



# DOUBLE MERIT NATIONAL EXAMINATIONS

## STANDARD 8 - YEAR 2021

### SCIENCE

2<sup>ND</sup> MERIT

Time: 1hour 40minutes

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 marks 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

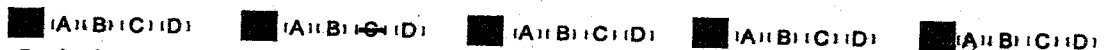
In the question booklet:

13. In feeding relationship, rat belong to the same group as

- A. Eagle
- B. Snake
- C. Antelope
- D. Cheetah

The correct answer is C.

On the answer sheet:



In the box numbered 13, with the letter C 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.

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TURN OVER

1. Which one of the following is formed immediately after fertilization takes place in human being?

- A. Embryo
- B. Mass of cells
- C. Foetus
- D. Zygote

2. Which one of the following characteristics differentiates amphibians from reptiles?

- A. Varying body temperature
- B. Laying unfertilized eggs
- C. Breathing through lungs
- D. Constant body temperature

3. In which of the following parts of the human digestive system does digestion of food takes place.

- A. Oesophagus and stomach
- B. Stomach and small intestines
- C. Small intestines and large intestine
- D. Oesophagus and large intestines

4. Which one of the following statement is correct according to immunization schedule of infants?

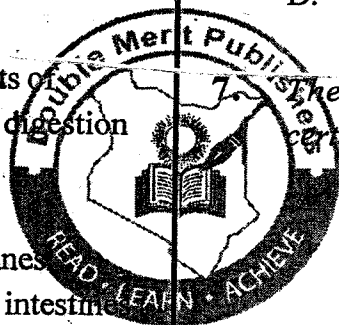
- A. The second dose of polio is given at 10 weeks
- B. D.P.T vaccine is given at birth
- C. Measles and 3<sup>rd</sup> dose of D.P.T vaccines are given at 9 months
- D. Polio and BCG vaccines are given at birth

5. In the structure of the mammalian heart, the blood vessel that carries blood to the left ventricle is

- A. pulmonary artery
- B. aorta
- C. pulmonary vein
- D. vena cava

6. Which of the following group of animal feeds mainly consists of commercial feeds only?

- A. Lucerne, desmodium, clover
- B. Banana stems, maize germ, desmodium
- C. Napier grass, maize stalks, grass
- D. Dairy meal, wheat bran, salt licks



The diagram below represents a certain type of human teeth.



The function of the tooth is

- A. tearing and gripping
- B. cutting and grinding
- C. biting and tearing
- D. cutting and biting

8. Which one of the following statement about reproduction in human being is correct?

- A. The embryo develops into a zygote
- B. Amniotic fluid facilitates gases exchange between the mother and foetus
- C. Labour pain is caused by contraction of the uterine walls
- D. Ovulation takes place in the oviduct

9. What is the meaning of sexually transmitted infections (STI's)? Are diseases

- A. caused by lack of certain type of nutrients in our bodies.
- B. spread through sexual contact with infected persons.
- C. that can be prevented through vaccination.
- D. passed from an infected person to others very easily.

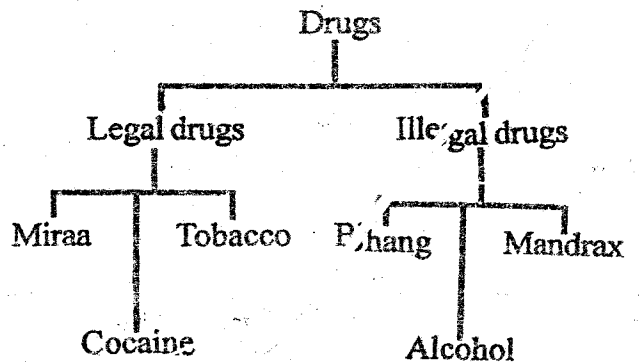
10. Which one of the following materials allows light to pass through but one cannot see through clearly?

- A. Mirror
- B. White paper
- C. Frosted glass
- D. Clean water

11. Which one of the following is not a way of preventing the spread of HIV and AIDs?

- A. Discouraging traditional practices such as F.G.M and wives inheritance.
- B. Advising pregnant mothers to visit voluntary testing and counselling centres.
- C. Proper screening of blood before transfusion.
- D. Campaigning through mass media.

