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

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		July 2009 Objectives
		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.
1.	The ultimate source of energy on the earth is A. petroleum. B. the sun. C. the wind. D. wood. The following gases are constituents of air	9. Which of the following radiations has the highest ionizing power? A. Alpha rays B. Beta rays C. Gamma rays D. X-rays
	A. carbon dioxide. C. oxygen. B. nitrogen. D. sulphur(IV) oxide	The malaria parasite is found in the saliva of A. female anopheles. B. female culex. C. male aedes. D. male anopheles.
1.	Which of the following parts of a leaf is most photosynthetic? A. Leaf epidermal tissue B. Palisade mesophyll C. Pericycle tissue D. Vascular tissue	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.
•	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.	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
	It is better to wear white clothing in the tropics because white materials A. reflect radiant heat. B. absorb radiant heat.	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
	 C. conduct heat away more readily. D. absorb sweat readily. Objects are weightless in space because A. there is negligible force of gravity. B. the force of gravity exactly balances the 	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.
	weight of the objects. C. there is no air. D. the upthrust on the object is equal to the weight of the object.	15. Which of the following computer programme application is most suitable for the production of financial records? A. Database management
\$531 531	The process of removing undigested food material out of the body is termed A. egestion. B. excretion. C. ingestion. D. secretion.	B. Desktop publishing C. Spreadsheet D. Word processing

16.	The	essential	elements	to	consider	in	town
	planning are						

- 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 seeding 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

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

- 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 clothing
- 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

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A. hepatic artery.
B. hepatic portal vein.

C. posterior vena cava.

D. renal vein.

32. The following measuring instruments are length-measuring devices except

A. metre rule.
B. speedometer.
C. spherometer.
D. venier calliper.

33. Which of the following metals is obtained from haematite?

A. Aluminium

B. Copper

C. Iron

D. Zinc

34. A rectangular block weighs 4000 N. Its mass is

A. 4 kg B. 40 kg

C. 400 kg D. 4000 kg

35. Which of the following diseases has the greatest adverse effects on productivity in Ghana?

A. Malaria B. Poliomyelitis

C. Smallpox D. Yellow fever

36. The reaction:

 $KAlSi_3O_8 + H_2O \rightarrow HAlSi_3O_8 + KOH$, which occurs during the chemical weathering of rocks is referred to as

A. carbonation. B. hydration.

C. hydrolysis.

D. oxidation.

37. Which of the following human characteristics is inherited?

A. Baldness

B. Language

C. Scar D. Skills

38. The speed of a body increased from 20.0 ms⁻¹ to 35.0 ms⁻¹ in 5.0 seconds. Calculate the average acceleration of the body.

A. 3.0 ms⁻²

C. 15.0 ms⁻²

B. 11.0 ms⁻² D. 75.0 ms⁻²

39. Insoluble salts are prepared by the A. crystallization method.

B. dissolution method.

C. precipitation method.

D. titration method.

40. Which of the following cell organelles is involved in the secretion and packaging of complex carbohydrates and proteins?

A. Endoplasmic recticulum

B. Golgi body
C. Lysosome

D. Ribosome

41. Which of the following forces enables a mosquito larva to stick to the surface of water?

A. Adhesion B. Capillarity

C. Gravity D. Surface tension

42. What mass of NaOH is contained in 0.2 M solution of NaOH? [Na = 23, O = 16, H = 1] A. 0.2 g B. 0.8 g C. 2.0 g D. 8:0 g

43. Smut disease of maize is caused by

A. bacterium. B. fungus.

C. protozoan. D. virus.

44. Which of the following statements about acids is incorrect? Acids

A. contain ionisable hydrogen.

B. turn blue litmus paper red.

C. are insoluble in water.

D. are neutralized by bases.

45. Which of the following ranks in classification shows the least resemblance among organisms?
A. Class

B. Genus

C. Order D. Species

46. A simple electrical circuit is connected to a voltage supply of 1.5 V. If a current of 0.5 A flows through the circuit, calculate the total resistance of the circuit.

A. 0.75 Ω B. 1.00 Ω

C. 2.00 Ω D. 3.00 Ω emistori pro establica della collida in descriptori et In conditioni della collida della collida della collida della collida della collida della collida della collida

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- 47. The following stages are involved in the process of childbirth except
 - A. stretching of the cervix of uterus.
 - B. continuous relaxation of the abdominal walls.
 - C. contractions of the walls of the uterus.
 - D. breaking of the embryonic membranes.
- 48. Which of the following computer parts is not a storage device?
 - A. Floppy disk
- B. Hard disk
- C. Pen drive
- D. Random Access Memory
- 49. Sound waves are
 - A. longitudinal mechanical waves.
 - B. transverse mechanical waves.
 - C. longitudinal electromagnetic waves.
- D. transverse electromagnetic waves.
- 50. A physical method of suppressing growth of weeds is by
 - A. cover cropping. B. hoeing.
 - C. mulching.
- D. use of herbicides
- 51. Which of the following forms of energy cannot be transformed directly into heat energy?

 - A. Chemical energy B. Electrical energy
 - C. Kinetic energy D. Potential energy
- 52. Essential substances contained in glomerular filtrate
 - A. accumulate in the ureter.
 - B. are reabsorbed into the blood.
 - C. sink into the loop of Henle.
 - D. are filtered out on the Bowman's capsule.
- 53. The south-east and north-east trade winds are the direct result of
 - A. the rotation of the earth.
- B. differential heating of the earth's surface.
- C. orbital motion of the earth.
 - D. 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 A. Part of the brain is damaged
- B. Thyroid gland has ceased functioning
- C. Eardrum is damaged
- D. 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
 - A. $3.48 \times 10^5 \,\text{J}$
- B. $4.32 \times 10^5 \text{ J}$
- C. $4.83 \times 10^5 \text{ J}$
- D. $8.43 \times 10^5 \,\text{J}$
- 56. A seed develops from the
 - A. endosperm.
- B. ovary wall.
- C. ovule.
- D. 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
 - A. analogue transformer.
 - B. distributing transformer.
 - C. step-down transformer.
 - D. step-up transformer.
- 58. The use of variegated leaf in photosynthesis experiments is to show that
 - A. light is essential in photosynthesis.
 - B. chlorophyll is essential in photosynthesis.
 - C. starch is formed during photosynthesis.
 - D. carbon dioxide is an ingredient of photosynthesis.
- 59. Rice grown on slopes of a hill is called
 - A. long-grain rice.
- B. paddy rice.
- C. swamp rice.
- D. upland rice.
- 60. The advantages of the use of computers include
 - I. accuracy of details
 - II. cost saving
 - III. increased speed of work
 - IV. security of documents
 - A. I, II and III only. B. I. III and IV only.
 - C. II, III and IV only. D. I, II, III and IV.

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Good luck!