



DOUBLE MERIT NATIONAL EXAMINATION

STANDARD 7 - YEAR 2021

SCIENCE

Time: 1hour 40minutes

2ND MERIT

READ THESE INSTRUCTIONS CAREFULLY

1. You have been given this question booklet and a separate answer sheet. The question booklet contains 50 questions.
2. Do any necessary rough work in this booklet.
3. When you have chosen your answer, mark it on the **ANSWER SHEET**, not in the question booklet.

HOW TO USE THE ANSWER SHEET

4. Use an ordinary pencil.
5. Make sure that you have written on the answer sheet:

YOUR INDEX NUMBER

YOUR NAME

NAME OF YOUR SCHOOL

6. By drawing a dark line inside the correct numbered boxes, mark your full Index Number (i.e. School Code Number and the three-figure Candidate's Number) in the grid near the top of the answer sheet.
7. Do not make any mark outside the boxes.
8. Keep your answer sheet as clean as possible and do not fold it.
9. For each of the questions 1 – 50, four answers are given. The answers are lettered A, B, C and D. In each case only **ONE** of the four answers is correct. Choose the correct answer.
10. On the answer sheet the correct answer is to be shown by drawing a dark line inside the box in which the letter you have chosen is written.

Example

In the question booklet:

33. Which one of the following is the third stage of HIV/AIDS infection?

- A. Incubation
- B. Full blown
- C. Window
- D. Symptomatic

The correct answer is D.

On the answer sheet:

3 (A) (B) (C) (D) 13 (A) (B) (C) (D) 23 (A) (B) (C) (D) 33 (A) (B) (C) (D) 43 (A) (B) (C) (D)

In the second set, the box with the letter D printed in it is marked.

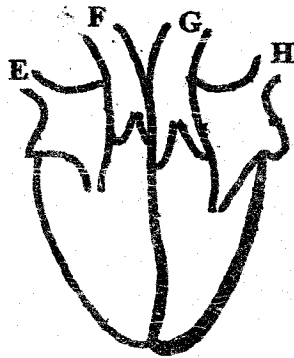
11. Your dark line **MUST** be within the box.
12. For each question **ONLY ONE** box is to be marked in each set of four boxes.

This question paper consists of 8 printed pages.

1. The function of haemoglobin in red blood cells is to
 - A. transport digested foods
 - B. clot blood after an injury
 - C. combine with oxygen gas
 - D. carry carbon dioxide gas

2. Which one of the following is a social effect of drug abuse?
 - A. Impaired judgement
 - B. Withdrawal
 - C. Addiction
 - D. Loss of income

3. The diagram below represents the heart of a mammal.



In which pair of blood vessels is the blood under highest pressure?

- A. E and F
 - B. F and G
 - C. G and H
 - D. E and G
-
4. Which one of the following components of environment do all animals depend on directly?
 - A. Air and soil
 - B. Water and soil
 - C. Water and air
 - D. Soil and plants

5. In female reproductive system, which part receives sperms and allows delivery of the foetus?
 - A. Ovary
 - B. Oviduct
 - C. Uterus
 - D. Vagina

6. The diagram below shows the human digestive system.



The juice produced at the part labelled Q is used to digest

- A. proteins
 - B. vitamin and mineral salts
 - C. starchy foods
 - D. body building food
-
7. Which of the following parts of breathing system are both involved in cleaning, warming and moistening air?
 - A. Trachea and nose
 - B. Lungs and trachea
 - C. Nose and lungs
 - D. Nose and bronchus

8. The following are characteristics of a certain type of tooth.

i) *sharp*

ii) *chisel shaped*

iii) *has one root*

Type of tooth described above is likely to be

- A. molar
- B. incisor
- C. premolar
- D. canine

9. Which one of the following consists a group of plants that cannot make their own food?

- A. Mould, lichen, yeast
- B. Peas, moss, millet
- C. Toadstool, puffballs, mushrooms
- D. Fern, mould, moss

