

K.C.P.E PREDICTION FIVE- SCIENCE 1HR 40 MINS

1. Which one of the following statement is correct when breathing out?
- Lungs shrink.
 - Diaphragm flattens.
 - Volume of the chest increases.
 - Ribs move upwards and outwards.

2. The following are some of the physical changes that take place during adolescence.
- Voice breaks
 - Pubic hair grows
 - Hips become broader
 - Rate of growth increases
 - Pimples may appear on the face
 - Chest and shoulders become broader.

Which of the above changes take place in both boys and girls?

- (ii) (iv) (v)
 - (i) (v) (vi)
 - (iii) (iv) (v)
 - (iii) (iv) (vi)
3. Which one of the following is the main reason why it is unadvisable to buy medicine from unauthorized dealers?
- They may not diagnose disease one is suffering from.
 - They do not have all drugs that may be required.
 - They can give contaminated drugs.
 - They may give wrong doses.

4. The table below shows pairs of diseases that infants are immunized against and the ages of vaccination.

Age of vaccination	Disease against	
At birth	Polio	X
Y	Diphtheria	Tetanus
9 th month after birth	Z	Yellow fever

Which of the following answers correctly represents X, Y and Z?

X	Y	Z
A. Whooping cough	6 th week after birth	Measles
B. Tuberculosis	10 th week after birth	Hepatitis B
C. Whooping cough	12 th week after birth	Poliomyelitis
D. Tuberculosis	14 th week after birth	Measles

5. Which one of the following government projects will **not** cause a reduction in the number of animals in the Tsavo National Park?

- Mining.
- Operating a quarry.
- Fencing around game reserve using electric wire.
- Construction of standard gauge railway through the reserve.

6. Which one of the following is polluted **most** when a farmer uses pesticides excessively?

- Air
- Soil
- Crops
- Water

7. Which one of the following pests attack seedlings?

- Aphids
- Stalkborers
- Cut worms
- Weaver birds

8. Standard five pupils classified some plants into groups as shown below.

Group 1	Group 2
Moss	Mucor
Pawpaw	Toadstool
Cypress	Puffball

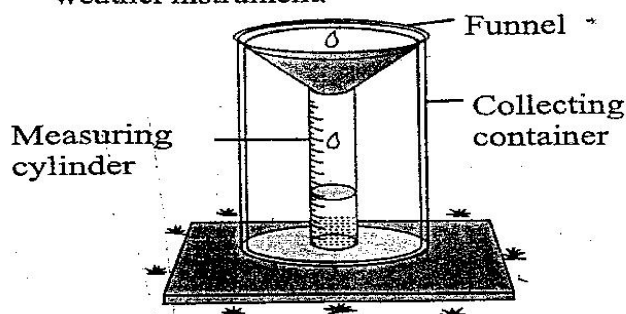
Which of the following did the pupils consider while classifying?

- Group 1 based on plant which produce flowers.
- Group 2 based on plants that feed on dead organic matter.
- Group 1 based on both green and flowering plants.
- Group 2 based on plants which manufacture food through photosynthesis.

9. Which one of the following crops is a stem tuber?

- Onion
- Irish potato
- Sugarcane
- Sweet potato

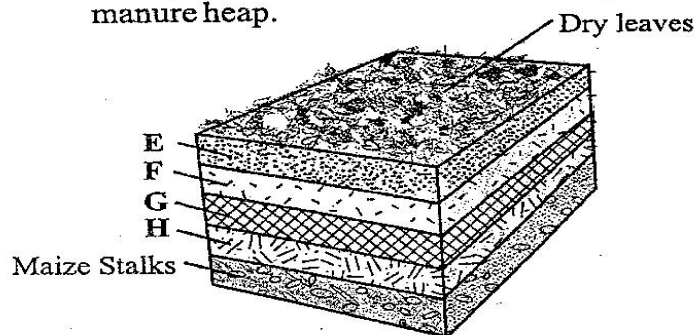
10. An ant differs from a tick in that
- an ant has eight legs while a tick has six legs
 - an ant has three body parts while a tick has two body parts
 - an ant is segmented while a tick is not segmented
 - an ant is an invertebrate while a tick is a vertebrate.
11. Which one of the following pairs of birds has beaks for eating similar types of food?
- Eagle and ostrich
 - Woodpecker and hawk
 - Flamingo and sunbird
 - Chicken and weaver bird
12. A farmer fenced a big pasture land with movable fences. Which method of grazing was the farmer practising?
- Herding
 - Tethering
 - Paddocking
 - Strip grazing
13. The presence of thick white and mountain shaped clouds are a sign of
- fine weather
 - low temperatures
 - strong wind blowing
 - heavy rain falling soon.
14. The diagram below shows an improvised weather instrument.



