

Level 2 Certificate in Fitness Instruction – Anatomy and Physiology Mock Paper

Choose one correct answer for each question

- 1 What type of bone is a phalange?
 - Long
 - Short
 - Flat
 - Irregular
- 2 Which of the following movements can be performed at the shoulder joint?
 - Plantar flexion
 - Dorsiflexion
 - Lateral flexion
 - Horizontal flexion
- 3 The growth plates can be found in which part of the long bone?
 - Diaphysis
 - Medullary cavity
 - Epiphysis
 - Vena cava
- 4 The limbs of the body make up which part of the human skeleton
 - The axial skeleton
 - The appendicular skeleton
 - The thorax
 - The axis
- 5 The medullary cavity is found in which part of a long bone?
 - Periosteum
 - Compact bone
 - Diaphysis
 - Epiphysis
- 6 Osteoblasts are cells that;
 - Produce muscle tissue
 - Break down muscle tissue
 - Produce bone tissue
 - Break down bone tissue
- 7 The spine is made up of how many bones?
 - 13
 - 23
 - 33
 - 43
- 8 Tightened pectoral muscles contributes towards which of the following?
 - Anterior pelvic tilt
 - Scoliosis
 - Lordosis
 - kyphosis
- 9 Which of the following movements can be performed by the spine;
 - Protraction
 - Horizontal flexion
 - Lateral flexion
 - pronation
- 10 A joint that is slightly moveable is classified as which of the following?
 - Fibrous
 - Cartilaginous
 - Synovial
 - Ellipsoid



- 11** What is the antagonist during knee flexion?
- Hamstrings
 - Quadriceps
 - Biceps Brachii
 - Erector Spinae
- 12** During horizontal flexion, which of the following muscles are the prime mover?
- Pectoralis Major
 - Trapezius
 - Latissimus Dorsi
 - Biceps
- 13** If the gluteus maximus is contracting eccentrically which of the following is occurring?
- Extension of the hip
 - Abduction of the shoulder
 - Flexion of the hip
 - Lateral flexion
- 14** Which of the following is under voluntary control;
- Smooth
 - Cardiac
 - Skeletal
 - Myocardium
- 15** Which of the following muscles are found in the anterior aspect of the body;
- Quadriceps
 - Hamstrings
 - Gastrocnemius
 - Soleus
- 16** Which of the following structures can be found in skeletal muscle tissue
- Periosteum
 - Myosin
 - Cerebellum
 - Ilium
- 17** Which of the following is true of type I muscle fibres;
- They can contract rapidly
 - They have a large amount of myoglobin
 - They have a small number of mitochondria
 - They have fewer capillaries
- 18** When a muscle contracts isometrically;
- It gets shorter
 - It gets longer
 - It stays the same length
 - Movement occurs at a constant speed
- 19** The role of the agonist is;
- To contract to produce a joint movement
 - To relax to allow joint movement
 - To assist the prime mover
 - To prevent unwanted movement.
- 20** Which of the following is a function of the pelvic floor muscles?
- Piloerection
 - Prevent stress incontinence
 - Retraction of the scapula
 - Flexion of the lumbar vertebrae



- 21** The movement of particles from an area of high concentration to an area of low concentration is known as which of the following?
- Osmosis
 - Diffusion
 - Vasodilation
 - Sarcopenia
- 22** The air sacs where gaseous exchange takes place are known as
- Alveoli
 - Bronchioles
 - Bronchi
 - Capillaries
- 23** During inspiration, the diaphragm does which of the following;
- Contracts
 - Relaxes
 - Becomes more domed
 - Lifts the ribs upwards and outwards
- 24** Tidal volume is;
- The amount of air breathed in and out in one breath
 - The amount of air breathed in and out in one minute
 - The number of breaths taken per minute
 - The amount of oxygen diffused into the blood
- 25** Which of the following statements are true;
- Falling levels of oxygen in the blood trigger breathing
 - Carbon dioxide levels are lower in the air we breathe out
 - Rising levels of carbon dioxide in the blood trigger breathing
 - Nitrogen levels in the air we breathe out is the same as the air we breathe in
- 26** The trachea is more commonly known as which of the following?
- The mouth
 - The throat
 - The voice box
 - The wind pipe
- 27** How many lobes does the right lung have?
- 1
 - 2
 - 3
 - 4
- 28** Which blood vessel do the lungs receive blood from?
- Pulmonary artery
 - Pulmonary vein
 - Aorta
 - Vena cava
- 29** Which of the following is a short term effect of exercise on the respiratory system?
- Increased capillarisation around alveoli
 - Increased tidal volume
 - Stronger respiratory muscles
 - Decreased minute ventilation
- 30** Which of the following is not a measurement of the respiratory system?
- Tidal volume
 - Stroke volume
 - Minute ventilation
 - Breathing rate



