

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
PRIMARY SCHOOL LEAVING EXAMINATION

05E


SCIENCE AND TECHNOLOGY

Time: 1:30 Hours

Year: 2021

Instructions

1. This paper consists of sections A and B with a total of **forty five (45)** questions.
2. Answer **all** the questions in each section.
3. Read all the instructions in the **special answer sheet (OMR)**.
4. Fill in **all** the required information in the OMR form.
5. **Shade the digits** of your **Examination Number** in the respective places of the OMR form.
6. **Shade** the letter of the correct answer for questions **1 to 40** in the answer sheet provided. For example, if the correct answer is A, shade as follows:

	[B]	[C]	[D]	[E]
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7. If you have to change your answer, you must use a **clean rubber** to rub out the shading **very neatly** before shading the new one.
8. Use **HB pencil** for answering questions **1 to 40** and a **blue or black** ink pen for answering questions **41 to 45**.
9. All communication devices and any unauthorized materials are **not** allowed in the examination room.

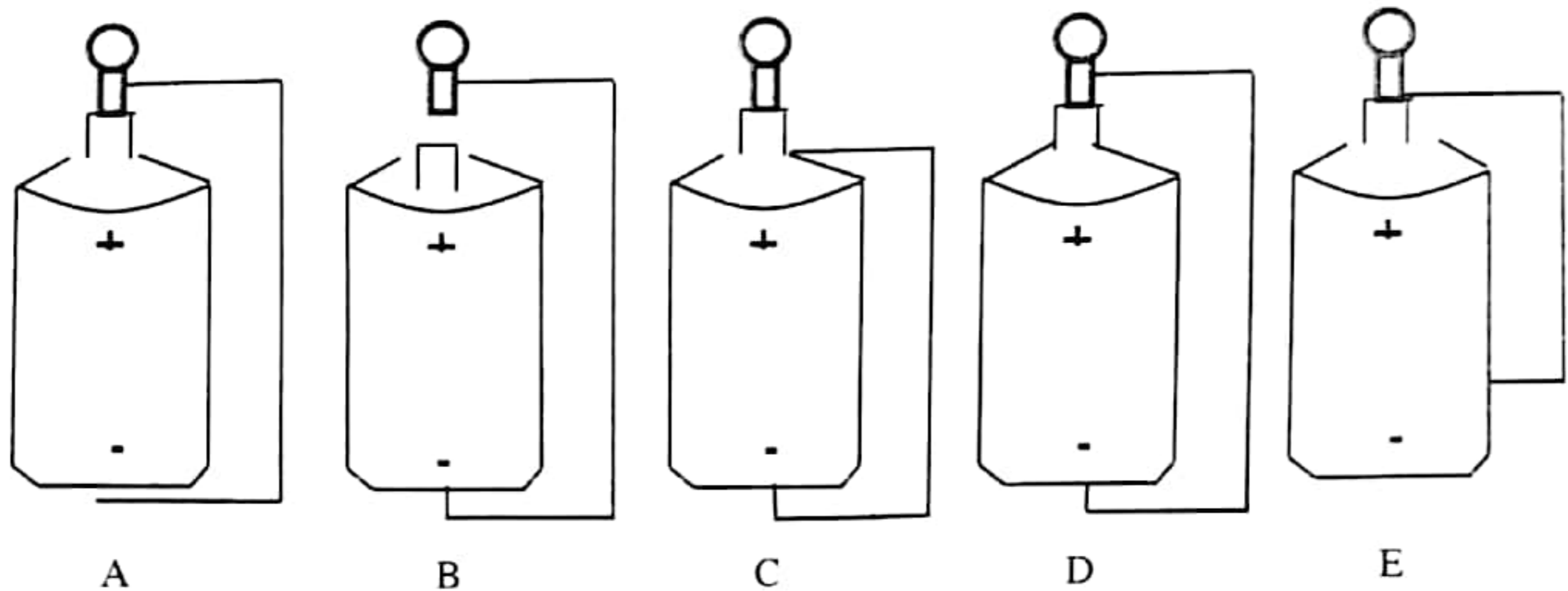


SECTION A (40 Marks)

For questions 1 – 40, choose the correct answer and **shade its corresponding letter** in the special answer sheet (OMR) provided.