12. A pupil classified drugs as shown in the chart below.



Which drugs were wrongly classified by the pupil?

- A. Cocaine and bhang
- B. Tobacco and mandrax
- C. Alcohol and cocaine
- D. Miraa and alcohol

Which of the following pair consists of most plentiful components of the environment?

- A. Air and water
- B. Plants and animals
- C. Plants and air
- D. Water and plants

14. The following are processes that take place during birth in human being.

- i) Tying and cutting of the umbilical cord
- ii) Bursting of the amnion sac
- iii) Contraction of the uterine walls
- iv) Dilation of the cervix

Which of the following is the first process to take place?

- A. iii
- B. i
- C. iv
- D. ii

15. Which of the following is the main information usually given when obtaining medicine from a doctor?

- A. Disposal method of the medicine
- B. Duration to complete the dose
- C. How to store the medicines
- D. The prescribed dose

16. Which one of the following effects of drug abuse consists of only health effects?

- A. Induced accidents, impaired judgement, death
- B. Fighting, rape, truancy
- C. Blackout, fits, lack of concentration
- D. Addiction, loss of income, withdrawal

17. Pupils observed a sheep tied on a post using a rope to graze. This method of grazing is known as

- A. herding
- B. zero grazing
- C. strip grazing
- D. tethering

18. The diagram below shows a sign of unhealthy crop.



- The sign is likely to be
- A. leaves discolouration
  - B. wilting
  - C. stunted growth
  - D. leaves curling

19. Which one of the following is a safety measure against lightning when it is raining?

- A. Leaning against walls
- B. Walking on open field
- C. Wearing rubber shoes
- D. Sheltering under trees

20. Which one of the following crop pest is wrongly matched to the part of the plant it damages?

<u>Pest</u>	<u>Part damaged</u>
A. Weevils	grains
B. Cutworms	stem
C. Rodents	leaves
D. Aphids	leaves

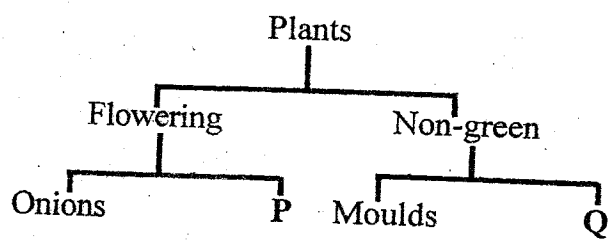
21. Animal provides plants with

- A. shelter and shade
- B. habitat and pollination
- C. nutrients and carbon dioxide
- D. pollination and oxygen

22. Which one of the following disease cannot be prevented by maintaining proper hygiene and sanitation?

- A. Cholera
- B. Typhoid
- C. Anaemia
- D. Bilharzia

23. The chart below shows simple classification of plants.



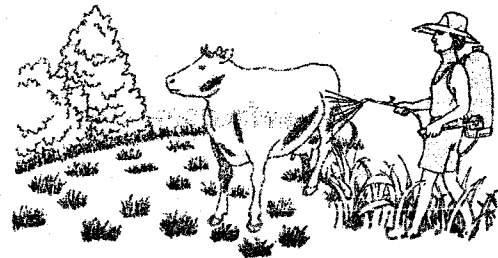
Which plants can be represented by letters marked P and Q respectively?

- |           |           |
|-----------|-----------|
| <u>P</u>  | <u>Q</u>  |
| A. Fern   | Grass     |
| B. Millet | Moss      |
| C. Algae  | Mushroom  |
| D. Pawpaw | Toadstool |

24. When modelling the solar system, which of the following is the first activity to be carried out?

- A. Pasting the manila paper on soft board.
- B. Drawing circles on manila paper to represent orbits.
- C. Modelling the planets and the sun using plasticine.
- D. Placing the model of the sun at the centre using a pin.

25. The diagram below shows a method of controlling livestock parasites.



Which of the following pair of parasites can be controlled using the above method?

