

**WASSCE / WAEC Integrated Science May / June 2009 Past Questions
and Answers (Objectives)**

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July 2009 Objectives

1. The ultimate source of energy on the earth is
A. petroleum. B. the sun.
C. the wind. D. wood.
2. The following gases are constituents of air **except**
A. carbon dioxide. B. nitrogen.
C. oxygen. D. sulphur(IV) oxide
3. Which of the following parts of a leaf is **most** photosynthetic?
A. Leaf epidermal tissue
B. Palisade mesophyll
C. Pericycle tissue
D. Vascular tissue
4. The area between the like poles of two magnets where no lines of force appear is called
A. magnetic field. B. neutral point.
C. north pole. D. south pole.
5. It is better to wear white clothing in the tropics because white materials
A. reflect radiant heat.
B. absorb radiant heat.
C. conduct heat away more readily.
D. absorb sweat readily.
6. Objects are weightless in space because
A. there is negligible force of gravity.
B. the force of gravity exactly balances the weight of the objects.
C. there is no air.
D. the upthrust on the object is equal to the weight of the object.
7. The process of removing undigested food material out of the body is termed
A. egestion. B. excretion.
C. ingestion. D. secretion.
8. The label of a fruit juice indicates that it contains 20% juice. The volume of fruit juice in a 250 ml pack of the product is
A. 50 ml. B. 100 ml.
C. 200 ml. D. 250 ml.
9. Which of the following radiations has the **highest** ionizing power?
A. Alpha rays B. Beta rays
C. Gamma rays D. X-rays
10. The malaria parasite is found in the saliva of
A. female anopheles. B. female culex.
C. male aedes. D. male anopheles.
11. Duck rearing is often integrated with fish culture system in order to
A. check eutrophication.
B. control predation.
C. control growth of water weeds.
D. improve nutrition.
12. The amount of energy needed to push a weight of 45 N through a distance of 5 m is
A. 9 J B. 40 J C. 50 J D. 225 J
13. Which of the following factors will quicken the rate at which microbial activity will turn milk sour?
A. Concentration. B. Particle size
C. Moisture content D. Temperature
14. The ecological instrument suitable for collecting small animals living in cracks and crevices is the
A. pitfall trap. B. pooter.
C. quadrat. D. sweep net.
15. Which of the following computer programme application is **most** suitable for the production of financial records?
A. Database management
B. Desktop publishing
C. Spreadsheet
D. Word processing

July 2009 Objectives

16. The essential elements to consider in town planning are
- I. provision of schools
 - II. human waste disposal system
 - III. water supply
- A. I and II only. B. I and II only.
C. II and III only. D. I, II and III.
17. Which of the following solvents may be used as an antiseptic?
- A. Caustic soda B. Kerosene
C. Methylated spirit D. Turpentine
18. A body of mass 4 kg is dropped from a height of 10 m. Calculate the maximum energy of the body ($g = 10 \text{ ms}^{-2}$).
- A. 25 J B. 40 J C. 100 J D. 400 J
19. The purpose of pricking out seedling is to
- A. ensure quick germination.
B. protect the seedlings from direct sunlight.
C. prevent overcrowding in the nursery.
D. reduce rate of transpiration.
20. In testing a leaf for the presence of starch, the leaf is **first** put into boiling water to
- A. harden the leaf cells.
B. stop all chemical reactions in the leaf cells.
C. activate the enzymes in the leaf cells.
D. dissolve out the chlorophyll in the leaf cells.
21. Which of the following devices is a second class lever?
- A. A pair of scissors B. See-saw
C. A pair of tongs D. Wheelbarrow
22. Chlorine is used in water treatment to
- A. kill microbes.
B. kill weeds.
C. prevent growth of algae
D. coagulate fine particles in the water.
23. Which of the following factors influence soil formation?
- I. Biological