- The human excretory system is composed of four major organs. Which organ is responsible for the excretion of carbon dioxide and water in form of vapour?
A Lungs B Kidney C Liver D Nose E Skin
- An old man was staggering along the road after drinking a lot of alcohol. Which part of the ear was affected by alcohol?
A Stapes B Oval window C Semicircular canals D Cochlea
E Auditory nerve
- Some people have poor vision at night. Which vitamin does the person with this problem lack?
A A B B1 C B2 D D E C
- A mother felt dizzy and her body became weak. After medical examination, the doctor found out that she had blood deficiency. What type of food would you advise her to eat?
A Food with enough sugar. B Food containing iron. C Food with enough oil.
D Carbohydrate food only. E Food without salt.
- Your friend fails to see well a ball which is placed close to him. Which type of glasses would you recommend for him?
A Convex lens B Concave lens C Double lens
D Large lens E Small lens
- My brother cut his finger while pilling sweet potatoes. He tied the wound with a bandage, but he continued to bleed for a long time. What did the blood of my brother lack?
A White blood cells B Platelets C Plasma
D Minerals E Red blood cells
- Farmers were educated by an expert in agriculture to stop using agriculture methods that cause soil erosion. Which method are the farmers **not** allowed to use?
A To plant trees in the farm. B Terrace farming. C Contour farming.
D Applying steps farming. E Clearing the farm using fire.
- Which group represents animals with a spinal cord?
A Snake, Zebra, Snail and Hyena.
B Lizard, Butterfly, Zebra and Lion.
C Crocodile, Antelope, Elephant and Grasshopper.
D Antelope, Crocodile, Hippopotamus and Giraffe.
E Snail, Crab, Elephant and Zebra.

9. Your young brother was surprised to see the symbol of a skull on electric poles and on the gallons of toilet detergents. What does this sign in those areas indicate?
- A Poison or danger B Flammable C Corrosive
D Explosive E Irritant
10. Standard five pupils did an assignment of making a simple electric circuit using a dry cell, wire and bulb. Which group succeeded to light the bulb?



11. A pupil witnessed the school building collapsing after being hit by lightning. What do you recommend to be done to buildings so that such incidences do not occur in other buildings?
- A They should be constructed using stones.
B They should be constructed using thick wall.
C They must have walls to protect lightning.
D They must be installed with earth wire.
E They must be installed with lightning rod.
12. Small particles of iron have entered into the eyes of a steel rod factory worker and he needs help. What would you do in order to help him?
- A Wash his face using clean water and soap.
B Use a magnet that will attract those particles.
C Use cotton buds to remove the particles.
D Use a clean cloth to wipe inside the eye.
E Make the person bend for the particles to fall down.
13. John looked at the surface of stagnant water and saw his image. Which characteristic of light is displayed by this action?
- A Travelling B Bending C Passing D Reflection E Absorption
14. Which reason makes biogas to be better than fire wood as a source of energy?
- A It does not produce smoke when used. B It gives out oxygen gas.
C It gives out carbon dioxide gas. D It is costless in production.
E It is used in small quantity.

15. A plant absorbs water molecules from the soil through roots to different parts. Which way does the plant use to absorb water?
 A Osmosis B Diffusion C Distribution D Propagation E Sucking
16. Which action results into the formation of a new matter?
 A Dissolving sugar in water. B Souring of milk. C The change of water to vapour.
 D Adding salt in food. E Boiling a mixture of wax and water.
17. You friend asked you for assistance to open Microsoft excel. Which steps would you follow?
 A Click start menu → Microsoft office → Microsoft excel.
 B Click start menu → Microsoft word → Microsoft excel.
 C Click start menu → Microsoft excel → Microsoft office.
 D Click start menu → Microsoft excel → Microsoft word.
 E Click start menu → Microsoft office → Microsoft word.
18. The head teacher at Makuti Primary School wants to change the system of keeping pupils attendance records from the manual attendance book to the electronic system. Which electronic machine would you advice to be used?
 A Television B Computer C Decoder D System Unit E Router
19. The Science and Technology teacher has requested you to have a gmail account. Which first step would you follow to get the account?
 A To visit the www.gmail.com website.
 B To fill all information needed in the gmail form.
 C To fill the phone number and birthdate in the gmail form.
 D To choose the type of address you want in the gmail form.
 E To visit the website "www.yahoo.com" and write the password correctly.
20. The news broadcast reported that most of the radios in Magunga village use the small loop type antenna. What disadvantage do they experience due to the use of that type of antenna?
 A They cause defect of radio.
 B They cause loss of electrical energy.
 C They destruct speakers.
 D They have high maintenance coast.
 E They have electromagnetic interference.
21. Why is it advised to shut down the computer by following the correct procedure?
 A To protect it against unexpected power failure.
 B To protect it from falling down.
 C To reduce heat generated within the computer.
 D To protect it against computer virus.
 E To avoid losing unsaved information.

