INTEGRATED SCIENCE

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ISSUE 17

1. Name the part of a flowering plant which develops into a new plant in vegetative propagation

2. Mention any one sign that shows that a boy has sexually matured.

3. Why are molecules of gases always in motion?

4. In which way do farmers benefit from having a lot of dead matter in their gardens?

5. State one way of improving the working conditions of the skeletal system in the human body.

6. How does the use of a slasher to promote sanitation in a home?

7. Why is natural gas regarded as a fossil fuel?

8. Name any one raw material for respiration to take place in plants.

The diagram below shows a feeding relationship among organisms in the environment. Use it to answer questions 9 and 10.

Tree   Deer   Lion

9. Name the feeding relationship shown in the illustration above.

10. What does the lion in the above feeding relationship represent?

11. State one advantage of taking prescribed drugs.

12. How does wind affect the rate of evaporation during rain formation?

SECTION A

13. Which part of soil profile is suitable for crop growing?

14. Change $20^{0}C$ to Fahrenheit scale

15. Give any one sign of anthrax in pigs.

16. How is distillation important in the process of producing alcohol?

The diagram below shows a method of family planning used in women. Use it to answer questions 17 and 18.

17. Name the method of family planning shown above.

18. How does the above method promote family planning?

19. Name the digestive juice that emulsifies fats in the duodenum.

20. How is nitrogen useful to cattle farmers?

21. State the meaning of the term a fuel.

22. Which body organ is responsible for production of insulin?

23. Why is litter useful in a house where layers lay their eggs?

24. What happens to the biceps when the arm is raised?

25. Why is bilharziasis regarded as a disease of the excretory system?

26. Give one reason why bees swarm.

27. Why are cutting blade always sterilised before use on another patient in the hospital?

28. How is culling useful in rabbit keeping?

29. Why do spiders make webs in the habitats?

30. State one advantage of mercury as a thermometric liquid over other liquids.

SECTION B

31. a) Give two reasons why alcoholism is dangerous to the family.
i) --------
ii) --------
b) State any two life skills a father can emphasize to his children in the family to ensure they avoid alcoholism.
i) --------
ii) --------

32. a) Where does respiration take place in the huma body?
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b) Mention any one danger of inhaling air through the mouth.
----
c) State two ways an alveolus is adapted to its function.
i) --------
ii) --------

33. a) How does PHC help to check the number of people in relation to the available resource in the environment?
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b) Mention any two dangers of having many people living in a place with few toilet facilities.
i) --------

ii) --------
c) State any one advantage of PHC in the community.
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34. a) State any two similar symptoms between measles and malaria attack in the human body
i) --------
ii) --------
b) Why do malaria patients develop anaemia after sometime?
----
c) Mention any one way of caring for a patient of malaria
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35. The diagram below shows a practice health workers commonly do to patients. Use it to answer questions that follow.

Blood bag

a) Name the practice shown in the diagram above.

b) How is the above activity useful to the patient?

c) Name one factor considered before the above activity is carried out on a patient.

d) Apart from the above practice, name any one other way a patient can be made to get enough blood in the body.

36. a) State any one reason why the following is done on a clinical thermometer before use.
i) Shaking the thermometer:

ii) Dipping it in iodine solution:

b) Which part of the clinical thermometer works like the valves in the human heart?

c) State one advantage of using an infra-red thermometer for measuring temperature of a patient.

37. The diagram below shows a certain crop growing practice. Use it to answer questions that follow.

a) Name the farming practice shown in the diagram above as applied in root crop management.

b) State any two advantages of heaping soil around the plant as shown in the diagram above.
i)
ii)

c) Mention any one crop where the above practice is suitable for its development

38. a) In which part of the digestive system of a bird does grinding of food take place.

b) Mention any one way the part named in a)above is suitable for grinding food.

c) How are the following parts useful in a bird?
i) A crop:
ii) A beak:

39. a) What name is given to the transition period between a young boy and an adult man?

b) State any two changes that a girl develops to show that she is sexually mature.
i)
ii)

c) How can a girl who has shown sexual maturity manage to prevent her self from getting HIV/AIDS?

