

| Number | Question  | Answer  | Topic                               |
|--------|---|---|-------------------------------------|
| 1      | What are the components of physical fitness?              | Aerobic endurance, muscular endurance, flexibility, speed, muscular strength, body composition  | Components of Physical Fitness      |
| 2      | Define aerobic endurance                                  | The ability of the cardiorespiratory system to work efficiently supplying nutrients and oxygen to working muscles   | Components of Physical Fitness      |
| 3      | Define muscular endurance                                 | The ability of the muscular system to work efficiently where a muscle can continue contracting over a period of time  | Components of Physical Fitness      |
| 4      | Define flexibility  | An adequate range of motion in all joints of the body   | Components of Physical Fitness      |
| 5      | Define speed  | Distance divided by the time taken  | Components of Physical Fitness      |
| 6      | Define muscular strength                                  | The maximum force (in KG or N) that can be generated by a muscle or muscle group  | Components of Physical Fitness      |
| 7      | Define body composition                                   | The relative ratio of fat mass to fat free mass   | Components of Physical Fitness      |
| 8      | What are the components of skill related fitness?         | Agility, balance, co-ordination, power, reaction time   | Components of Skill Related Fitness |
| 9      | Define agility  | The ability of the sports performer to quickly and precisely change direction   | Components of Skill Related Fitness |
| 10     | Define balance  | The ability to maintain centre of mass over a base of support (static balance and dynamic balance)  | Components of Skill Related Fitness |
| 11     | Define co-ordination                                      | The smooth flow of movement needed to perform a motor task efficiently and accurately   | Components of Skill Related Fitness |
| 12     | Define power  | The product of strength and speed   | Components of Skill Related Fitness |
| 13     | Define reaction time                                      | The time taken for a sports performer to respond to a stimulus  | Components of Skill Related Fitness |
| 14     | Which components of fitness would a gymnast need?         | Speed, flexibility, agility, power  | Fitness Components                  |
| 15     | Which components of fitness would a football GK need?     | Agility, co-ordination, reaction time, Muscular endurance, Power  | Fitness Components                  |
| 16     | Which components of fitness would a marathon runner need? | Muscular endurance, cardiovascular endurance, speed   | Fitness Components                  |
| 17     | Why would a swimmer require agility?                      | When the swimmer approaches the end of the pool they will need to perform a tumble turn in order to change direction quickly and continue in the race.                      | Fitness Components                  |
| 18     | Why would a sprinter require good reaction time?          | The stimulus is the starting gun, as the sprinter hears this they need to respond and move away from the blocks.  | Fitness Components                  |
| 19     | Why would a midfield player require different             | Each position requires players to carry out a range of roles, e.g. a midfield player would be expected to attack and defend and thus require a good level of cardiovascular | Fitness Components                  |

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|    | fitness components to a goalkeeper?   | endurance whilst a goalkeeper will not use this component of fitness but would need to be agile to move in order to save the ball.   |                        |
| 20 | How do the components of fitness enable a performer to carry out their role?                                  | It will enable the performer to carry out their sport specific skills to the best of their ability for example; a rugby player would be able to consistently pass accurately due to the good levels of muscular endurance in his/her arms. | Fitness Components     |
| 21 | How do you calculate MHR?   | 220 – age  | Exercise Intensity     |
| 22 | What is the recommended training zone for improving cardiovascular health and fitness?                        | 60-85% of an individual's MHR e.g. 220 – age = 205<br><br>205 ÷ 100 x 75 = 153.75  | Exercise Intensity     |
| 23 | What other method apart from HR can be used to measure exercise intensity?                                    | Borg Rate of Perceived Exertion Scale  | Exercise Intensity     |
| 24 | What is the relationship between RPE and heart rate?  | RPE x 10 = HR (bpm)  | Exercise Intensity     |
| 25 | Identify the three training zones.  | Speed zone, anaerobic zone and aerobic zone  | Exercise Intensity     |
| 26 | What is the HR of someone working in the aerobic zone? Give examples of training types you would find here.   | 60% - 85% of MHR<br>Flexibility e.g. static, active and passive. Endurance training e.g. continuous, fartlek and interval  | Exercise Intensity     |
| 27 | What is the HR of someone working in the anaerobic zone? Give examples of training types you would find here. | 85% - 95% of MHR<br>Flexibility e.g. ballistic, Speed endurance e.g. interval and strength and power e.g. circuit training and free weights  | Exercise intensity     |
| 28 | What is the HR of someone working in the speed zone? Give examples of training types you would find here.     | 95% - 100% of MHR<br>Speed (hollow sprint & acceleration sprint) strength and power (plyometrics)  | Exercise intensity     |
| 29 | What do the letters FITT represent?   | Frequency, Intensity, Time, Type   | Principles of Training |
| 30 | What is frequency?  | The number of training sessions completed over a period of time e.g. a week  | Principles of Training |
| 31 | What is intensity?  | How hard an individual will train  | Principles of Training |
| 32 | What is time?   | How long an individual will train for.   | Principles of Training |
| 33 | What is type?   | How an individual will train by selecting a training method to improve a specific component of fitness e.g. continuous training = cardiovascular endurance   | Principles of Training |