10. Which of the following pair of diseases can be prevented by vaccination?

- A. Bilharzia, tetanus, measles
- B. Polio, whooping cough, yellow fever
- C. Diphtheria, malaria, cholera
- D. Marasmus, measles, yellow fever

11. If anthers of a flower were cut off before they mature, which of the following statements would be correct?

- A. Germination of pollen grains will not take place
- B. Pollination will not take place
- C. Fertilization will not take place
- D. Ovary will form fruits

12. Which one of the following activities is not a drug abuse?

- A. Taking less dose of prescribed drug
- B. Taking prescribed medicines for long time
- C. Taking medicines prescribed to someone else
- D. Using drug to induce sleep

13. Which one of the following pair of drugs are harmful but are legal in Kenya?

- A. Tobacco and alcohol
- B. Miraa and bhang
- C. Bhang and alcohol
- D. Tobacco and inhalants

14. Which one of the following statement is true about vena cava? It carries

- A. oxygenated blood
- B. blood from the lungs
- C. deoxygenated blood
- D. blood from the heart

15. The vaccines given at nine months after birth protect an infant against

- A. tetanus and yellow fever
- B. diphtheria and measles
- C. measles and yellow fever
- D. tuberculosis and polio

16. Which one of the following statements best describes the term environment?
- The surrounding of a living organism
 - The source of food for living organism
 - The habitat of a living organism
 - The home of a living organism
17. Which one of the following physical changes takes place during adolescence in boys only?
- Increase in body weight and height
 - Production of mature sex cells
 - Chest and shoulders broadens
 - Enlargement of breast
18. Which of the following pair consists of root tuber crops only?
- Arrow roots, cassava, sweet potatoes
 - Irish potatoes, cassava, carrots
 - Yams, carrots, ginger
 - Arrow roots, sugarcane, irish potatoes
19. Which one of the following statements about HIV and AIDs is true?
- HIV and AIDs is curse
 - During window stage a person tests negative
 - People with HIV/AIDs are thin
 - AIDs develop during incubation period
20. Which of the following method would not be effective in controlling the spread of malaria disease?
- Clearing bushes around our homestead
 - Isolating patients with malaria
 - Draining stagnant water
 - Sleeping under treated mosquito nets

21. The following are parts of a flower.

- anthers
- style
- ovary
- stigma

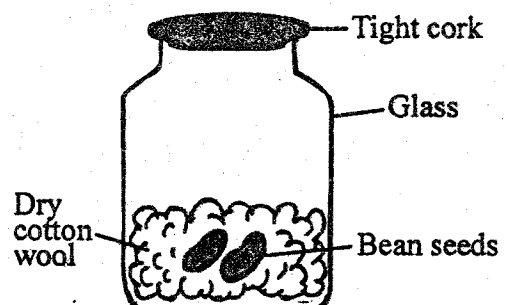
Which pair of parts are involved in pollination?

- i, iv
- i, ii
- iii, iv
- ii, iii

22. Which of the following shows the 4th and 7th planet from the sun respectively?

- Jupiter, Uranus
- Mars, Uranus
- Jupiter, Saturn
- Venus, Neptune

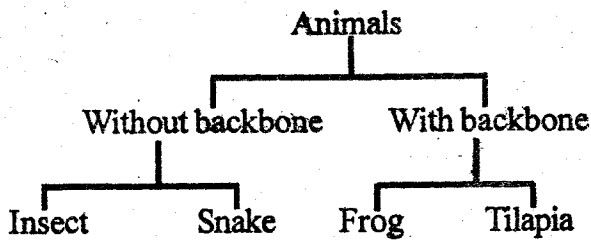
23. When investigating a certain condition necessary for germination bean seeds were placed in a glass container as shown below.