40. a) Give a reason why the following practices are done in goat rearing.
i) hoof trimming:

ii) spraying:

b) Apart from saanen, give two breeds of goats kept for milk production.
i)
ii)

MATHEMATICS ANSWERS TO ISSUE 17 (8TH JULY 2024)

1.
```
   9 5
 - 4 2
 ─────
   5 3
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2. $7k - y - 2k + 8y$
$7k + 8y - 6y - 2k$
$(7k - 2k) + (8y - 6y)$
$5k + 2y$

3. DCCV = DCC / V
$700 + 5 = 705$

4.
```
H  T  O
TTH TH H T O
 7  7  6   5  5  1
+         1
 7  8  0   0  0  0
```

5. 1 litre = 1000cc
0.75 litres = 0.75 × 1000cc
= 75 × 1000cc
= 750cc

6. 1 0 1₂   1 + 1 = 2
+ 1 1₂   2 ÷ 2 = 1 rem 0
─────
1 0 0₂

7. Tuesday repr 2
2 + (40) = ... (finite 7)
40 ÷ 7 = 5 rem 5
2 + 5 = ... (finite 7)
7 ÷ 7 = 1 rem 0
2 + 40 days = = 0 (finite 7)
0 represents Sunday
That day of the week was Sunday

8. Sketch

10. $nCp = 2^n - 1$
$31 = 2^n - 1$
$31 + 1 = 2^n - 1 + 1$
$32 = 2^n$

$32 = 2 × 2 × 2 × 2 × 2$

2	32
2	16
2	8
2	4
2	2
	1

$32 = 2^6$
$2^6 = 2n$
$25 = 2 = 2n = 2$
$5 = n$
$n = 5$

11. Mean = 8k + 3 + 9k - 10 + 7k - 8
+ 4k - 1
$\frac{8k + 9k + 7k + 4k + 3 - 8 - 1}{4}$
$= \frac{28k - 16}{4} = \frac{(28k)}{4} + \frac{(16)}{4}$
$= 7k - 4$

12. 12 men take 20 days
20 days are taken by 12 men
1 day will need
= 12 × 20 days
= 240 days
$\frac{240 \text{ days}}{16} = 15$ days

13. S.P = B.P + P
sh. 145000
+ sh. 17500
─────────
sh. 162500

14. Time left to midnight
1200 60 - 45 = 15
- 945 11 - 9 = 2
─────
2 : 15
2 hours and 15 minutes
duration = 3 : 20
+ 2 : 15
─────
5 : 35
5 hours and 35 minutes

15. -3 ≤ m < 4?
solution Set (-3, -2, -1, 0, 1, 2, 3)

16. 100% - 33⅓% = 66⅔%
$\frac{(66 × 3)}{3} + 2 = \frac{200 \%}{3}$
$\frac{200 - 100}{3} × 48$ bags

$= \frac{200 × 100 × 48 \text{ bags}}{3 \quad 100 \quad 1}$
$= 2 × 1 × 16$ bags
= 32 bags

17. a) 12.00
- 1.05
──────
10.95

b) $(\frac{48}{10} × \frac{27}{10}) ÷ (\frac{18}{10})$
$= \frac{48}{10} × \frac{18}{10} × \frac{10}{48}$
$= \frac{48 × 3 × 1}{10 × 1 × 1}$
$= \frac{24 × 3 × 1}{10 × 1 × 1} = \frac{72}{10} = 7.2$

18. a) $P^3 - qr$
$(p × p × p) - (q × r)$
$= (3 × 3 × 3) - (5 × 7)$
$= 27 - 35$
$= -8$

b) $\frac{1}{3}y + 10 = 16$
$3 × \frac{1}{3}y + (10 × 2) = (16 × 2)$
$y + 20 = 32$
$y + 20 - 20 = 32 - 20$
$y + 0 = 12$
$y = 12$

19. n∑ = 60

(Venn diagram: F and M circles, x+8, 17, 2x-4, y)

b) 2(2x - 4) = x + 8 + 17
2 × 2x) - (2 × 4) = x + 25
4x - 8 = x + 25
4x - 8 + 8 = x + 25 + 8
4x = x + 33
4x - x = x - x + 33
$\frac{3x}{3} = \frac{33}{3}$ x = 11

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c) x + 8 + 17 + 2x - 4 + y = 60
x + 25 + 2 × 11 - 4 + y = 60
11 + 25 + 22 - 4 + y = 60
(58 - 4) + y = 60
54 + y = 60
54 - 54 + y = 60 - 54
y = 6

20. a) (5k - 6) - 1(3k - 18)
5k - 6 - 1 × 3k - -1 × 18
5k - 6 - 3k + 18
5k - 3k + 18 - 6
2k + 12

$(3k - 18^0) + (3k - 18^0) + 2k + 12^0 = 180^0$
$(3k + 3k + 2k) + 12^0 - 18^0 - 18^0 = 360^0$
$8k + 12^0 - 36^0 = 180^0$
$8k - 24^0 = 180^0$
$8k - 24^0 + 24^0 = 180^0 + 24^0$
$\frac{8k}{8} = \frac{204^0}{8}$
$k = 25.5^0$

b) <ACB = 3k - 18
$= (3 × 25.5^0) - 18^0$
$= 76.5^0 - 18^0$
$= 58.5^0$

21. M : W : C
3 : 5 : 7
If 5 parts repr 50
1 part will repr $\frac{50}{10}$
1 part represents : 10
Men are 3 parts = 3 × 10 = 30
There are 30 men in Kyaka.
Children are 7 parts = 7 × 10 = 70
There are 70 children in Kyaka
Village

22. 2 2 . 3kg
- 3 . 4kg