- 31** Which of the following is the correct sequence of blood flow?
- Vena cava, right ventricle, right atrium, pulmonary artery
 - Vena cava, right atrium, right ventricle, pulmonary artery
 - Vena cava, right atrium, right ventricle, pulmonary vein
 - Vena cava, left atrium, right ventricle, pulmonary artery
- 32** Which of the following is classed as healthy blood pressure?
- Systolic 80mmHg over Diastolic 120mmHg
 - Systolic 100mmHg over Diastolic 65mmHg
 - Systolic 120mmHg over Diastolic 80mmHg
 - Systolic 100mmHg over Diastolic 100mmHg
- 33** What type of tissue is the heart made up of?
- Cardiac muscle
 - Smooth muscle
 - Skeletal muscle
 - Voluntary muscle
- 34** What type of tissue is found in the walls of blood vessels?
- Cardiac muscle
 - Smooth muscle
 - Skeletal muscle
 - Voluntary muscle
- 35** What are the upper chambers of the heart known as?
- Aorta
 - Ventricles
 - Atrioventricular
 - Atria
- 36** When the ventricles contract, this is known as;
- Ventricular hypertrophy
 - Cardiac arrest
 - Systole
 - Diastole
- 37** Which of the following causes clotting of the blood?
- Red blood cells
 - White blood cells
 - Plasma
 - Platelets
- 38** Pulmonary circulation is the circulation of blood between;
- The heart and the lungs
 - The heart and the muscular system
 - The heart and the myocardium
 - The heart and the digestive system
- 39** The widening of blood vessels is known as;
- Venous return
 - Vasodilation
 - Vasoconstriction
 - Valsalva manoeuvre
- 40** Which of the following is a short-term effect of exercise on the cardiovascular system?
- Decreased resting heart rate
 - Increased stroke volume
 - Decreased cardiac output
 - Increased number of capillaries



- 41** What fuel sources are used when using the lactate system?
- Glycogen
 - Fat
 - Pospho-creatine
 - Both glycogen and fat
- 42** What by-product is produced when burning glycogen anaerobically?
- Carbon dioxide
 - water
 - Lactic acid
 - ATP
- 43** Which of the following does NOT predominantly use the lactate system?
- 400m
 - The plank
 - 1 minute press up test
 - Marathon
- 44** What fuel source is used across all three energy systems?
- Glycogen
 - ATP
 - Phosphocreatine
 - Protein
- 45** Where does aerobic cellular respiration occur?
- Mitochondria
 - Myoglobin
 - Haemoglobin
 - Capillaries
- 46** At what intensity would you use the creatine phosphate system?
- 95-100%
 - 60-95%
 - 30-60%
 - 0-30%
- 47** What does anaerobic mean?
- With carbon dioxide
 - Without carbon dioxide
 - With oxygen
 - Without oxygen
- 48** Which of the following is a by-product of aerobic respiration?
- Oxygen
 - Water
 - Lactic acid
 - Creatine
- 49** When would fat be used for energy
- 95-100% intensity
 - When using the creatine-phosphate system
 - When using the aerobic system
 - When using the lactate system
- 50** Adenosine tri-phosphate is broken down to;
- Adenosine di-phosphate
 - Adenosine mono-phosphate
 - Adenosine
 - Phosphate



Answers

Question	Answer
1	A
2	D
3	C
4	B
5	C
6	C
7	C
8	D
9	C
10	B
11	B
12	A
13	C
14	C
15	A
16	B
17	B
18	C
19	A
20	B
21	B
22	A
23	A
24	A
25	C
26	D
27	C
28	A
29	B
30	B
31	B
32	C
33	A
34	B
35	D
36	C
37	D
38	A
39	B
40	B
41	A
42	C
43	D
44	B
45	A
46	A
47	D
48	B
49	C
50	A

