



EXAMINATIONS COUNCIL OF ZAMBIA

GRADE SEVEN COMPOSITE EXAMINATION – 2016

## Integrated Science

SUBJECT 4/1

60 MINUTES

TD/INT3/G7/2016

- 1 Read these instructions carefully.
- 2 **Do not** turn this page before you are told. Your teacher will tell you when to turn this page to begin the questions.
- 3 There are **50** questions in this **Integrated Science Paper**. You will be given **exactly 60 minutes** to do the questions.
- 4 For each question, four answers are given, but only one of the four is right. Work out which is the **best** answer. Then, on your **answer sheet**, mark the box completely by shading the answer space of the letter of your choice. If you had chosen answer D for a question, you would show it like this:-

A	B	C	
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- 5 You must **shade** your answer spaces **completely** and **darkly** using an HB pencil. If you have to change your answer, you must rub out the shading **very neatly** before shading the new one. **use a clean rubber.**
- 6 When you have finished one page, go straight on without waiting to be told. If you have time left at the end of the question paper, use it to check your work carefully.
- 7 Look at your **ANSWER SHEET**. On the top left hand side are boxes which should have Examination Year, your School Number and Examination Number. It should also say **Subject 4, Paper 1.**
- 8 Look at your **ANSWER SHEET** again. At the bottom left hand side, it should have your Surname, Forename, Subject **Integrated Science**, Name of Primary School, and your Secondary School of Choice.
- 9 **Put up your hand now if:**
  - You have any question.
  - You have the wrong answer sheet.

You will **not** be able to ask questions once the examination has begun.

**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD.  
USE ONLY AN HB PENCIL FOR YOUR ANSWERS.**

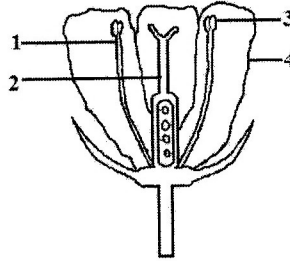
- 1** What is the function of the heart?
- A** Pumping food
  - B** Pumping air
  - C** Pumping water
  - D** Pumping blood
- 2** Opening doors, windows and having cooling fans is very important because they ...
- A** protect people from germs.
  - B** allow fresh air to move around.
  - C** let germs to move freely.
  - D** let in different types of gases.
- 3** People conserve electricity in homes by using ...
- A** energy saving bulbs for lighting.
  - B** ordinary bulbs for lighting.
  - C** ordinary pots for heating water.
  - D** geysers for heating water.
- 4** What is the use of a copper wire with one end buried in the earth in a house and the other extending higher than the house?
- A** To transmit messages.
  - B** Act as an aerial for a television.
  - C** Act as an aerial for a radio.
  - D** To protect the house from lightning.
- 5** What is the process by which plants make food?
- A** Evaporation
  - B** Transpiration
  - C** Photosynthesis
  - D** Pollination
- 6** A given disease can be prevented as follows:-
- 1 Drink clean water and eat clean food.
  - 2 Wash hands with soap after using the toilet.
  - 3 Always defaecate in a toilet.
- What disease is this?
- A** AIDS
  - B** Cancer
  - C** Cholera
  - D** Malaria

- 7 Which of the following minerals is **not** mined in Zambia?
- A Cobalt
  - B Diamond
  - C Lead
  - D Zinc
- 8 What electrical appliance can convert electrical energy into light energy?
- A Radio
  - B Bulb
  - C Speaker
  - D Stove
- 9 Choose a source of vitamins and minerals from the following:-
- A Bread
  - B Cassava
  - C Maize
  - D Fruits
- 10 Study the following diagram.



- The process **X** is ...
- A cross pollination.
  - B fertilisation.
  - C germination.
  - D self pollination.
- 11 The fish ban is practised in Zambia from 1<sup>st</sup> December to 31<sup>st</sup> March every year. This is done to ensure that fish is ...
- A given chance to breed.
  - B protected from being eaten.
  - C not sold on the market.
  - D preferred to meat.

- 12 Study the diagram of the flower below.



Which of the parts numbered is female?

- A 1
  - B 2
  - C 3
  - D 4
- 13 - Grade 7 learners recorded rainfall for four districts as shown below.

District	Rainfall (ml)
Livingstone	20ml
Mwinilunga	56ml
Kitwe	41ml
Chinsali	29ml

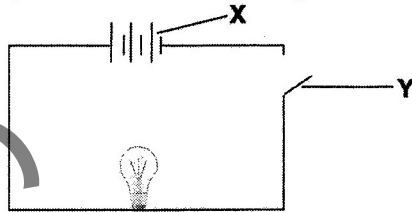
Which district could have had its crops damaged due to floods?