────────
18 . 9kg
18.9kg - 450g
1kg = 1000g
18.9kg = 18.9 × 1000g

= 18900g
No of tiles = $\frac{18900g}{450g}$ = 42
There are 42 tile in the box

23. a) Lenght BC = √3600cm²

PF	No	cm	cm²
2	3600	cm	cm
2	1800		1
3	900		
3	300		
3	100		
2	50		
5	25		
5	5		
	1		

$√3600cm² = 2 × 3 × 2 × 5$
$= 6 × 10$
$= 60cm$

$\frac{5}{d} = 3$
$60cm = 3$
d
$= \frac{60cm × 3}{x} = 3 × d$
$60cm = 3d$
$\frac{60cm}{3} = \frac{3d}{3}$
$20cm = d$
Diameter = 20cm
Area of circular plate
$A = πr²$
$= 3.14 × \frac{20cm}{x} × \frac{20cm}{x}$
$= 3.14 × 10cm × 10cm$
$= \frac{314 × 10cm × 10cm}{100}$
$= 314cm²$
Area of 9 circular plates
$= 9 × 314cm²$
$= 2826cm²$
Area of metal not used
$3600cm² - 2826cm²$
$= 774cm²$

ENGLISH

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SUB-SECTION I

For numbers 1-10, use the correct form of the word given in brackets to complete the sentences.

1. He does not want to talk to _____ nowadays. (we)
2. Unless you are very courageous you cannot _____ the boss. (opposition)
3. Their poultry business collapsed because it lacked proper_____ (maintain)
4. We hope to perform _____in this paper. (well)
5. By the time the holiday ends, she_____ three mats. (weave)
6. The teacher insisted on _____only wrapped books. (get)
7. The cat hurt _____ while playing with a mouse-trap. (self)
8. Do you mind the _____ of your room? (clean)
9. Peter was asked by Jesus to_____ his fellow disciples. (strong)
10. I have learnt to respect elders since my _____(child)

In numbers 11-15, complete each sentence by filling in the best word or group of words.
11. What is the _____by your watch?
12. The football match attracted a large _____
13. _____Sylvia and Jackie are my close friends.
14. Our niece was_____ from hospital last Friday.
15. There is room for me to improve, isn't _____?

Use each of the given words in a sentence to show the difference in their meaning.
16. herd_____
17. hard _____

Write the short forms of the following words.
18. I would _____
19. page_____

Re-arrange the following words to make sensible sentences.
20. boy the hurt little himself has.
_____
21. old nearly years is she thirteen.
_____

SECTION A

For numbers 22-24, re-write each sentence giving the plural form of the underlined words.
22. Which drug can she use to spray the butterfly larva?
_____
23. Lwamiti plays a banjo.
_____
24. They went on shouting without noticing the passer-by.
_____

Arrange the following words in alphabetical order.
25. thus, third, ticket, thy, thrush
_____
26. mechanic, spanner, spare, spoil
_____

Re-write giving the opposite of the underline word.
27. The smooth wall was not easy to paint.
_____
28. Most people fear blessings to be invoked upon them.
_____

Re-write each sentence replacing the word in brackets with a word which has the closest meaning to it.
29. From the heap of mangoes (select) any four you like.
_____
30. Have you saved (adequate) funds for your forthcoming trip?
_____

SUBS-SECTION II

For items 31-40, rewrite each sentence as instructed in brackets

31. I did not intend to insult my neighbour. (Re-write beginning: It_____)
_____
32. The teacher gave me three new exercise books. (Re-write Beginning: I was...........)
_____
33. The place had a very wonderful scenery. (Begin: What...................)