22. The Kiswahili subject teacher sent pupils' results to their parents by using an electronic mail (e-mail) but they did not receive them. Which important thing did the teacher fail to consider when sending the e-mail?
- A Writing the receivers' e-mail address correctly.
 B Writing the heading of the message.
 C Writing the sender e-mail address correctly.
 D Signing out his e-mail account after using.
 E Allowing the web browser to remember the password.
23. Complex machines are made up of two or more simple machines. What is the importance of that make up?
- A To increase efficiency. B To increase attraction. C To increase friction.
 D To increase velocity. E To reduce friction.
24. A lever has three main parts which are arranged in a specific order. Which arrangement best represents a third class lever?
- A Effort, load and fulcrum. B Fulcrum, effort and load. C Fulcrum, load and effort.
 D Load, fulcrum and effort. E Effort, fulcrum and load
25. Which formula gives the relationship between mechanical advantage, load and effort in a pulley system?
- A $\text{Mechanical advantage} = \frac{\text{load}}{\text{effort}}$. B $\text{Load} = \frac{\text{mechanical advantage}}{\text{effort}}$
 C $\text{Load} = \frac{\text{effort}}{\text{mechanical advantage}}$. D $\text{Effort} = \frac{\text{mechanical advantage}}{\text{load}}$.
 E $\text{Effort} = \text{mechanical advantage} \times \text{load}$.
26. Standard four pupils were asked to bring complex machines to be used in learning its parts. Which tools did they bring?
- A Bicycle, sewing machine and beam balance.
 B Mortise lock, bicycle and claw hammer.
 C Mortise lock, sewing machine and bicycle.
 D Sewing machine, bicycle and bottle opener.
 E Beam balance, mortise lock and bicycle.
27. Which is the unit of resistance in electricity?
- A Volt B Ohm C Voltmeter D Ampere E Ammeter
28. Which set contains acidic substances?
- A Orange and wood ash. B Lemon and wood ash. C Wood ash and soda ash.
 D Orange and lemon. E Orange and soda ash.

29. White, red, black, yellow and green clothes made of the same material were washed and kept in a place to dry from sunlight. Clothes of which colour will be the first to dry up?
A White B Red C Black D Yellow E Green
30. Your friend's clothes caught fire which was caused by petrol explosion. What are you supposed to do in order to put off the fire?
A Remove all the victim's clothes.
B Cover the victim with a cold piece of cloth.
C Splash the victim with water.
D Cover the victim with a heavy blanket.
E Take the victim to the hospital.
31. A hunter was bitten by a snake on his leg. What kind of first aid is he supposed to be given?
A Lay the victim down with the legs raised up.
B Take the victim to hospital.
C Scrub with ashes and salt.
D Tighten the top part of the bitten leg.
E Wash him/her by using clean water and soap.
32. Your grandfather is a short sighted person. Which food would you recommend him to use so as to solve the problem?
A Bananas, oranges and groundnuts
B Rice, pineapple and meat
C Mango, carrots and green vegetables.
D Carrots, cassava and beans
E Bread, bananas and cassava.
33. The students were not allowed to throw the plastic bottles of water in the school fields after the use in order to prevent environmental pollution. Which way would you advice to be used to prevent bottles to continue polluting the environment?
A Burning them
B Return them to the factory
C Break them into pieces and throw away
D Bury them in a pit
E Keep them in the store
34. The Head prefect led the Standard Three pupils to clean the school environment so as to destroy mosquito breeding sites. Which main activities did they do?
A Slashing and filling up water pools
B Sweeping and planting trees
C Planting flowers and slashing
D Removing cobwebs and mopping
E Covering full rubbish pits and digging new ones