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| 34 | What is progressive overload?   | In order to progress training needs to be demanding enough to cause the body to change   | Additional Principles of Training |
| 35 | What is specificity?  | Training should be specific to the individuals needs e.g. sport/activity   | Additional Principles of Training |
| 36 | What is meant by individual needs?  | The programme is designed to meet individual training goals and needs  | Additional Principles of Training |
| 37 | What is adaptation?   | How the body reacts to training loads by increasing its ability to cope with these demands   | Additional Principles of Training |
| 38 | What is meant by reversibility?   | If training stops or the training is not demanding enough to cause adaptation training effects are reversed  | Additional Principles of Training |
| 39 | Why is it important to vary your training?                                | To avoid boredom and maintain enjoyment  | Additional Principles of Training |
| 40 | Why is rest and recovery required?  | So that the body can recover from the training and allow adaptation to occur   | Additional Principles of Training |
| 41 | Why should you complete a warm up and cool down?                          | Raise the heart rate/bring the heart rate back to normal<br>Elasticate the muscles, loosen the joints, increase blood flow<br>Begin the removal of lactic acid build up,   | Training Methods                  |
| 42 | What are the three fitness training methods for flexibility?              | Static, ballistic, proprioceptive neuromuscular facilitation (PNF)   | Training Methods                  |
| 43 | What are the two types of static stretching?<br>How do you conduct each?  | Active stretching and passive stretching<br>Active – independently where you apply internal force to lengthen the muscle<br>Passive – use another person or object (wall). They apply external force causing muscle to stretch | Training Methods                  |
| 44 | What is ballistic stretching?   | The performer makes fast, jerky movements through a range of motion. Specific to the movement pattern of the sport. Useful in gymnastics.  | Training Methods                  |
| 45 | What is PNF stretching?   | Used to develop mobility, strength and flexibility<br>Performed with help of a partner<br>Used in rehabilitation programmes<br>Use a partner to stretch muscle to it's limit and hold (isometric)                              |                                   |
| 46 | What are the training methods for strength, power and muscular endurance? | Circuit training, free weights, plyometrics  |                                   |
| 47 | Describe circuit training   | Where different stations/exercises are used to develop strength, muscular endurance and power. Vary the muscle groups to avoid fatigue   | Training Methods                  |
| 48 | How do you train for strength?  | Low reps and high weight   |                                   |
| 49 | How do you train for muscular endurance?                                  | High reps and low weight   | Training Methods                  |

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| 50 | Why should you always train using core exercises?                 | To stabilise the spine and pelvis by strengthening the muscles which surround them  | Training Methods |
| 51 | What are assistance exercises?                                    | Those that work the muscles associated with the performers particular sport or activity   | Training Methods |
| 52 | What must you consider when planning a weight training programme? | Alternate between upper and lower body and alternate push and pull movements  | Training Methods |
| 53 | How do you measure intensity when weight training?                | 1 repetition maximum (1RM)  | Training Methods |
| 54 | How do you train for strength endurance?                          | 50%-60% of 1RM, 20 reps, repetitive movements e.g. golf swing   | Training Methods |
| 55 | How do you train for elastic strength?                            | 75% 1RM, 12 reps, movements in close succession e.g. trampolining   | Training Methods |
| 56 | How do you train for maximum strength?                            | 90% 1RM, 6 reps, single movement e.g. shot put  | Training Methods |
| 57 | What is plyometrics training?                                     | Develops explosive power and strength. Used by performers such as basketball, volleyball, tennis players. Includes the muscles getting longer (eccentric) and shorter (concentric)<br>Exercises include; hopping, jumping, bounding, skipping | Training Methods |
| 58 | How do you train for aerobic endurance?                           | Continuous, fartlek, interval, circuit  | Training Methods |
| 59 | What is continuous training?                                      | Training at a steady pace and moderate intensity for 30 minutes or over e.g. cycling, jogging, rowing, swimming   | Training Methods |
| 60 | What is fartlek training?   | Intensity of training changes, run at different speeds with no rest periods   | Training Methods |
| 61 | How else can you increase the intensity of fartlek training?      | Use a harness or weighted backpack, ankle weights   | Training Methods |
| 62 | What is interval training?  | Work followed by rest period. Work period between 30 seconds and 5 minutes. Rest is either slow walking or complete rest.   | Training Methods |
| 63 | What is circuit training?   | Must be tailored to ensure activities develop aerobic endurance, consider time and order and rest period  | Training Methods |
| 64 | Which methods are used to improve speed?                          | Hollow sprints, acceleration sprints, interval training   | Training Methods |
| 65 | What are hollow sprints?  | Sprints which are followed by a period of jogging or walking  | Training Methods |
| 66 | What are acceleration sprints?                                    | Pace is gradually increased from a standing start to jogging then striding then a maximum sprint  | Training Methods |
| 67 | How could increase the difficulty or intensity of speed training? | Hill sprints, weighted equipment  | Training Methods |
| 68 | What is interval training?  | Work intervals shorter and performed at a high intensity  | Training Methods |
| 69 | How do you test for flexibility?                                  | Sit and reach test (measured in cm or inches)   | Fitness Tests    |
| 70 | How do you test for strength?                                     | Hand grip dynamometer (measured in kgw)   | Fitness Tests    |

