4. Which one of the following changes takes place during adolescence in boys only?
A. Fast body growth.
B. Growth of pubic hair.
C. Chest and shoulders become broader.
D. Releasing of sex cells.

5. Which one of the following statements is TRUE about HIV and AIDS?
A. All HIV positive people have AIDS.
B. During the window stage a person may test negative.
C. It can be transmitted by sharing utensils.
D. It is not spread during the asymptomatic phase.

6. Which one of the following is NOT a communicable disease?
A. Whooping cough.
B. Tetanus.
C. Tuberculosis.
D. Measles.

7. A child suffering from kwashiorkor should be given a diet rich in
A. carbohydrates.
B. fats.
C. vitamins.
D. proteins.

8. Wearing protective clothing while walking in stagnant water can prevent one from contracting
A. bilharzia
B. typhoid
C. typhoid and cholera
D. bilharzia and cholera.

9. Which one of the following statements is CORRECT according to immunization schedule of infants?
A. The first dose of polio is given at 6 weeks.
B. DPT vaccine is given at birth and at 10 weeks.
C. DPT and measles vaccines are given at 14 weeks.
D. Polio and BCG vaccines are given at birth.

10. Planets appear bright because they
A. reflect light
B. produce light
C. all twinkle
D. are large.

11. A pupil gave the following reasons as to why dairy cattle are given commercial feeds.
(i) To increase milk production.
(ii) Given only to cattle under zero grazing.
(iii) To supplement other feeds.
(iv) Only when fodder crops and pasture are not available.

Which two reasons are CORRECT?
A. (i) and (iii).
B. (ii) and (iv).
C. (i) and (iv).
D. (ii) and (iii).

12. The diagram below represents a set-up that is used to lift a load.

To investigate the force required to lift the load a spring balance must be at
A. P
B. Q
C. R
D. S.
13. The following are some methods of preserving foods:
   (i) smoking
   (ii) drying
   (iii) freezing
   (iv) salting
   (v) canning

Which methods are traditionally:
A. (ii), (iv) and (v).
B. (ii), (iii) and (v).
C. (i), (iii) and (iv).
D. (i), (ii) and (iv).

14. Which one of the following pairs of machines belongs to the same group as a ladder?
A. Claw hammer and bottle opener.
B. Spade and fishing rod.
C. Staircase and a road winding uphill.
D. Handcart and wheelbarrow.

15. The reason why an ordinary jiko without a clay lining is not recommended for use is because
A. it pollutes the environment
B. of the large amounts of charcoal used
C. it takes a long time when cooking
D. it gets too hot to hold.

16. The following are liquids added together in glass bottles labelled P, Q, R and S by some pupils.
   P – kerosene and cooking oil
   Q – water and cooking oil
   R – milk and water
   S – milk and kerosene

Which glass bottle contains liquids that cannot be separated by decanting?
A. P
B. Q
C. R
D. S

17. Which one of the following plants is green and non-flowering?
A. Mould.
B. Onion.
C. Sisal.
D. Moss.

18. Which one of the following consists of a pair of storage pests?
A. Rats and aphids.
B. White ants and rats.
C. Aphids and cutworms.
D. White ants and cutworms.

19. Which one of the following is a possible food chain that could be found in a grassland inhabited by hawks, frogs, snakes, mice and grasshoppers?
   A. Grass → grasshoppers → frogs → snakes.
   B. Grass → grasshoppers → frogs → mice.
   C. Grass → snakes → mice → hawks.
   D. Grass → grasshoppers → hawks → snakes.

20. Which one of the following is TRUE for both chickens and frogs? Both
   A. have a constant body temperature
   B. have scales
   C. breath by lungs
   D. feed on insects only.

21. Which one of the following is NOT a rotational method of grazing?
A. Paddocking.
B. Herding.
C. Tethering.
D. Strip.

22. Birds which feed on nectar have
   A. short pointed beaks
   B. strong curved beaks
   C. long slender pointed beaks
   D. long slender curved beaks.

23. In which one of the following practices is water re-used?
   A. Using dirty water from the kitchen for watering plants.
   B. Collecting rainwater from the roof for domestic uses.
   C. Getting clean water from dirty water by boiling and cooling the steam.
   D. Storing water in dams to be used in irrigation.

24. The texture of a soil type depends on the
   A. amount of water in the soil
   B. organic matter in the soil
   C. amount of mineral particles in the soil
   D. size of soil particles.

25. The component that makes up 0.97% of air is used in
   A. rusting
   B. preservation of soft drinks
   C. electric bulbs
   D. making proteins.

26. Which one of the following pairs of processes is as a result of increase in temperature?
   A. Melting and evaporation.
   B. Condensation and freezing.
   C. Condensation and evaporation.
   D. Melting and freezing.
27. The diagram below shows a set up that was used to demonstrate a certain property of matter.

![Diagram of a setup with coloured water rising up the straw]

The coloured water rises up the straw because
A. liquids expand when heated
B. liquids occupy space
C. air occupies space
D. air expands when heated.