- A Chinsali
  - B Kitwe
  - C Livingstone
  - D Mwinilunga
- 14 Syphilis and gonorrhoea are all diseases which are transmitted through ...
- A eating together with an infected person.
  - B unprotected sex with an infected person.
  - C shaking hands with an infected person.
  - D sleeping on the same bed with an infected person.
- 15 Dissolved substances in the body are transported by the ...
- A blood.
  - B heart.
  - C intestines.
  - D stomach.

16 Which of the following is **not** an agent of pollination?

- A Fungus
- B Insect
- C Water
- D Wind

17 Below is a simple electric circuit diagram.



What components are **X** and **Y** in this circuit?

- |   | <b>X</b> | <b>Y</b> |
|---|----------|----------|
| A | Bulb     | Switch   |
| B | Cell     | Wire     |
| C | Switch   | Bulb     |
| D | Cell     | Switch   |
- 18 Which of the following are **not** basic needs of livestock?
- A Firewood and medicine
  - B Shelter and air
  - C Care when sick and food
  - D Protection from danger and water
- 19 Which of the following lists represents the agents of pollination?
- A Wind, insects, water
  - B Animals, wind, air
  - C Insects, water, heat
  - D Water, animals, smoke
- 20 Which of the following diseases is prevented by drinking clean safe water?
- A Measles
  - B Malaria
  - C Tuberculosis
  - D Typhoid

21 Which of the following are common diseases of the skin?

- |   | 1            | 2        | 3           | 4         |
|---|--------------|----------|-------------|-----------|
| A | Tuberculosis | Scurvy   | Rabies      | Measles   |
| B | Ringworm     | Warts    | Chicken pox | Scabies   |
| C | Chicken pox  | Ringworm | Malaria     | Small pox |
| D | Small pox    | Ringworm | Malaria     | Warts     |

22 A person must read the labels on a container of food before buying it because this helps to ...

- A eat food which is balanced.
- B learn how to cook the food properly.
- C process food easily for storage.
- D know the manufacturing and expiry dates.

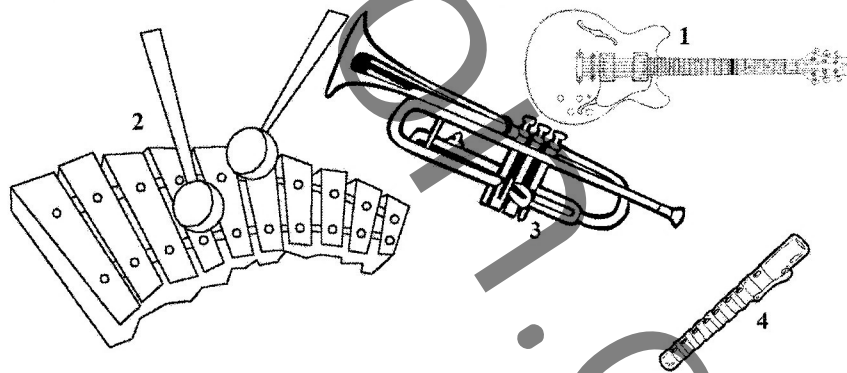
23 Bean seeds are usually dispersed by ...

- A wind.
- B explosion.
- C water.
- D animal.

24 The solar system consists of the ...

- A earth and moon.
- B earth and eight planets.
- C Saturn and the moon.
- D sun and the planets.

25 The diagrams below show different musical instruments.



Which of the above instruments produces sound by hitting?

- A 1
- B 2
- C 3
- D 4

- 26** When a ball is thrown into the air, it falls back again because of the force called ...
- A** gravity.
  - B** magnet.
  - C** pressure.
  - D** resistance.

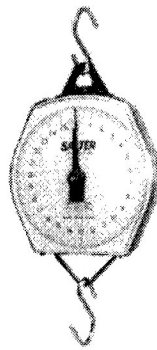
- 27** A person experienced the following signs and symptoms:
- 1 Blood in urine
  - 2 Feeling pain in lower abdomen
  - 3 Fever

Which of the following diseases was the person suffering from?

- A** Typhoid
  - B** Tuberculosis
  - C** Dysentery
  - D** Bilharzia
- 28** Study the list of body changes below:
- 1 Voice breaking.
  - 2 Widening of hips.
  - 3 Growth of pubic hair.
  - 4 Growth of hair under the arms.

At what stage of human development do these changes take place?