July 2009 Objectives

- II. Chemical
III. Physical
- A. I and II only B. I and III only
C. II and III only D. I, II and III
24. Some waste products which are produced and stored within flowering plants are
- A. excess water, carbon dioxide and oxygen.
B. excess water, tannins and carbon dioxide.
C. tannins, resins and lignin.
D. resins, lignin and oxygen.
25. A coin placed 10.0 cm below a liquid appeared to be 6.0 cm deep when observed from above. Calculate the refractive index of the liquid.
- A. 0.60 B. 1.67 C. 4.00 D. 16.00
26. The metal that can be obtained from bauxite is
- A. aluminium B. gold.
C. iron. D. manganese.
27. The following livestock diseases are caused by viruses **except**
- A. anthrax. B. foot and mouth disease.
C. rinderpest. D. swine fever.
28. Which of the following functions is performed by blood platelets?
- A. Engulfing bacteria
B. Production of antibodies
C. Transportation of oxygen
D. Aiding blood clotting
29. One characteristic that distinguishes between the same note played on a *piano* and an *organ* is the
- A. beat. B. loudness.
C. pitch. D. quality.
30. Farm animals develop immunity to disease through
- A. disinfection. B. drenching.
C. quarantine D. vaccination.
31. The blood vessel which carries digested food from the small intestine to the liver is the

July 2009 Objectives

47. The following stages are involved in the process of childbirth **except**
- stretching of the cervix of uterus.
 - continuous relaxation of the abdominal walls.
 - contractions of the walls of the uterus.
 - breaking of the embryonic membranes.
48. Which of the following computer parts is **not** a storage device?
- Floppy disk
 - Hard disk
 - Pen drive
 - Random Access Memory
49. Sound waves are
- longitudinal mechanical waves.
 - transverse mechanical waves.
 - longitudinal electromagnetic waves.
 - transverse electromagnetic waves.
50. A physical method of suppressing growth of weeds is by
- cover cropping
 - hoeing
 - mulching
 - use of herbicides
51. Which of the following forms of energy **cannot** be transformed directly into heat energy?
- Chemical energy
 - Electrical energy
 - Kinetic energy
 - Potential energy
52. Essential substances contained in glomerular filtrate
- accumulate in the ureter.
 - are reabsorbed into the blood.
 - sink into the loop of Henle.
 - are filtered out on the Bowman's capsule.
53. The south-east and north-east trade winds are the direct result of
- the rotation of the earth.
 - differential heating of the earth's surface.
 - orbital motion of the earth.
 - gravitational attraction of the moon.
54. A man survived stroke and noticed that he had become deaf. Which of the following explains his condition?

July 2009 Objectives

- Part of the brain is damaged
 - Thyroid gland has ceased functioning
 - Eardrum is damaged
 - Spinal cord is damaged
55. A steel ball of mass 20.0 kg cools from 120°C to 80°C. If the specific heat capacity of steel is 435 J/kg, calculate the quantity of heat given out.
- 3.48×10^5 J
 - 4.32×10^5 J
 - 4.83×10^5 J
 - 8.43×10^5 J
56. A seed develops from the
- endosperm.
 - ovary wall.
 - ovule.
 - sepal.
57. A voltage transformer in which the number of turns in the primary coil is greater than that of the secondary is known as a/an
- analogue transformer.
 - distributing transformer.
 - step-down transformer.
 - step-up transformer.
58. The use of variegated leaf in photosynthesis experiments is to show that
- light is essential in photosynthesis.
 - chlorophyll is essential in photosynthesis.
 - starch is formed during photosynthesis.
 - carbon dioxide is an ingredient of photosynthesis.
59. Rice grown on slopes of a hill is called
- long-grain rice.
 - paddy rice.
 - swamp rice.
 - upland rice.
60. The advantages of the use of computers include
- accuracy of details
 - cost saving
 - increased speed of work
 - security of documents
- I, II and III only
 - I, III and IV only
 - II, III and IV only
 - I, II, III and IV.

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