28. A sufuria made up of steel weighing 1000 g floats on water while a nail made of iron weighing 50 g sinks.

This is because of difference in
A. type of material
B. shape
C. volume
D. mass.

29. Which of the following materials will NOT be required in an experiment to show that pressure in a liquid increases with depth?
A. Tin can.
B. Water.
C. Nail.
D. Collecting jar.

30. The diagram below represents a circuit that can be used to make a temporary magnet.

![Diagram of a circuit with cells, copper wire, coil, and nail]

The energy transformation that occurs at the section marked P is
A. electrical → magnetic
B. chemical → electrical
C. heat → electricity
D. chemical → magnetic.

31. The following are forms of energy:
   (i) heat
   (ii) electricity
   (iii) light
   (iv) sound

   The two forms of energy that DO NOT require a medium for transmission are
A. (ii) and (iv)
B. (i) and (iii)
C. (i) and (ii)
D. (iii) and (iv).

32. The following practices help to conserve energy:
   (i) using improved firewood jikos
   (ii) switching off lights that use hydro-electric power when not needed
   (iii) using public transport whenever possible
   (iv) using biogas for cooking

   Which two practices conserve non-renewable sources of energy?
A. (i) and (ii)
B. (ii) and (iii)
C. (i) and (iv)
D. (iii) and (iv).

33. Which of the following is a recommended practice to avoid being struck by lightning?
A. Sheltering under a tree.
B. Using an umbrella when in an open field.
C. Sheltering while leaning on a wall.
D. Wearing rubber shoes with thick soles.

34. Which one of the following groups consists of only foodstuffs that are used for body building and repair?
A. Rice, oranges, meat.
B. Wheat, fish, maize.
C. Beans, potatoes, groundnuts.
D. Eggs, peas, milk.

35. The function of fibre in the human diet is to
A. provide the body with nutrients
B. transport digested food
C. prevent constipation
D. help in digestion of food.

36. Which one of the following statements is NOT TRUE about the force that opposes movement? The force
A. can be reduced by streamlining
B. makes the load heavier
C. increases effort required to move the load
D. produces heat.
37. A farmer noticed small and shallow channels forming in the soil in the garden due to running water. This type of soil erosion is called
A. splash
B. rill
C. sheet
D. gully.

38. Which one of the following plants is a cereal?
A. Millet
B. Coffee
C. Sunflower
D. Peas.

39. Which one of the following consists of a pair of plants that CANNOT make their own food?
A. Fern and pine
B. Toadstool and moss
C. Puffballs and mould
D. Cedar and yeast.

40. Which one of the following pairs of parasites can be controlled by spraying?
A. Ticks and fleas
B. Liver flukes and isosce flies
C. Fleas and liver flukes
D. Ticks and tapeworms.

41. Which one of the following sources of electricity pollutes the environment?
A. Geothermal
B. Wind-driven generators
C. Hydro-electric generators
D. Petrol-driven generators.

42. Which one of the following is a natural way of lighting a house? Using a
A. candle
B. torch
C. hurricane lamp
D. transparent roof.

43. Which one of the following components is found in all environments?
A. Plants
B. Soil
C. Air
D. Water.

44. Which one of the following groups of methods can be used to separate solid mixtures only?
A. Sieving, picking, winnowing
B. Picking, use of magnet, decanting
C. Winnowing, sieving, filtration
D. Use of magnet, filtration, decanting.

45. Which one of the following DOES NOT function the same way as a bicycle dynamo when used to produce electricity?
A. Hydro-electric generator
B. Car battery
C. Diesel generator
D. Wind driven turbines.

46. The diagram below represents a simple machine.

```
   P
    R
  Q
```

Which of the positions labelled P, Q and R would represent the load, effort and fulcrum when the machine is in use?

<table>
<thead>
<tr>
<th>Load</th>
<th>Effort</th>
<th>Fulcrum</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Q</td>
<td>R</td>
</tr>
<tr>
<td>R</td>
<td>Q</td>
<td>P</td>
</tr>
<tr>
<td>Q</td>
<td>P</td>
<td>R</td>
</tr>
<tr>
<td>R</td>
<td>Q</td>
<td>P</td>
</tr>
</tbody>
</table>

47. The diagram below represents a block of wood being pushed along a surface towards point X.

```
               J
               K
              ___________
             X    M
```

Which one of the arrows represents the direction of the force of friction?
A. J
B. K
C. L
D. M.

48. Which one of the following consists of only materials that are ALL non-magnetic?
A. Aluminium foil, a shilling coin
B. Iron nails, staple pins
C. Metal scissors, steel wool
D. Piece of glass, sewing needle.
49. The reason why coloured water is used in the construction of a liquid thermometer is to
A. make it visible
B. make it expand faster
C. make it absorb more heat
D. increase its density.

50. Which one of the following is the largest planet?
A. Mercury.
B. Saturn.
C. Jupiter.
D. Earth.