International Baccalaureate®
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**SPORTS, EXERCISE AND HEALTH SCIENCE
STANDARD LEVEL
PAPER 1**

Monday 6 May 2013 (morning)

45 minutes

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer all the questions.
- For each question, choose the answer you consider to be the best and indicate your choice on the answer sheet provided.
- The maximum mark for this examination paper is *[30 marks]*.

1. What are four types of bone?

    A.   long, short, flat, irregular

    B.   long, short, compact, spongy

    C.   compact, spongy, flat, irregular

    D.   flat, irregular, long, spongy

2. Which movement characteristics apply to cartilaginous joints?

    A.   No observable movement

    B.   Allow for expansion of skull

    C.   Allow for a wide range of movement types

    D.   Slight movements between intervertebral discs

3. Which of the following are characteristics of cardiac muscle?

        I.   Striated
        II.   Involuntary
        III.   Voluntary

    A.   I and II only

    B.   I and III only

    C.   II and III only

    D.   I, II and III

4. What are the principle structures of the ventilatory system?

    A.   nose, pharynx, bronchioles, diaphragm

    B.   nose, trachea, bronchioles, alveoli

    C.   mouth, larynx, lungs, diaphragm

    D.   mouth, trachea, alveoli, ribs

5. How is the *vital capacity* of the lungs best defined?

    A.   The volume of air inspired and expired at rest

    B.   The volume of air which is inspired or expired in one minute

    C.   The maximum amount of air that a person can expel from the lungs from a position of full inspiration

    D.   The volume of air that can still be expired following normal expiration at rest

6. What are the major components of blood?

    A.   erythrocytes, leucocytes, platelets

    B.   plasma, gases, erythrocytes

    C.   plasma, hormones, erythrocytes

    D.   plasma, water, leucocytes

7. Which blood vessel directly supplies the heart?

    A.   Superior vena cava

    B.   Inferior vena cava

    C.   Coronary artery

   D.   Right pulmonary artery

8. Where is the electrical impulse in the heart generated?

    A.   Bundle of His

    B.   Sinoatrial node

    C.   Synapse

    D.   Atrioventricular node

9. What best describes diastolic blood pressure?

    A.   Force on arterial walls during ventricular relaxation

    B.   Force on arterial walls during atrial relaxation

    C.   Force on arterial walls during ventricular contraction

    D.   Force when the heart pumps blood into the system

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10.   Which is the basic structure of a glucose molecule?
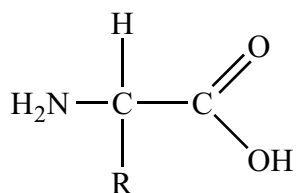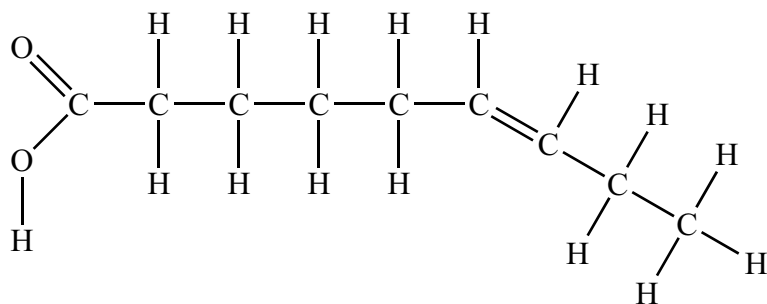
A.
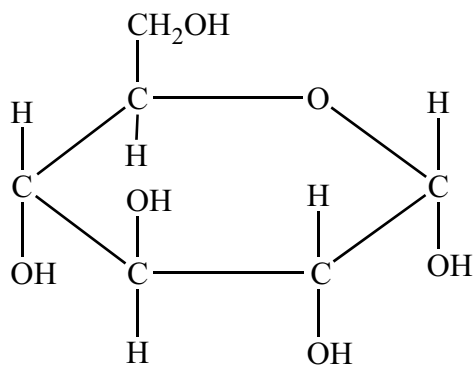
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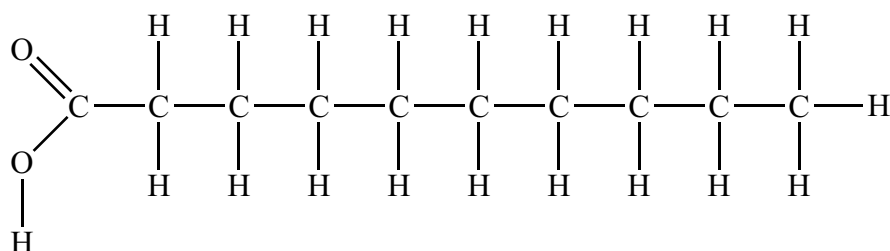
C.

