

# SPECIAL EXAM TWO 2022

## INTEGRATED SCIENCE

*Time Allowed: 2 hours 15 minutes*

Random No.						Personal No.		

**Candidate's name:** .....

**Candidate's signature:** .....

**District:** ..... **Stream:**.....

**Read the following instructions carefully.**

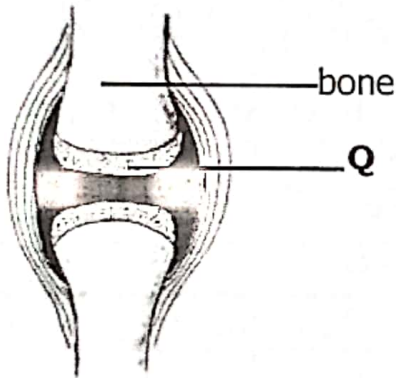
1. This paper is made up of two Sections: A and B.
2. Section A has 40 questions (40 marks)
3. Section B has 15 questions (60 marks)
4. Attempt all questions. All answers to both sections A and B must be written in the spaces provided.
5. All answers must be written in blue or black ballpoint pen or ink but not in pencil. All work done in pencil, except diagrams, will NOT be marked.
6. Unnecessary crossing out of answers will lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Wrong spelling will lead to loss of marks

FOR EXAMINERS USE ONLY		
QN. NO.	MARK	SIGN
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44 - 46		
47 - 49		
50 - 52		
53 - 55		
TOTAL		

## SECTION A

1. Name the form of energy that enables people iron their clothes.  
\_\_\_\_\_
2. Which disease is spread by simulium flies to people?  
\_\_\_\_\_
3. State any **one** use of capital when starting a livestock farm.  
\_\_\_\_\_
4. What kind of accident requires the use splints in giving first aid?  
\_\_\_\_\_
5. Give any **one** breed of sheep kept for wool production.  
\_\_\_\_\_

**The diagram below shows a type of movable joint. Use it to answer questions 6 and 7.**



6. Name the type of movable joint shown above.  
\_\_\_\_\_
7. State the function of the fluid marked **Q** at the joint above.  
\_\_\_\_\_
8. State the type of chicken kept for both meat and egg production.  
\_\_\_\_\_
9. What type of objects have no proper geometrical shapes?  
\_\_\_\_\_
10. Why is water regarded as a universal solvent?  
\_\_\_\_\_
11. How does gonorrhoea affect the newly born babies?  
\_\_\_\_\_

30. Give any **one** way in which bacteria are useful in soil formation.

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31. Why does cooking oil settle on top when mixed with water?

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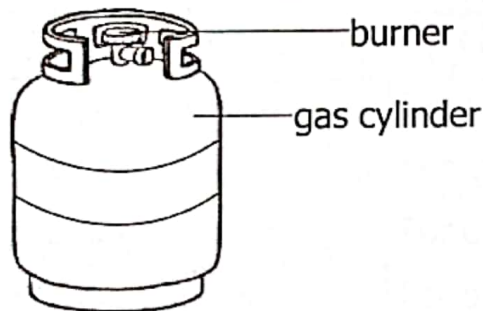
32. Which property of air enables a person to drink soda using a straw?

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33. Name any **one** deficiency disease that affects the skin.

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**The diagram below shows a cooking device. Study and use it to answer questions 34 and 35.**



34. Name the energy resource used in the above cooking device.

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35. State any **one** way in which the use of the above cooking device helps to conserve wood fuel in the environment.

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36. Mention the group of mammals to which a whale belongs.

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37. Why is the left side of the heart thicker than the right side?

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38. What happens to water when its temperature reaches 32°F?

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39. How do plants reduce the amount of carbon dioxide in the environment?

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40. State any **one** activity carried out by farmers to remove unwanted plants from their gardens.

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**SECTION B:**

41. a) Which fungus is used during fermentation of alcohol?

\_\_\_\_\_

b) State the role of the fungus you have named in (a) above during fermentation.