Which one of the following is **not** true about the above weather instrument?

- The diameter of the funnel is about 13 centimetres.
- The measuring cylinder should be long and narrow.
- The scale is graduated in millimeters (mm).
- It is dug 15cm deep into the soil to avoid splashing of water.

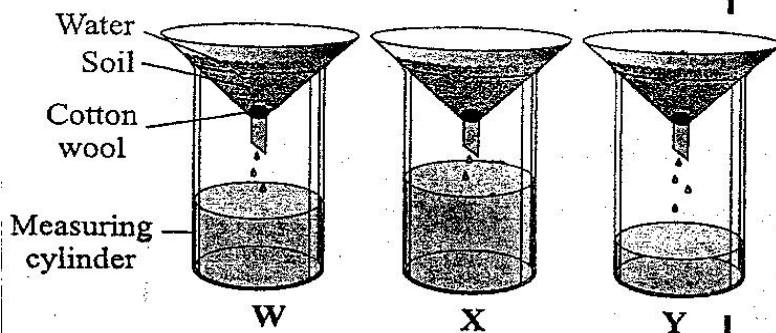
15. Which one of the following waterborne diseases that can be prevented by draining stagnant water?
- Cholera
 - Bilharzia
 - Typhoid
 - Dysentery
16. Which one of the following shows how water is used sparingly?
- Repairing leaking pipes
 - Using water that had washed clothes to clean toilets.
 - Using harvested rain water to clean toilets.
 - Treating dirty water in industries for domestic use.
17. The diagram below represents an arrangement of materials in a compost manure heap.



What is the function of the part labelled E?

- To add more nutrients to the compost
- To introduce micro-organisms for decomposition in the compost
- To provide food and nutrients to the micro-organisms which are decomposers
- To provide moisture in the heap

18. The set-ups shown in the diagram below were used to investigate a certain property of the soil. The amount of soil, water and cotton wool used in all three funnels were equal.



Which one of the following statements is **true** about the experiment above?

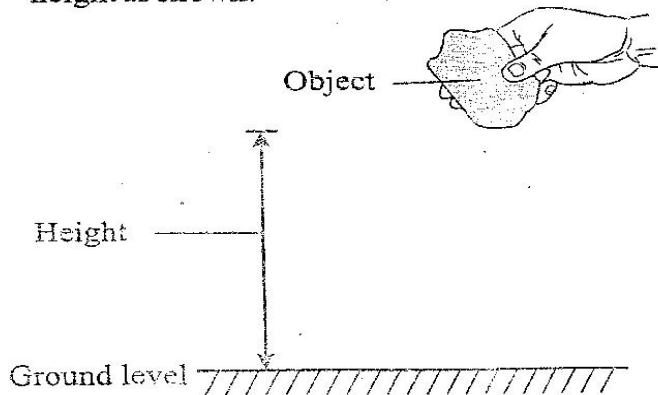
- A. The experiment was done to investigate water retention of different types of soil
 - B. Using the same size of measuring cylinder is not important.
 - C. The experiment was done to investigate capillarity in different types of soil.
 - D. The soil samples in Y has large particles than the soil sample X.
19. Lactating mothers are advised to eat foods that are rich in iron. This is because iron
- A. increases milk production.
 - B. improves the quality of breast milk.
 - C. replaces the blood lost during birth.
 - D. helps in the formation of strong bones of the baby.
20. Mwanamvua have the following symptoms.
- (i) *Pale skin*
 - (ii) *Poor appetite*
 - (iii) *Swollen arms and legs*
 - (iv) *Brown hair that could be plucked out easily*

Which one of the groups of food will help to correct the disease Mwanamvua is suffering from?