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| 71 | How do you test for speed?   | 30 metre sprint (measured in seconds)   | Fitness Tests |
| 72 | How do you test for agility?   | Illinois agility run (measured in seconds)  | Fitness Tests |
| 73 | How do you test for anaerobic power?   | Vertical jump test (measured in kgm/s)  | Fitness Tests |
| 74 | How do you test for muscular endurance?  | One minute press up, one minute sit up (measured in reps)   | Fitness Tests |
| 75 | How do you test for body composition?  | Body Mass Index<br>Bioelectrical impedance analysis<br>Skinfold testing via Jackson Pollock   | Fitness Tests |
| 76 | How do you test for aerobic endurance?   | Multi stage fitness test (measured in ml/kg/min)<br>Forestry step test  | Fitness Tests |
| 77 | Why are fitness tests important to sports performers and coaches?  | Gives baseline data for monitoring performance<br>Can design training programmes based on results<br>Can give performer a goal or objective | Fitness Tests |
| 78 | What should you do before conducting a test?   | Informed consent form<br>Check and ensure equipment is fit for purpose  | Fitness Tests |
| 79 | What should you collect before the test?   | Equipment and resources, standard test results for comparison, published methods on how to conduct each test                                | Fitness Tests |
| 80 | What should you explain to a client before conducting the test?  | The purpose of the test and what it measures  | Fitness Tests |
| 81 | Why is it essential to ensure measuring equipment is reliable and other people know what they are doing? | To ensure the measurements are accurate and the recording of test results is valid/reliable   | Fitness Tests |
| 82 | Why do we also collect published data of previous test results?  | To make comparison between elite performers and individuals   | Fitness Tests |
| 83 | What are the terms you must consider when setting up a fitness test?                                     | Validity<br>Reliability<br>Practicality   | Fitness Tests |
| 84 | What are the advantages and disadvantages of each test?  | Consider; space, equipment, accuracy, number of people who can be tested at once, cost  | Fitness Tests |
| 85 | Who can we make comparisons to once test data has been collected?  | Peers<br>Published historical data<br>Elite athletes  | Fitness Tests |
| 86 | What should a fitness instructor be able to do once test results have been collated?                     | They should be able to draw conclusions from the test results to determine the next course of action for their client                       | Fitness Tests |

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| 87 | What aspects of safety should you consider when completing fitness tests or training methods?      | Safe use of equipment<br>Technique<br>Warm up/cool down<br>Training principles e.g. FITT  | Fitness Tests |
| 88 | Give two pieces of equipment used to carry out the multi stage fitness test?                       | Audio equipment<br>Cones  | Past Exam Qs  |
| 89 | Name one performer who would use the multi stage fitness test?                                     | 1500 metre runner/marathon runner/football player (midfield)  | Past Exam Qs  |
| 90 | Identify the training zone someone would use who wants to improve their cardiovascular endurance?  | 60%-85%   | Past Exam Qs  |
| 91 | Identify how MHR is calculated   | 220 – age   | Past Exam Qs  |
| 92 | Give one other way which exercise intensity can be calculated?                                     | Borg Scale (RPE) Grade 6 to 20  | Past Exam Qs  |
| 93 | Complete the sentence;<br>?????<br>is a measure of a person's maximum amount of oxygen uptake      | VO2 max   | Past Exam Qs  |
| 94 | Complete the sentence;<br>?????<br>Is used for the prediction of a person's percentage of body fat | Bioelectrical Impedance Analysis (BIA)  | Past Exam Qs  |
| 95 | Identify one part of the body where the skinfold caliper is used to take measurements?             | Thigh   | Past Exam Qs  |
| 96 | What does I stand for in the FITT principle?   | Intensity   | Past Exam Qs  |
| 97 | Explain why power is important for a sprinter in a 100 metre race                                  | Power will enable the sprinter to push off/generate maximum force from the blocks (1 mark) so that they start the race at the fastest possible pace/can get a good start (1 mark) | Past Exam Qs  |

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| 98  | Describe one safety requirement when performing a bicep curl using free weights              | Making sure you use the right weight/a weight that is not too heavy. This will lead to poor technique (1) to prevent injury (1)                                 | Past Exam Qs |
| 99  | Explain why the BMI test can often provide inaccurate information                            | BMI test does not differentiate between muscle and body fat (1) therefore a person with a lot of muscle will weigh more (and would be categorised as obese) (1) | Past Exam Qs |
| 100 | Parents/carers – choose a topic from the end column e.g. fitness tests/components of fitness | Students – talk to your parents about that area for x 3 minutes<br>Repeat using a series of topics  | Past Exam Qs |