improve flexibility. • PNF stretching usually increases flexibility at a faster rate so may be the better form of stretching in comparison to static stretching. • Ballistic stretching could be used however it can cause muscle strain especially if a person is not very flexible. • Circuit training with appropriate stations to train flexibility can be accepted Increased flexibility will help to improve the ability to stretch out with the legs and lunge forward in the long jump and use the full range of movement of the shoulder joint to help to propel him through the air when jumping and reduce the risk of getting muscle strains when making these movements. Speed: The sprint test result is average but it could be in a higher category of elite as speed is important. To train for speed he could take part in: • Hollow sprints - involve the individual taking part in a series of sprints separated by a 'hollow' period where he jogs or walks which acts as a **recovery period.** This is done so that every sprint is performed at the same very high intensity which improves speed from a standing start. • Acceleration sprints are where a person has a slow moving start then gradually increases his stride and speed so that he sprints with rest periods of jogging or walking between each sprint. This is done to increase speed when it is required from a moving start. • Accelaration sprints with resistance or hill sprints can also be accepted as a viable training method. • Circuit training with appropriate stations to train speed can be accepted

	• Interval training can also be carried out which involves sprints followed by a rest period, which allows him to train at very high intensity. In the long jump having a fast sprint speed on the run up to the long jump to the take-off point will help him to travel further through the air so that he can jump further. Anaerobic power: • Plyometrics training helps to develop explosive power but has to be carried out carefully as it can result in muscle strains or soreness. • Circuit training with appropriate stations to train anaerobic power can be accepted Increased anaerobic power will help to improve the height gained at take-off which will enable Mark to travel further and complete a longer jump.
Level	Descriptor
0 0 marks	No rewardable material
1 1-3 marks	A few key points identified, **or** one point described in some detail. The answer is likely to be in the form of a list. Only one viewpoint considered. Points made will be superficial/generic and not applied/directly linked to the situation in the question.
2 4-6 marks	Some points identified, **or** a few key points described. Consideration of more than one viewpoint but there will be more emphasis on one of them. The answer is unbalanced. Most points made will be relevant to the situation in the question, but the link will not always be clear.
3 7-8 marks	Range of points described, **or** a few key points explained in depth. All sides of the case are considered and the answer is well-balanced, giving weight to all viewpoints. The majority of points made will be relevant and there will be a clear link to the situation in the question.