- A. Liver, butter, cassava
- B. Beef, peas, milk
- C. Groundnuts, milk, sorghum
- D. Beans, oranges, ugali

21. Which one of the following is the source of the sound produced by a bee?
- A. Vibration of its legs
 - B. Shaking of the body
 - C. It comes through the mouth
 - D. Rapid beating of its wings.
22. Which one of the following statements is **true**? Convection of heat
- A. only takes place in liquids
 - B. takes place in gases only
 - C. is the transfer of heat in solids
 - D. takes place in gases and liquids
23. Which one of the following consists of magnetic materials only?
- A. Cobalt, tin, steel
 - B. Iron, steel, aluminium
 - C. Tin, aluminium, copper
 - D. Steel, tin, brass
24. Which two of the following components of air make approximately 21.97% of the volume of air?
- A. Rare gases and oxygen
 - B. Carbon dioxide and rare gases
 - C. Oxygen and carbon dioxide
 - D. Nitrogen and rare gases
25. Which one of the following is a difference between solids and gases?
- A. Solids have mass whereas gases do not
 - B. Solids expand when heated while gases do not.
 - C. Solids can change to liquid whereas gases cannot
 - D. Solids have definite volume whereas gases do not have

26. Pupils at Matokeo Bora Primary school dropped different objects from the same height as shown.



They recorded the time taken for each object to reach the ground. The results were as shown in the table below.

OBJECT	TIME TAKEN TO REACH THE GROUND
Pieces of stone	3 seconds
metallic spoon	2 seconds
Block of wood	4 seconds
Sheet of paper	5 seconds

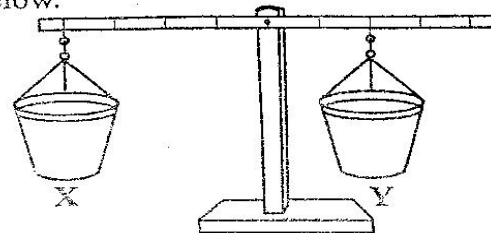
The **most** likely reason why the paper took longer to reach the ground is that

- A. it was not as heavy as the other objects
- B. it had a larger surface area than the other objects.
- C. it was affected by air resistance than the other objects.
- D. the force of gravity on the paper was less than on the other objects.

27. Greasing is a maintenance practice carried out on simple tools on storage. The **main** reason why it is necessary is to

- A. make the tools durable.
- B. make the moving tools more efficient.
- C. make the tools more attractive.
- D. prevent the tools form rusting.

28. Two identical containers X and Y containing water were balanced on a beam balance as shown in the diagram below.



Which one of the following statements is correct?

- A. Container X contains as much water as Y.
- B. Container Y contains half as much water as X.
- C. Container X contains half as much water as Y.
- D. Container Y contains four times as much water as X.

29. Peter and John were scout members from Bidii Academy and were on duty to host the flag on top of the flag post. Peter used a ladder to climb on top to put the flag. John used a single fixed pulley to raise the flag up. Which of the following statements is **not** true?

- A. Peter made work easier by increasing the effort distance
- B. John made work easier by changing the direction of force
- C. Peter made work easier by changing the direction of force
- D. John had the effort and the load move the same distance

30. The following are forms of energy.

- (i) heat
- (ii) light
- (iii) sound
- (iv) electricity

Which of the following statements is **true**?

- A. (i) and (iv) do not require medium of transmission.
- B. Only (ii) does not require a medium of transmission
- C. (iii) and (iv) require a medium of transmission
- D. Only (i) does not require a medium of transmission

31. Kerosene moves up the wick of a lamp by
 A. solubility.
 B. capillarity.
 C. evaporation.
 D. pressure.

32. In which one of the following activities is friction **least** useful?
 A. Carpenter cutting wood with a saw
 B. Pupil writing on blackboard
 C. A person walking on a slippery ground
 D. A child shutting a door

33. Which one of the following parts of an insectivorous plant is adapted for trapping insects?
 A. Leaf
 B. Stem
 C. Fruit
 D. Flower

34. In an experiment to investigate a certain component of soil, water was added to four different types of soil Q, R, S and T. They were weighed and heated gently until there was no change in mass. The results recorded are as shown in the table below.

Soil type	Mass (g) before heating	Mass (g) after heating
Q	32	27
R	21	14
S	30	29
T	27	25

Which soil contained the **least** amount of moisture?

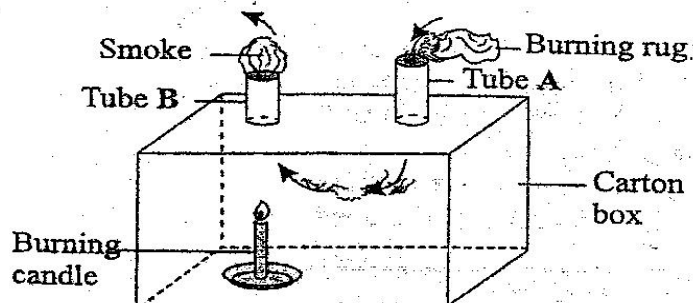
- A. Q
 B. R
 C. S
 D. T
35. Which of the following correctly shows the path taken by urine from the kidneys?
 A. Ureter → bladder → urethra
 B. Urethra → bladder → ureter
 C. Urethra → ureter → bladder
 D. Bladder → ureter → urethra

36. Standard eight pupils observed the feeding relationships of animals in a bush near their school compound. They noted that frogs fed on grasshoppers, snake ate frogs and grasshoppers fed on grass. What is likely to happen if all the frogs were killed?