The reason why the bean seeds did not germinate was due to lack of

- soil
- warmth
- moisture
- oxygen

24. A pupil classified some animals as shown in the chart below.



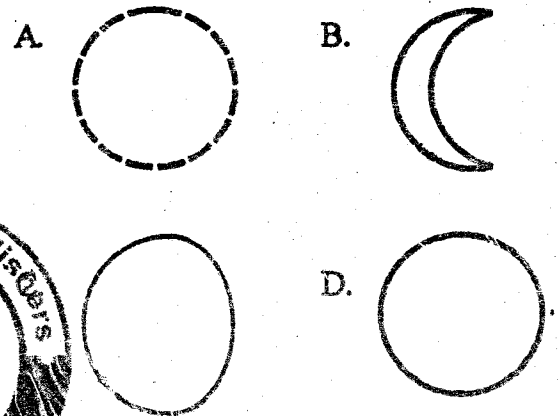
Which of the following animal was wrongly classified?

- A. Tilapia
 B. Frog
 C. Snake
 D. Insects
25. Which one of the following statements is true about sheet erosion?
- A. Forms small and shallow channels
 B. Controlled by making terraces
 C. Occurs below roofs of buildings
 D. Removes a thin uniform layer of top soil
26. Which of the following only consists of energy giving foods?
- A. Lemon and cabbages
 B. Bread and coconut
 C. Fish and milk
 D. Ugali and spinach

27. In an investigation, pupils observed a raised coin in a glass of clean water. The pupils were investigating

- A. reflection of light
 B. dispersion of light
 C. how light travels
 D. refraction of light

28. Which one of the following diagram shows the shape of the new moon?



29. The embryo of a seed is made up of

- A. Cotyledon and plumule
 B. Endosperm and cotyledon
 C. Plumule and endosperm
 D. Radicle and plumule

30. When modelling the solar system, the material used to fix models of the sun and the planets to their respective positions is

- A. manila paper
 B. plasticine
 C. pins
 D. name tags

31. A heap of fresh garden soil was placed in a container covered with a sheet of glass and then heated. Which of the following component of soil was the set-up used to investigate?

- A. Organic matter
- B. Water
- C. Air
- D. Living organisms

32. Which one of the following farm animals are correctly grouped according to their products?

- A. Poultry - eggs and beef
- B. Sheep - mutton and milk
- C. Goats - milk and mutton
- D. Cattle - beef and layers

33. The following materials were assembled by pupils to make a beam balance.

- i) Two similar tins
- ii) Nails
- iii) base stand
- iv) piece of wood

Which one of the following material was missing?

- A. A string
- B. Soft board
- C. Scale
- D. Glass bottles

34. Which one of the following is an advantage of stall feeding?

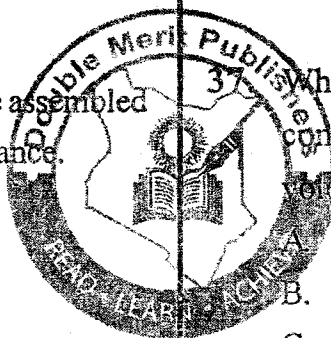
- A. The animals feed on pastures directly
- B. It is cheap to start
- C. Requires alot of labour
- D. Feeds are well utilized without wastage

35. Which of the following pair consists of nutritional deficiency disease caused by lack of minerals in the diet?

- A. Rickets and marasmus
- B. Anaemia and rickets
- C. Anaemia and measles
- D. Marasmus and kwashiorkor

36. Which one of the following is not a reason for lighting a house?

- A. To read comfortably
- B. For safety purposes
- C. To avoid accidents
- D. To warm the house



37. Which one of the following group consists of substances with definite volume and definite shape?

- A. Kerosene, nails and sand
- B. Oxygen, carbon dioxide, inert gases
- C. Stones, pins, milk
- D. Sugar, wood, wax