D.

11. Which of the following are macronutrients?

    A.   water, lipid (fat), fibre, protein

    B.   water, vitamins, minerals, fibre

    C.   vitamins, minerals, protein

    D.   water, lipid (fat), carbohydrate, protein

12. What are the major sites of triglyceride storage?

    A.   adipose tissue and pancreas

    B.   skeletal muscle and liver

    C.   adipose tissue and liver

    D.   adipose tissue and skeletal muscle

13. What component of the aerobic system produces the greatest number of ATP molecules?

    A.   Krebs cycle

    B.   Electron transport chain

    C.   Anaerobic glycolysis

    D.   Aerobic glycolysis

14. What is the energy content per 100 g of a carbohydrate molecule?

    A.   1720 kJ

    B.   1760 kJ

    C.   4000 kJ

    D.   17 600 kJ

15. Which term best describes the breakdown of complex chemical substances into simpler compounds in the absence of oxygen?

    A.   Metabolism

    B.   Anaerobic anabolism

    C.   Anaerobic catabolism

    D.   Aerobic catabolism

16. Which best describes Newton's first law of motion?

    A.   An unbalanced force acts on a body

    B.   For every action force, there is an equal and opposite reaction force

    C.   An object will remain stationary or will move at a constant velocity or in a straight line

    D.   The amount of change in the momentum of an object

17. What is the term used to describe the movement below?
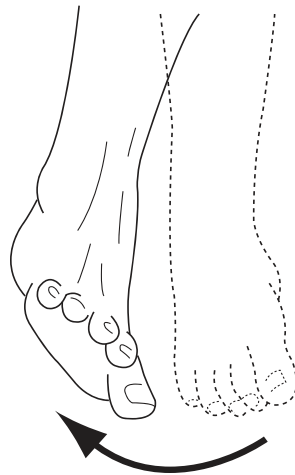
    A.   Pronation

    B.   Supination

    C.   Eversion

    D.   Inversion

18. Which of the following affects the flight path of a projectile?

    A.   Height of release

    B.   Displacement of release

    C.   Centre of mass

    D.   Moment of inertia

19. What is displacement?

    A.   The speed of an object in a certain direction

    B.   The amount of motion possessed by a moving body

    C.   The rate of change in velocity

    D.   The shortest distance from the initial to the final position of a moving body

20. What does the Bernoulli principle refer to?

    A.   Projectile motion

    B.   Centre of mass

    C.   Angle of release

    D.   Moment of inertia

21. Which of the following best defines the term *skill*?

    A.   The consistent production of goal-oriented movements

    B.   A stable, enduring characteristic that is genetically determined

    C.   A way of doing

    D.   The selection of an appropriate technique

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22. What is response time?

    A.   Signal time + movement time

    B.   Stimulus detection + movement time

    C.   Reaction time + movement time

    D.   Reaction time + signal time

23. What is the term used to describe a hard court tennis player competing on a grass court for the first time?

    A.   Bilateral transfer

    B.   Stage to stage transfer

    C.   Positive skill to skill transfer

    D.   Negative skill to skill transfer

24. Which is an example of Fleishman's physical proficiency abilities?

    A.   Static strength

    B.   Manual dexterity

    C.   Arm-hand steadiness

    D.   Response orientation

25. Which of the following describes variable basketball practice?

    A.   Practice with very short rest periods

    B.   Practice with long rest periods between sessions

    C.   Practice with individual skills, group drills and minor games

    D.   Practice with the skill in the player's mind

26. What is the command style of teaching?

   A.   Learners work in pairs and take it in turns to be an observer and performer

   B.   Allows the learners to take more responsibility

   C.   The teacher makes all the decisions

   D.   Encourages learners to be creative

27. Which is a health-related aspect of fitness?

   A.   Flexibility

   B.   Agility

   C.   Reaction time

   D.   Speed

28. Which is a valid test of muscle endurance?

   A.   Leger Test

   B.   Maximum sit-ups

   C.   Cooper's 12 Minute Run

   D.   Hand grip dynamometer

29. What do error bars on a graph represent?

   A.   Range

   B.   Variability

   C.   Coefficient

   D.   Significance

30. What percentage of values is normally distributed within ± 1 standard deviation of the mean?

   A.   65 %

   B.   98 %

   C.   95 %

   D.   68 %