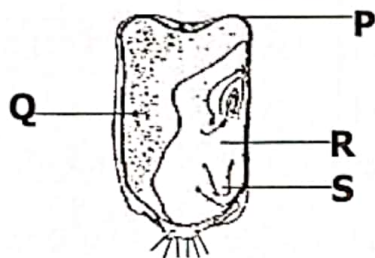
\_\_\_\_\_

c) Give any **two** ways in which alcohol is useful to people.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

42. **The diagram below shows a maize grain. Study and use it to answer the questions that follow.**



a) Name the parts marked **P** and **Q**.

(i) **P** \_\_\_\_\_

(ii) **Q** \_\_\_\_\_

b) What plant system does part **S** grow into after germination?

\_\_\_\_\_

c) State the function of part labelled **R** in a maize grain.

\_\_\_\_\_

\_\_\_\_\_

43. a) Mention any **two** pieces of information recorded on a child health card.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

b) State any **one** way in which a child health card is important to each of the following people.

(i) parent \_\_\_\_\_

(ii) health worker \_\_\_\_\_



44. a) Give any **two** examples of poisonous snakes.
- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_
- b) State any **one** characteristic of poisonous snakes.
- \_\_\_\_\_
- c) What first aid would you give to a person bitten by a poisonous snake?
- \_\_\_\_\_

45. **In the table below, list A shows equipment used on livestock farm and list B shows their uses in wrong order.**

<b>List A: Equipment</b>	<b>List B: Use of the equipment</b>
a) Drenching gun	For detecting mastitis in milk.
b) Lactometer	For castrating farm animals.
c) Burdizzo	For giving liquid drugs to animals.
d) Strip cup	For determining the density of milk.

- a) Drenching gun : \_\_\_\_\_
- b) Lactometer : \_\_\_\_\_
- c) Burdizzo : \_\_\_\_\_
- d) Strip cup : \_\_\_\_\_

46. a) Write down any **two** of the 5Rs in waste management.
- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_
- b) Give any **two** ways in which poor disposal of waste is harmful to the environment.
- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_

47. Use the list of diseases given below to answer the questions that follow.

trachoma, asthma, pellagra, measles

a) Which disease on the list is caused due to poor nutrition?

\_\_\_\_\_

b) Identify the disease on the list which;

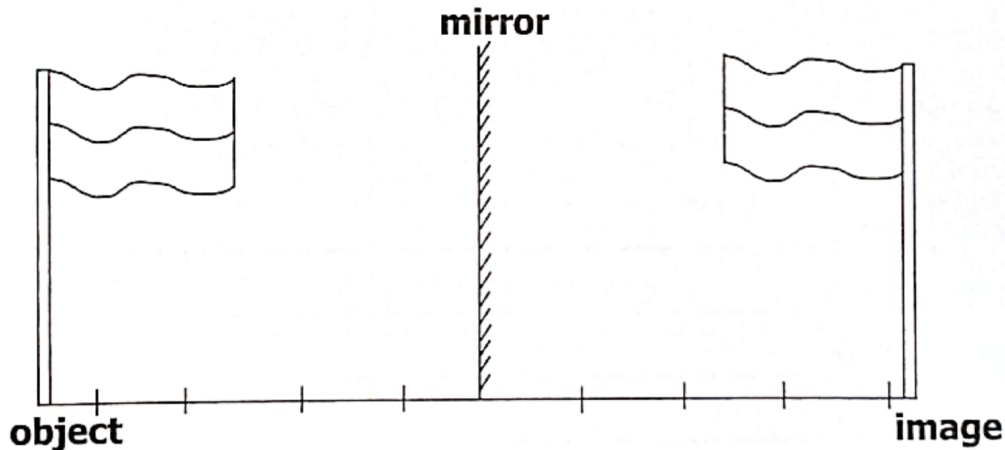
(i) attacks the respiratory system \_\_\_\_\_

(ii) attacks the human eye \_\_\_\_\_

c) Give any **one** way in which measles is different from all the other diseases on the list.

\_\_\_\_\_

48. **The diagram below shows an object in front of a mirror and its image. Study and use it to answer the questions that follow.**



a) What type of mirror is shown in the diagram above?

\_\_\_\_\_

b) Mention any **two** characteristics of images formed by such a mirror.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

c) State any **one** way in which such a mirror is useful to people.

\_\_\_\_\_

49. a) In which **two** ways are echoes useful to people?