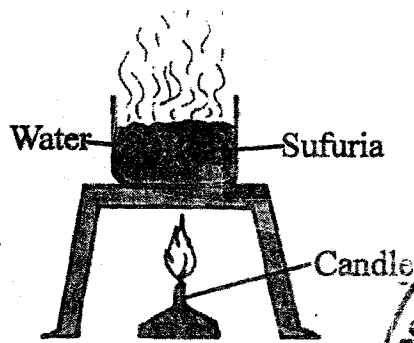
38. In our home draining of stagnant water can prevent the spread of

- A. Malaria and bilharzia
- B. Typhoid and malaria
- C. Cholera and typhoid
- D. Bilharzia and cholera

39. Which one of the following pair of signs and symptoms is for cholera disease only?

- A. Skin rashes and mild diarrhoea
- B. Blood in stool and dehydration
- C. Abdominal pain and sore in the mouth
- D. Violet diarrhoea and abdominal pain

40. The diagram below shows water in a sufuria being heated.



The heat transfer at point X is

- A. convection
 - B. conduction
 - C. radiation
 - D. expansion
41. Which of the following group of foodstuffs can be preserved by use of low temperatures in our homes?
- A. Soda, meat, legumes
 - B. Fish, salt, mutton
 - C. Fresh milk, meat, fruits
 - D. Vegetables, grains, meat

42. Shadows of objects are formed when light

- A. is refracted as it passes through from the water to the air.
- B. falls on opaque objects, the light is stopped and darkness forms behind the object.
- C. falls on a shiny polished and smooth surface.
- D. falls on a surface at an angle.

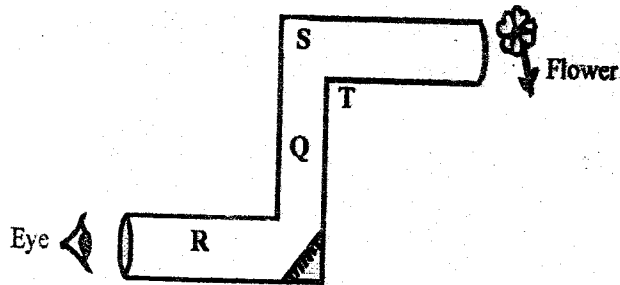
43. Which one of the following is a transparent material?

- A. Manilla paper
- Window panes
- Mirror
- Milk

44. The main constituent of a balanced diet obtained by feeding animals with both salt licks and fish meat is

- A. minerals
- B. fats and oils
- C. carbohydrates
- D. proteins

45. The diagram below represents a pupil observing an object at the corner using a periscope.



For the instrument to work properly a mirror is supposed to be placed at point

- A. Q
- B. R
- C. T
- D. S

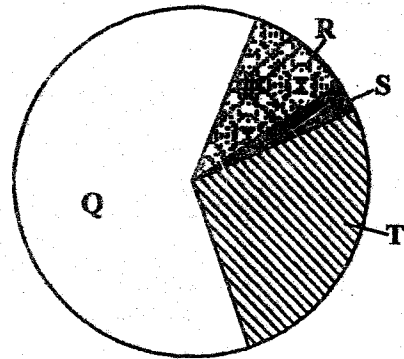
46. Which one of the following pair consists only of materials that would sink in water when their shape are changed?

- A. Wax and wood
- B. Glass and ship
- C. Sufuria and nail
- D. Bottle top and metallic plate

47. Which of the following pair of activity only consists of industrial use of water?

- A. Transport and mixing chemicals
- B. Boat racing and swimming
- C. Washing utensils and making fountain
- D. Cooling machines and mixing chemicals

48. The chart below represents proportion of the components of air.



Which labelled part represents the gas that is necessary for germination?

- A. S
- B. Q
- C. R
- D. T

49. Newton is a unit used for measuring
 A. energy
 B. force
 C. mass
 D. pressure

50. Which one of the following is true about the soil that has high water retention?

- A. Large air spaces
- B. Large soil particles
- C. Low capillarity
- D. Fine texture