

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	Name the three types of speed	Accelerative (up to 30 metres), pure speed (up to 60 metres) and speed endurance (sprints with recovery)	Components of Physical Fitness
7	Define muscular strength	The maximum force (in KG or N) that can be generated by a muscle or muscle group	Components of Physical Fitness
8	Define body composition	The relative ratio of fat mass to fat free mass	Components of Physical Fitness
9	What are the components of skill related fitness?	Agility, balance, co-ordination, power, reaction time	Components of Skill Related Fitness
10	Define agility	The ability of the sports performer to quickly and precisely change direction	Components of Skill Related Fitness
11	Define balance	The ability to maintain centre of mass over a base of support (static balance and dynamic balance)	Components of Skill Related Fitness
12	Define co-ordination	The smooth flow of movement needed to perform a motor task efficiently and accurately	Components of Skill Related Fitness
13	Define power	The product of strength and speed	Components of Skill Related Fitness
14	Define reaction time	The time taken for a sports performer to respond to a stimulus	Components of Skill Related Fitness
15	Which components of fitness would a gymnast need?	Speed, flexibility, agility, power	Fitness Components
16	Which components of fitness would a football GK need?	Agility, co-ordination, reaction time, Muscular endurance, Power	Fitness Components
17	Which components of fitness would a marathon runner need?	Muscular endurance, cardiovascular endurance, speed	Fitness Components
18	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
19	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

20	Why would a midfielder player require different fitness components to a goalkeeper?	Each position requires players to carry out a range of jobs, e.g. a midfielder player would be expected to attack and defend and thus require a good level of cardiovascular 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.	Fitness Components
21	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
22	How do you calculate MHR?	$220 - \text{age}$	Exercise Intensity
23	What is the recommended training zone for improving cardiovascular health and fitness?	60-85% of an individual's MHR e.g. $220 - \text{age} = 205$ $205 \div 100 \times 75 = 153.75$	Exercise Intensity
24	What other method apart from HR can be used to measure exercise intensity?	Borg Rate of Perceived Exertion Scale	Exercise Intensity
25	What is the relationship between RPE and heart rate?	$\text{RPE} \times 10 = \text{HR (bpm)}$	Exercise Intensity
26	Identify the three training zone.	Speed zone, anaerobic zone and aerobic zone	Exercise Intensity
27	What is the HR of someone working in the aerobic zone? Give examples of training types you would find here.	60% - 85% of MHR Flexibility e.g. static, active and passive. Endurance training e.g. continuous, fartlek and interval	Exercise Intensity
28	What is the HR of someone working in the anaerobic zone? Give examples of training types you would find here.	85% - 95% of MHR Flexibility e.g. ballistic, Speed endurance e.g. interval and strength and power e.g. circuit training and free weights	Exercise intensity
29	What is the HR of someone working in the speed zone? Give examples of training types you would find here.	95% - 100% of MHR Speed (hollow sprint & acceleration sprint) strength and power (plyometrics)	Exercise intensity
30	What do the letters FITT represent?	Frequency, Intensity, Time, Type	Principles of Training
31	What is frequency?	The number of training sessions completed over a period of time e.g. a week	Principles of Training
32	What is intensity?	How hard an individual will train	Principles of Training
33	What is time?	How long an individual will train for.	Principles of Training

34	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
35	What is progressive overload?	In order to progress training needs to be demanding enough to cause the body to change	Additional Principles of Training
36	What is specificity?	Training should be specific to the individuals needs e.g. sport/activity	Additional Principles of Training
37	What is meant by individual needs?	The programme is designed to meet individual training goals and needs	Additional Principles of Training
38	What is adaptation?	How the body reacts to training loads by increasing its ability to cope with these demands	Additional Principles of Training
39	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
40	Why is it important to vary your training?	To avoid boredom and maintain enjoyment	Additional Principles of Training
41	Why is rest and recovery required?	So that the body can recover from the training and allow adaptation to occur	Additional Principles of Training
42	Why should you complete a warm up and cool down?	Raise the heart rate/bring the heart rate back to normal Elasticate the muscles, loosen the joints, increase blood flow Begin the removal of lactic acid build up,	Training Methods
43	What are the three fitness training methods for flexibility?	Static, ballistic, proprioceptive neuromuscular facilitation (PNF)	Training Methods
44	What are the two types of static stretching? How do you conduct each?	Active stretching and passive stretching Active – independently where you apply internal force to lengthen the muscle Passive – use another person or object (wall). They apply external force causing muscle to stretch	Training Methods
45	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
46	What is PNF stretching?	Used to develop mobility, strength and flexibility Performed with help of a partner Used in rehabilitation programmes Use a partner to stretch muscle to it's limit and hold (isometric)	
	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
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) 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
71	How do you test for speed?	35 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 Bioelectrical impedance analysis Skinfold testing via Jackson Pollock	Fitness Tests
76	How do you test for aerobic endurance?	Multi stage fitness test (measured in ml/kg/min) Forestry step test	Fitness Tests
77	Why are fitness tests important to sports performers and coaches?	Gives baseline data for monitoring performance Can design training programmes based on results Can give performer a goal or objective	Fitness Tests
78	What should you do before conducting a test?	Informed consent form 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 Reliability 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 Published historical data 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
87	What aspects of safety should you consider when completing fitness tests or training methods?	Safe use of equipment Technique Warm up/cool down Training principles e.g. FITT	Fitness Tests
88	Give two pieces of equipment used to carry out the multi stage fitness test?	Audio equipment 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; ????? is a measure of a person's maximum amount of oxygen uptake	VO2 max	Past Exam Qs
94	Complete the sentence; ?????? 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
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 Repeat using a series of topics	Past Exam Qs