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

b) State any **one** in which echoes can be reduced in a hall.

\_\_\_\_\_

c) Give a reason why sound does not travel through the vacuum.

\_\_\_\_\_

50. a) Apart from nuts and bolts, name any **one** other simple machine which is classified as a screw.

\_\_\_\_\_

b) State any **two** ways in which screws are useful.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

c) Mention any **one** factor that affects the proper working of screws.

\_\_\_\_\_

51. **The table below shows types of crop, examples and part for propagation. Study and use it correctly.**

<b><u>Type of crop</u></b>	<b><u>Example</u></b>	<b><u>Part propagated</u></b>
_____	maize, millet, rice	seeds, grains
Root tuber	cassava	_____
_____	beans	seeds
Leafy vegetables	_____	seeds

52. a) Apart from changes of state of matter, give any **two** examples of physical changes in the environment.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

b) State any **one** characteristic of physical changes.

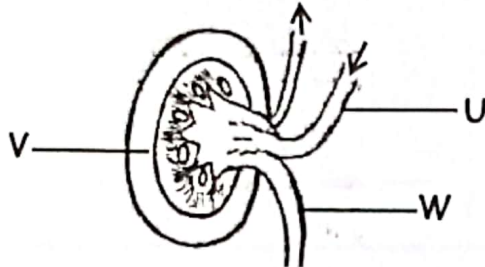
\_\_\_\_\_

c) In which **one** way are physical changes useful in the environment?

\_\_\_\_\_

53. **The diagram below shows the cross section of a human kidney.**

**Study and use it to answer the questions that follow.**



a) Name the parts marked **U** and **W**.

(i) **U** \_\_\_\_\_

(ii) **W** \_\_\_\_\_

b) State the function of part marked **V** on the above organ.

\_\_\_\_\_

c) Give any **one** way of keeping the above organ in proper working conditions.

\_\_\_\_\_

54. a) State any **two** advantages of using mercury in thermometers over alcohol.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

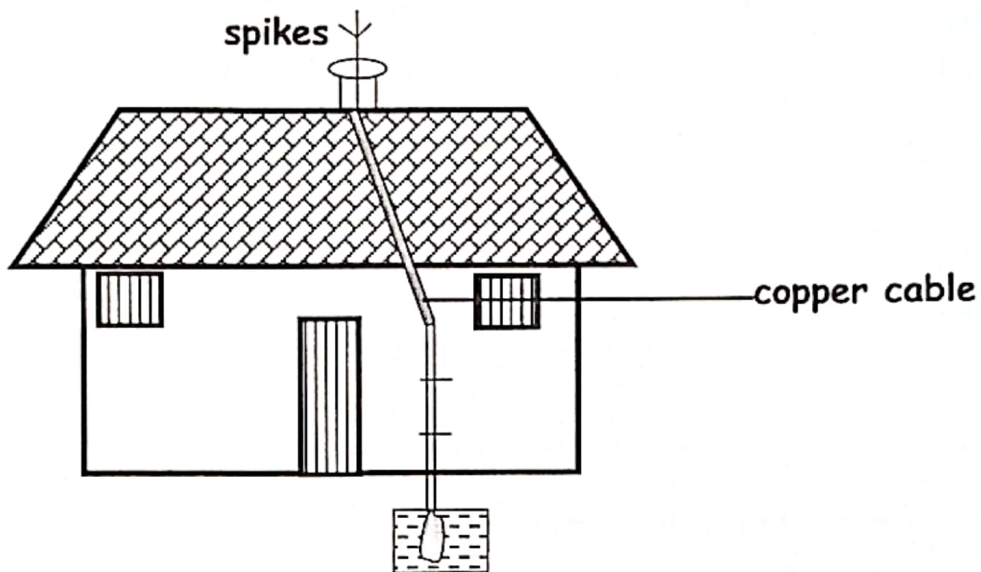
b) Give any **two** reasons why water is not used in thermometers.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_



55. The diagram below shows a structure installed on a building.  
Study and use it to answer the questions that follow.



- a) Name the structure shown in the diagram above.

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- b) Why is the above structure installed on to buildings?

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- c) State the function of the copper cable on the diagram above.

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- d) Give **one** danger of building the house without installing the above structure on it.

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