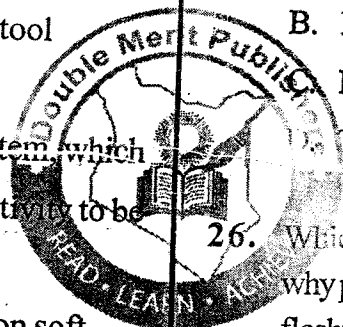
- A. Ticks and mite
- B. Liver flukes and tapeworms
- C. Round worms and flea
- D. Tsetse flies and tapeworms

26. Which of the following is the main reason why plants that grow in dry areas have thick fleshy stem?

- A. For storing manufactured foods
- B. To reduce absorption of water
- C. To reduce water loss
- D. For storing water

27. Which one of the following components of blood is correctly matched with its function?

<u>Blood component</u>	<u>Function</u>
A. Plasma	transport digested food
B. White blood cells	transport oxygen to body parts
C. Platelets	fight germs
D. Red blood cells	clotting blood



28. Which one of the following organ is correctly matched with one of its functions?

Organ    Function

- A. Lungs    removes excess water and salt
- B. Kidney    excretes urine
- C. Skin    removes sweat and carbon dioxide
- D. Kidney    excretes excess water and carbon dioxide

29. Which one of the following is a way of controlling water pollution?

- A. Harvesting rain water
- B. Using water sparingly
- C. Recycling sewage water
- D. Controlled use of farm chemicals

30. In a maize seed which of the following part protects the embryo?

- A. Testa
- B. Cotyledon
- C. Endosperm
- D. Plumule

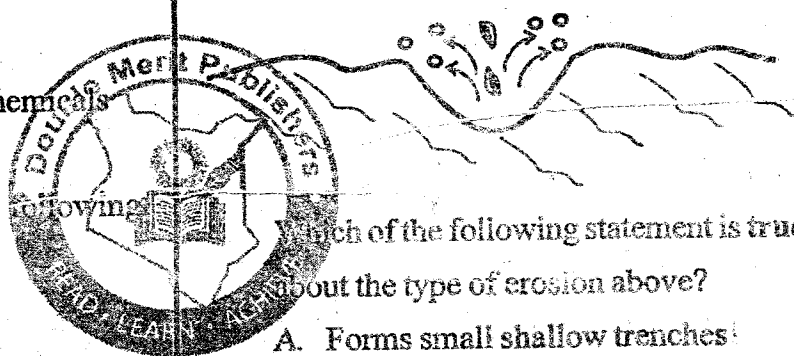
31. Which one of the following uses of water is **not** practiced on the farm?

- A. Cleaning tools
- B. Mixing chemicals
- C. Preparing of soft drinks
- D. Irrigation

32. In an investigation, a pupil holding a metal rod placed it onto a source of fire and after few minutes the hand felt some hotness from the rod. Which was the best conclusion made?

- A. Solids conducts heat
- B. Metals bend when heated
- C. Metal are bad conductor of heat
- D. Metal expands when heated

33. The diagram below shows a certain type of soil erosion.



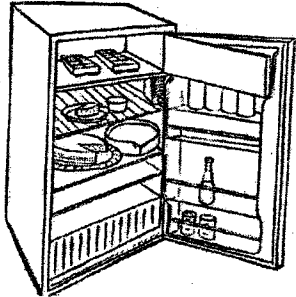
Which of the following statement is true about the type of erosion above?

- A. Forms small shallow trenches
- B. Mainly controlled by terracing
- C. Occurs below roofs of buildings
- D. Thin layer of top soil is carried away

34. In a certain investigation pupils at different positions had sound from a ringing bell. Which of the following aspect of sound were they investigating?

- A. Loud and soft sound
- B. Meaning of special sound
- C. Direction of sound
- D. Sound pollution

35. The diagram drawn below shows an electric appliances used in food preservation.



Which of the following pair of foodstuffs can be preserved using the above method?