_____
34. It was he who welcomed us to the class.(Rewrite using....... the one......)
_____
35. I have never met a kinder man than my class teacher. (Begin: My class teacher......)
_____
36. If I get the money, I shall buy that English text book. (Re-write using ....would have...................)
_____
37. When you use a lot of electricity, your bill will be very high. (Begin: The more......)
_____
38. Nobody else but headmaster will introduce the new teacher. (Re-write ending ....himself)
_____
39. I have not heard about him for six months. (Begin: It is...........)
_____
40. You can't divide this number by three. (Rewrite using.........divisible.......)
_____

SECTION B

41. Read the following poster carefully and, in full sentences answer all the questions that follow..

KISOZI ACADEMY
Science Fair

Venue	: Makerere University Main Hall
Date	: 24th July, 2024
Time	: 9:00a.m - 4:00p.m.
Entry fee	: Adult : 5,000/= Children 3,000/=
Disabled	: Free

Come one come all!
Management
4th June 2024

QUESTIONS

1) What is the poster about?
_____
2) Where will the function take place?
_____
3) How much money are lame people supposed to pay to attend the science fair?
_____
4) When was the notice written?
_____
5) Why was the notice written?

6) To whom was the notice written?
_____
7) If Mr. Kamya, his wife and their two children attended the fair, how much money would they pay altogether?
_____
8) How long will the fair last?
_____
9) Write the abbreviations given in full form:
a. a.m _____
b. p.m _____

42. In their meeting one Thursday the teachers of Kasai junior school noted with concern that some pupils do not finish their homework. The headmaster suggested that children should be allowed not to do the home work if they don't like it after all it was not useful and very tiring some to the children.

In a nine sentence paragraph write to show whether you support the headmaster's view or not. Remember to give your writing a heading
_____
_____
_____
_____
_____
_____
_____
_____

43. (a) Read the passage below carefully and, in full sentences, answer all the questions about it.

One day, a lion lay down under a tree-shade to sleep. While he slept, a playful mouse ran over him. This woke the lion in rage. He put out his great paw, but as he was just going to swallow the mouse, it pleaded with the lion and it asked for forgiveness. Mr. lion merely laughed when the little mouse promised to help him. At last the lion let the mouse go. Not after very long, the lion was caught in trap out of which he could not take himself. He roared and roared, struggled out, but all in vain. When the tittle mouse heard the loud roar, that seemed to be of its great friend, Mr. lion, it decided to go and lend a hand, the tittle mouse decided to gnaw up the trap till the lion was helped out of the trap. The lion was very grateful for what the little mouse had done. He learnt to respect every animal irrespective of its size.
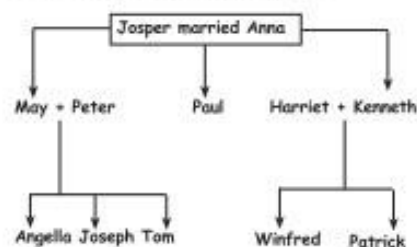
QUESTIONS
1. Why didn't the lion kill the little mouse?
2. Give another word that means "grateful" as used in the passage.
3. Why do you think the mouse helped the lion?
4. What lesson do you learn from this passage?
5. Suggest a suitable title for the passage.

43 (b) Study the family tree below and answer all the question about in full sentences

