

# WASSCE INTEGRATED SCIENCE 2015

(Paper 1, Q26 to 50)

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**ACKNOWLEDGEMENT:** The West African Examinations Council – for the past questions used in this document.

26. The efficiency of a machine is always less than 100% due to

- A. its high mechanical advantage
- B. the greater load to effort ratio
- C. the work done when operating
- D. the work done against friction

27. Which of the following pairs of compounds will produce an ester when warmed with few drops of concentrated sulphuric acid?

- A. Ethanol and ethane
- B. Ethanol and ethanoic acid
- C. Ethane and ethanoic acid
- D. Ethanoic acid and ethane

28. The use of watering can is necessary in crop production

- A. after harvesting of the field crops
- B. during rainy season
- C. when the crops are at the nursery stage
- D. when the farm is far from the source of water

29. Which of the following joints allow movement in all directions?

- A. ball and socket joints
- B. hinge joints
- C. gliding joints
- D. pivot joint

30. A car traveling at a uniform speed of  $40.0 \text{ ms}^{-1}$  covers the distance between

two stations in 3 minutes. Calculate the distance between the stations

- A. 0.2 km
- B. 2.4 km
- C. 4.8 km
- D. 8.0 km

31. Which of the following processes is associated with rusting of iron? It

- A. is a physical change
- B. takes place in the presence of dry air
- C. releases carbon dioxide
- D. produces an oxide of iron

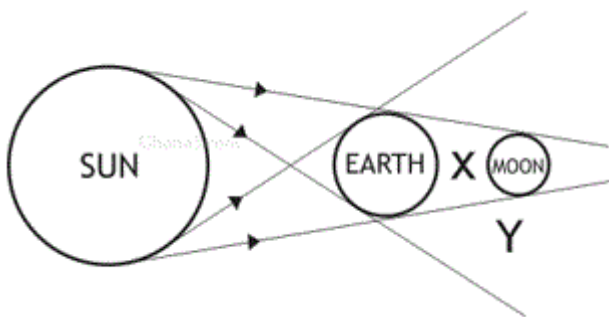
32. Aristotle classification of living organisms was based on the

- A. appearance and movement of the organisms
- B. structural similarities and differences in the organism
- C. anatomical and histological differences in the organisms
- D. evolutionary trends in the organisms

33. Which of the following crops is stored in barns?

- A. cassava
- B. cowpea
- C. pineapple
- D. yam

34. Which of the following statements about the diagram below is correct?



- A. Portion X is called penumbra

- B. Portion Y is called umbra  
C. Illustrates an eclipse of the sun  
D. Illustrates an eclipse of the moon
35. A test for hydrogen in the laboratory is
- A. a characteristic irritating smell  
B. a 'pop' sound produced with a glowing splint  
C. production of pungent smell  
D. rekindling of glowing splint
36. Fats and oils are the esters formed from the reaction between
- A. glycerine and long chain fatty acids  
B. glycerol and long chain fatty acids  
C. glycerine and sodium hydroxide  
D. glycerol and sodium hydroxide
37. When a cube of sugar is treated with concentrated sulphuric acid, a black product is formed due to
- A. dehydration  
B. esterification  
C. oxidation  
D. neutralization
38. A piece of metal of volume  $25 \text{ cm}^3$  has a mass of 45 g. Determine its density in  $\text{kg m}^3$
- A.  $0.56 \times 10^3 \text{ kg m}^{-3}$   
B.  $1.80 \times 10^3 \text{ kg m}^{-3}$   
C.  $5.66 \times 10^3 \text{ kg m}^{-3}$   
D.  $1.80 \times 10^4 \text{ kg m}^{-3}$
39. Which of the following methods cannot be used to protect iron against rust?
- A. enameling  
B. galvanizing  
C. painting  
D. riveting

40. Which of the following statements about inhaled air and exhaled air is correct?

- A. Exhaled air contains more oxygen than inhaled air
- B. Inhaled air contains same amount of oxygen as exhaled air
- C. Inhaled contains more carbon dioxide than exhaled air
- D. Exhaled air contains more carbon dioxide than inhaled air

41. Sound energy can be converted into an electrical energy by

- A. amplifier
- B. loudspeaker
- C. microphone
- D. radio

42. An onion bulb can be described as one which

- A. grows horizontally underground and has long internodes
- B. grows obliquely from and underground parts of the parent plant
- C. has fibrous roots arising from the base and a short conical stem that grows vertically
- D. has thick horizontal stem and adventitious roots arising from the nodes

43. Which of the following effects are associated with late harvesting of maize?

- I. increase in crop yield
- II. rain may cause grain to rot
- III. weevils may attack and destroy grain
- IV. exposure of maize to attacks by birds and rodents

- A. I and II only
- B. III and IV only
- C. I, II and III only
- D. II, III and IV only

44. A quantity of NaCl was dissolved in  $100.0 \text{ cm}^3$  of solution to obtain 0.54 M NaCl solution. Determine the mass of NaCl used [Na = 23, Cl = 35.5]

- A. 2.93 g
- B. 5.85 g
- C. 29.25 g
- D. 58.50 g

45. The scrotum which contains the testes is located externally because

- A. The sperms will be too far away from the egg if the scrotum is placed internally
- B. It will take up too much space in the abdomen
- C. The temperature for sperm production should be higher than the body temperature
- D. The temperature for sperm production should be lower than the body temperature

46. Atmospheric air is a mixture because it

- A. supports combustion
- B. can be liquefied
- C. contains more than two elements
- D. has no definite composition

47. The structure that covers the opening of the trachea during swallowing and prevents food from entering it is the

- A. epiglottis
- B. lungs
- C. pharynx
- D. rib cage

48. Blinking of the eye is considered as a reflex action because it is

- A. a delayed response
- B. initiated from the cerebrum
- C. an automatic response
- D. under the control of the cerebellum

49. Which of the following organisms is an ectoparasite?

- A. Housefly
- B. Liver fluke
- C. Tapeworm
- D. Tick

50. The true stomach of a ruminant is the

- A. Abomasum
- B. Omasum
- C. Reticulum
- D. Rumen

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**God, having raised  
up His servant  
Jesus, sent Him  
to bless you...**

**Acts 3: 26**