- A. Grass will increase
 B. Snakes will increase
 C. Grass will decrease
 D. Grasshoppers will decrease

37. Salting helps in preserving meat by
 A. softening the meat.
 B. adding flavour to the meat.
 C. removing water from the meat.
 D. removing air from the meat.

38. The diagram below represents a set-up that is used to demonstrate a certain aspect of matter.



The purpose of the burning rug is to

- A. provide heat
 B. show convection in air
 C. make the air coloured for visibility
 D. expand the gas inside the box

39. Which of the following is not a storage of chemical energy?

- A. Sun
 B. Fuel
 C. Food
 D. Cooking gas

40. Which of the following pair of levers has the effort between the load and the fulcrum?

- A. Wheel barrow
 B. Crow bar
 C. Claw hammer
 D. Spade

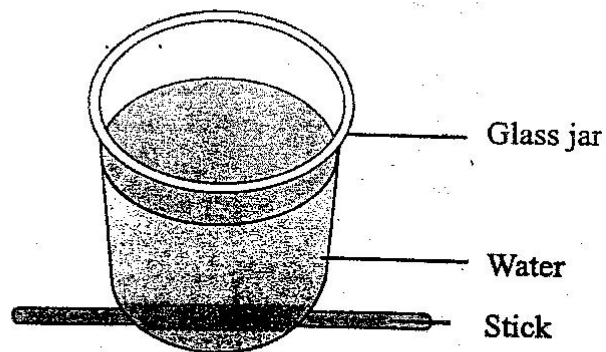
41. Standard six pupils saw a billboard during a field trip. The bill board was written "KAA CHONJO UKIMWI NI HATARI UNAUA." Which of the following is the main reason why the billboard is placed on the roadside before entering into the town?
- To alert people entering into the town that there are many HIV and AIDS victims.
 - It is an advertisement of VCT centres in that town.
 - To make people be aware on the ways of controlling HIV and AIDS.
 - It is a quick way of creating HIV and AIDS awareness to many people.
42. Which of the following parasites destroy wool in sheep?
- Lice
 - Fleas
 - Ticks
 - Mites
43. Which one of the following farming activities would **not** lead to soil erosion?
- Overstocking
 - Deforestation
 - Ploughing across the slope
 - Ploughing along the slope
44. Fuel can be obtained from the following materials.
- sawdust
 - Solar heater
 - Charcoal
 - Firewood
 - Coffee husks
 - Cow dung

Which among the sources of energy listed above help to conserve trees?

- (i) (iii) (v) (vi)
 - (i) (ii) (v) (vi)
 - (ii) (v) (iv) (vi)
 - (i) (iii) (iv) (vi)
45. Which one of following shows the correct order of the processes that take place when ice is heated until steam is formed and the steam cooled to form water?
- Melting, vaporization, condensation
 - Vaporization, melting, condensation
 - Vaporization, condensation, melting
 - Melting, boiling, freezing

46. A boat sinks deeper in a fresh water lake than in sea water. This happens because sea water differs from lake water in
- mass
 - volume
 - density
 - pressure.

47. The diagram below represents a stick which was placed below a glass jar half filled with water.



The part of the stick viewed through water appeared to be larger in size than the part viewed outside glass jar because rays of light were

- refracted
 - reflected
 - dispersed
 - magnified
48. Which of the following mixtures **cannot** be separated by dissolving, filtering and evaporation?
- Dust and salt
 - Salt and sugar
 - Sand and sugar
 - Maize flour and sugar

49. The table below shows characteristics of flowers labeled U, V, W and X.

Flower	Characteristics
U	has nectar, large petals
V	strong scent, red in colour
W	feathery stigma, anthers outside the flower
X	loosely attached anthers, large amount of pollen.

Which one of the following pair of flowers are insect pollinated?

- A. U and V
- B. W and X
- C. V and W
- D. U and X

50. Which of the following planets are in the fifth, sixth and seventh positions from the sun respectively?

- A. Saturn, Jupiter, Uranus
- B. Jupiter, Uranus, Saturn
- C. Jupiter, Saturn, Uranus
- D. Uranus, Saturn, Jupiter