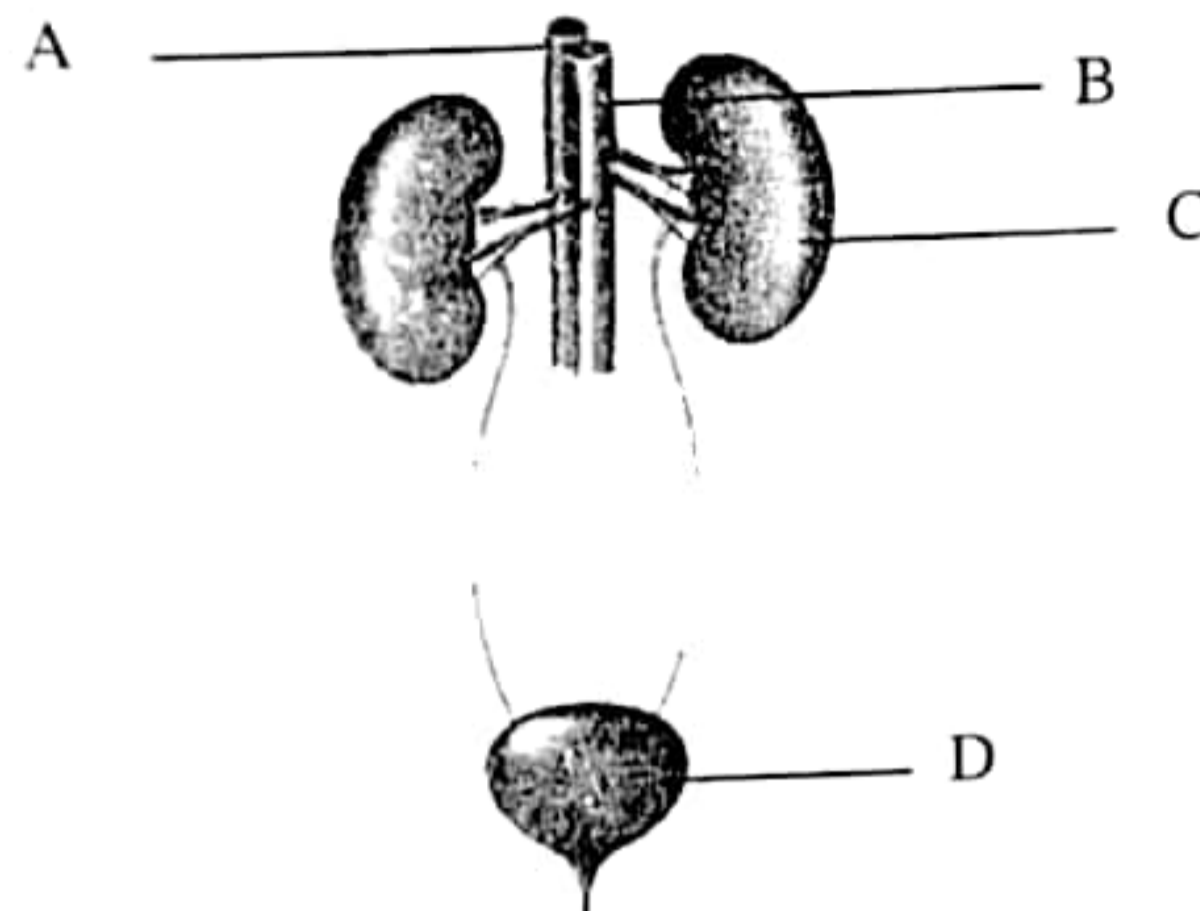
35. Which of the following does not relate to the health principles which are required to be followed by each one in order to have good health?
- A Eat balanced diet B Environmental cleanliness
C Using clean and safe water D Knowing different games
E Resting and sleeping
36. Which diseases are caused by the inheritance of disorders in genes from one generation to another?
- A Epilepsy and bilharzia B Sickle cell and haemophilia
C Albinism and hepatic fever D Asthma and tuberculosis
E Haemophilia and gonorrhoea
37. What kind of food are the people who do manual work of carrying luggage supposed to eat in large quantity?
- A Vitamins B Oils C Minerals D Carbohydrates E Proteins
38. The human digestive system is made up of several parts. Which part absorbs water and minerals?
- A Large intestine B Small intestine C Stomach
D Gall bladder E Oesophagus
39. The density of wood is 20 kilogram per cubic metre. If the volume of wood is 90 cubic metre, find the mass of the wood.
- A 110.0 kg B 0.222 kg C 4.5 kg D 1800 kg E 180.0 kg
40. Submarine is a type of ship which can either sink or float on water. What should be done when a submarine is in the water and is required to float?
- A Water should be removed and the tanks filled with air.
B Water should be removed and the tanks left empty without air.
C To increase the upthrust in the tanks by using a light fluid.
D To remove the air from the tanks to reduce weight.
E To balance upthrust and gravitation force in the submarine.

SECTION B (10 Marks)

For questions 41 – 45, write your answers in the blank spaces provided in the OMR form. Use a blue or black pen.

41. Plants have chloroplast which absorbs sunlight energy for photosynthesis. Which other things are used by plants as raw materials for photosynthesis?
42. A pregnant mother was instructed by the Doctor when attending maternity clinic that in the first three months after delivery, she should breast feed her child instead of using powdered milk. Why was she given this advice?

43. If a pupil connected a circuit which has a potential difference of 12 Volts and a current of 3A is flowing in it; find the resistance in the circuit.
44. Observe the following figure and then answer the questions that follow:



- (a) What are the functions performed by the parts labelled A and B.
- (b) What is the relationship of the part labelled C and the one labeled D in performing their functions?
45. Health specialists insist that, people should frequently perform exercises. Why is it important to adhere to this advice?