- A** Puberty
  - B** Childhood
  - C** Toddler
  - D** Adulthood
- 29** Study the diagram below.



What is the name of the instrument above?

- A** Spring balance
- B** Beam balance
- C** Voltmeter
- D** Bathroom scale

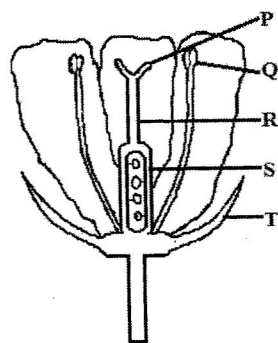
- 30** The use of a switch in a circuit is to ...
- A** produce electric energy in a circuit.
  - B** light the bulb in the circuit.
  - C** reverse the flow of electricity in a circuit.
  - D** open and close the circuit.

- 31** People in villages mostly depend on lakes and rivers for water which ...
- A** they don't normally purify.
  - B** they always purify.
  - C** is not polluted.
  - D** is clean and safe.

- 32** Three of the following are uses of good conductors of electricity:
- 1 Making electric wire and cables.
  - 2 Transmitting signals in communication devices.
  - 3 Heating elements in cookers.
  - 4 Making the handles of pots.

Which of the above is **not** a use of good conductors of electricity?

- A** 1
  - B** 2
  - C** 3
  - D** 4
- 33** Which of the following best explains the effect of substance abuse in people's lives? Substance abuse may ...
- A** lead to one contracting tuberculosis.
  - B** lead to one becoming intelligent.
  - C** cause one to commit crime.
  - D** cause stunted growth.
- 34** Study the diagram of the flower below.



Which letters represent the anther and style?

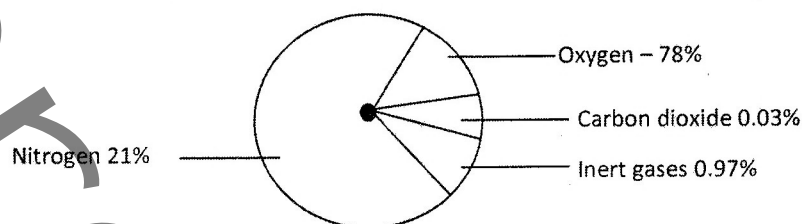
- A** P and S
- B** Q and T
- C** Q and R
- D** T and S



35 Which of the following changes are observed in females at puberty?

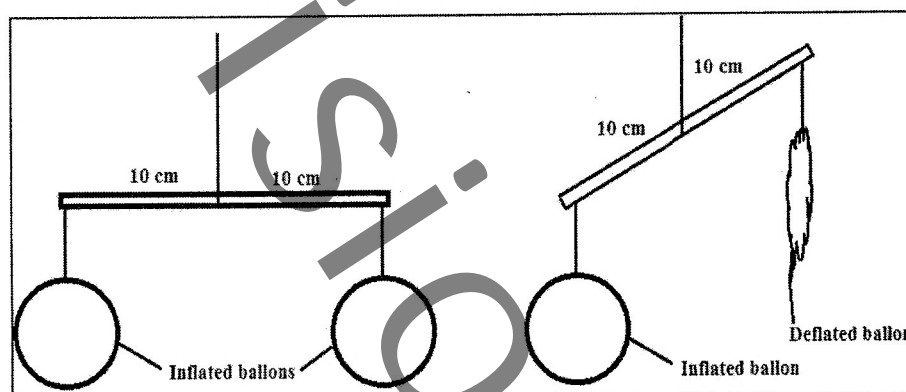
- A Breaking of the voice.
- B Enlargement of breasts.
- C Growth of beards and pubic hair.
- D Enlargement of shoulders.

36 Which of the components of air in the diagram below are not correct?



- A Carbon dioxide and oxygen.
- B Inert gases and carbon dioxide.
- C Nitrogen and oxygen.
- D Nitrogen and inert gases.

37 A learner set up the experiment below.



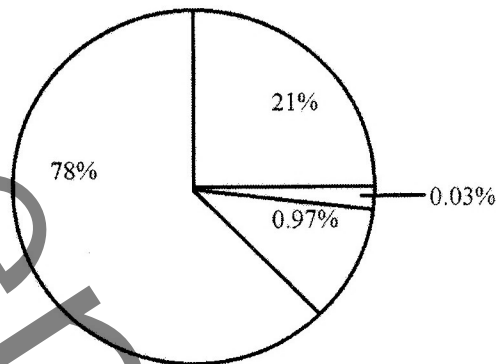
The learner concluded from the experiment that air ...

- A exerts pressure.
- B occupies space.
- C has weight.
- D is colourless.