- A. Meat and legumes
  - B. Fruits and grains
  - C. Fish and fresh milk
  - D. Beef and maize seeds
36. In an investigation, pupils observed their images in a mirror. The pupils were likely to be investigating.
- A. dispersion of light
  - B. refraction of light
  - C. how light travels
  - D. reflection of light

37. Which one of the following nutritional deficiency disease is caused by lack of calcium minerals and vitamin D in our body?
- A. Malaria
  - B. Marasmus
  - C. Rickets
  - D. Anaemia

38. A plant with shallow roots and flexible stem is also likely to
- A. have sunken stomata
  - B. shed off their leaves
  - C. have flat broad leaves
  - D. have thick cuticles

39. Which one of the following pair of materials are good conductors of electricity?

- A. Iron nail and biro pen case
- B. Sulfur and paper
- C. Plastic and wood
- D. Staple pins and wire

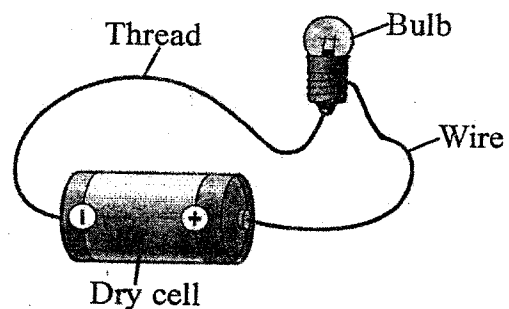
40. Which one of the following consists of foodstuffs that are mainly body building?

- A. Chick, yams, arrowroot
- B. Beef, chapati, pawpaw
- C. Fish, milk, eggs
- D. Oranges, tomatoes, melon

41. Which of the following disease is characterized by sores on genitals and painful swelling in lymph nodes?

- A. Chancroid
- B. Gonorrhoea
- C. Typhoid
- D. Syphilis

The diagram drawn below shows a set-up used to demonstrate a simple



Which mistake was made in the circuit for the bulb did **not** light?

- A. Using a single dry cell
- B. Not having a switch in the circuit
- C. Using a poor conductor of electricity
- D. Using a wire

43. The following are advantages of fertilizers and manure.

- i) nutrients are released immediately
- ii) improves soil structure
- iii) have specific amount of nutrients
- iv) binds soil particles together

Which two statements are true about fertilizers?

- A. ii, iii
- B. ii, iv
- C. i, iii
- D. i, iv

44. In investigating capillarity pupils were provided with water and different types of soil. Which other materials were required?

- A. Cotton wool, funnels, measuring jar
- B. Cotton wool, funnels, biro pen tubes
- C. Trough, biro pens tubes, collecting jar
- D. Cotton wool, trough, biro pen tubes

45. In which of the following methods of separation is the most appropriate to separate a mixture of sand and salt after adding water?

- A. Decanting
- B. Evaporating
- C. Sieving
- D. Filtering

46. Which one of the following group of materials consists of **only** non-magnetic materials?

- A. Wood, aluminium, copper
- B. Cobalt, steel, pins
- C. Plastics, iron, rubbers
- D. Paper, glass, staples

47. The following are uses of some components of air.

- i) Germination
- ii) Preserving soft drinks
- iii) Electric bulbs
- iv) burning

Which of the following is a use for the component that makes up 0.03% of air?

- A. iv
- B. ii
- C. iii
- D. i

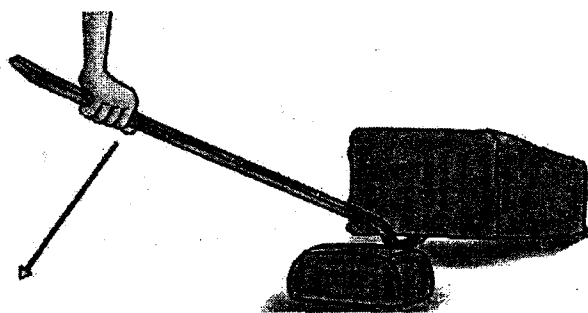
48. Which one of the following pair consists of substances that are in the same state of matter **only**?

- A. Flour and glue
- B. Ice and water
- C. Oil and milk
- D. Wax and oxygen

49. In which one of the following activities does a person need to reduce friction?

- A. Stopping a moving object
- B. Lighting a match stick
- C. Sliding a crate of soda long the floor
- D. Writing on a chalkboard

50. The diagram below represents a lever on use.



The lever is likely to be a

- A. spade
- B. claw hammer
- C. lid opener
- D. crowbar