38 In a hydro-electric power station, the energy transformations that take place are ...

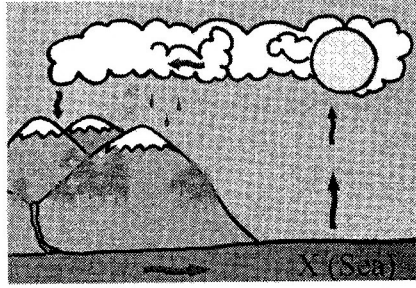
- A potential → kinetic → electrical
- B potential → electrical → kinetic
- C chemical → kinetic → electrical
- D chemical → electrical → kinetic

- 39 Study the pie chart below. It shows the composition of air in the atmosphere.



- The gas with the highest percentage represents...
- A carbon dioxide.  
B nitrogen.  
C oxygen.  
D water vapour.
- 40 A learner was asked to blow over the mouth of an empty bottle. This was to demonstrate how sound ...
- A travels.  
B is produced.  
C volume is increased.  
D makes music.
- 41 Which of the following activities is **not** an effect of mining on the environment?
- A Dust is released to the surrounding communities.  
B Dangerous solids are dumped in the surrounding.  
C Minerals are produced for the country.  
D Poisonous gases are released to the atmosphere.
- 42 Which of the following is a property of copper?
- A Mixture of gases  
B Colourless liquid  
C Resistant to rust  
D Exerts pressure
- 43 The best method of communicating with a large number of people that are in different places at the same time is by using a ...
- A phone.  
B drum.  
C letter.  
D radio.

44 Study the water cycle below.



What will be the result of not having water at X?

- A Floods
- B Drought
- C Evaporation
- D Condensation

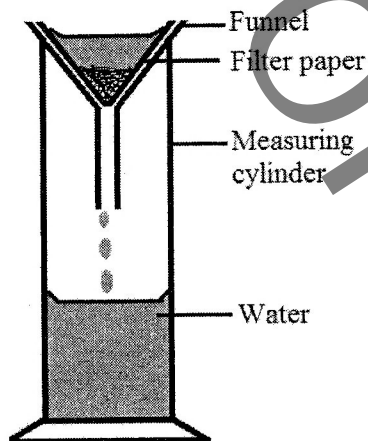
45 In a certain community most of the children were found to be suffering from a disease which has the following signs:

- 1 Soft and weak bones
- 2 Bow-shaped legs
- 3 Poor teeth formation

Which of these diseases were the children suffering from?

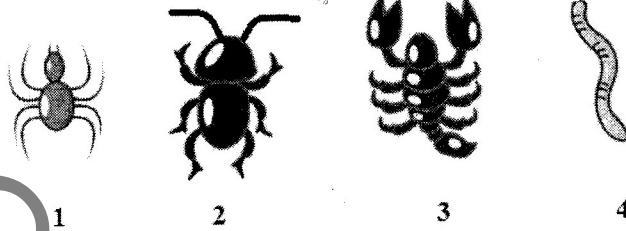
- A Rickets
- B Marasmas
- C Kwashiorkor
- D Goitre

46 What type of substances does the following technique separate?



- A A soluble substance from water.
- B An insoluble substance from water.
- C Two soluble substances mixed together.
- D Insoluble substance from another insoluble one.

47 Which of the following is an insect?

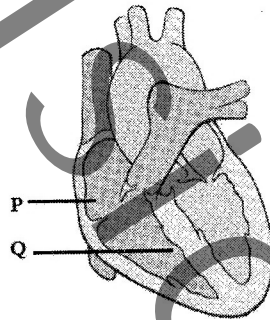


- A 1
- B 2
- C 3
- D 4

48 What is the importance of improving varieties of seeds?

- A Improve the harvest, increase resistance to diseases.
- B Increase resistance to draught, reduce resistance to diseases.
- C Reduce the harvest, reduce resistance to diseases.
- D Improve the harvest, reduce resistance to draught.

49 Study the diagram of the heart below.



The parts shown by the letters **P** and **Q** in the diagram are ...

- |   | <b>P</b>        | <b>Q</b>         |
|---|-----------------|------------------|
| A | Right ventricle | Left ventricle   |
| B | Left ventricle  | Right ventricle. |
| C | Right atrium    | Right ventricle  |
| D | Left atrium     | Left ventricle   |
- 50 The absence of starch in a leaf is shown when iodine solution turns ...
- A black.
  - B purple.
  - C brown.
  - D colourless.

**STOP! PLEASE CHECK ALL YOUR WORK CAREFULLY.**