```
        Josper married Anna
  ┌──────────┬──────────┬──────────┐
May + Peter  Paul   Harriet + Kenneth
  ┌───┬───┐            ┌────┬────┐
Angella Joseph Tom   Winfred  Patrick
```

QUESTIONS
1) Who is Harriet's husband?
2) How many children did Josper and Anna produce?
3) Why do you think Tom cannot marry Angella?
4) What is the relationship between Winfred and Anna?
5) What does Joseph call Patrick?

44. Re arrange the sentences given in the correct order to form a sensible composition.

a. After his primary course, Ronald joined Buddo College for O' Level.
b. He stayed with his mother and father up to the age of five years.
c. Later, he went to St. Lawrence High School for "A" level.
d. Form London, he got employed in Barclays Bank, where he worked for three years.
e. Ronald was born in Wakiso District.
f. Being a bright boy, Ronald straight away joined P.1 at Kiziba Mixed Primary School.
g. He passed very well and got a bursary to study in London for his Bachelor's degree.
h. He was born of a very hardworking Uganda father and Kenyan mother.
i. At the bank, Ronald become very rich and he built a nice flat.
j. Their riches helped him to marry Nessie and they and happily married with two children.

1	2	3	4	5	6	7	8	9	10

SST ANSWERS TO ISSUE 17 (8TH JULY 2024)

1. To make road transport possible across rivers and streams/ to ease the movement of people and goods across rivers and streams
2. They introduced the western culture /They introduced their religion/Christianity They introduced their language
3. Swamps are water catchment areas/ swamps hold masses of water in an area. 4. Political leaders
5. They promote unity /They help people to develop their talents They promote entertainment
6. It led to intermarriages between Africans and Arabs/ Arabs led to wide spread of Islam religion
7. Both are sugar cane growing areas
8. Money is used to buy goods It was used as a medium of exchange
9. This is a form of tax charged on imported goods
10. By extending rural electrification/ by giving people loans through its programs like PDM
11. Poaching
12. South Africa/Botswana/Namibia/Zimbabwe
13. The White settlers grabbed the fertile land of the Kikuyu The Kikuyu were displaced from their fertile land(Kenya highlands) by the White settlers
14. The sun rises from the East where Mombasa is located/ Mombasa

is far in the East where the sun rises
15. They symbolise the source of river Nile
16. Labour is used in management Labour is used in loading and offloading goods
17. Tirenga oil field / King Fisher oil field /Ngege oil field / Mpuuta oil field
18. The Ngoni taught the Rugarugas new military skills which they used to defend their empire
19. Ugandans use English as their official language Ugandans participate in Commonwealth Games
20. Uganda is a land of freedom/ Ugandans provide labour to neighbours/ Ugandans live in peace and friendship
21. These were homelands set for the blacks to live in during Apartheid policy in South Africa
22. It forms a natural boundary between Uganda and Democratic Republic of the Congo
23. By paying security officers in time/ by revising and giving better salaries to security officers/ by providing better houses for the security officers/ building better schools and hospitals for security officers and their children
24. To promote gender balance To promote cooperation

25. they united Zanzibar and Tanganyika to form the Republic of Tanzania
26. Either: by giving them pens/books/pencils/ sharing with them Or: By giving them pens/books/pencils/ sharing with them
27. Either: Pottery/ she was a potter Or: She was a business woman/ trader
28. Either: they humble themselves/ they ask for forgiveness before receiving Or: Getting ablution/ wudhu/ saying adhan/ Facing the qibla/ dressing decently
29. Either: Paying attention to the preacher during service Or: Prophet Muhammad
30) Either: Love one another as I have loved you. OR) Hajj/ making a pilgrimage to Mecca or Medina
31.a) Mining is the extraction of minerals from the ground b) Diamonds c) Minerals cannot be replaced naturally when used up. d) Shortage of funds to invest in the mining sector \ Low levels of technology/ poor machinery / Poor transport and communication network /Shortage of skilled labour
38.a) Down warping b) Uganda gets a wider market for her goods d) Uganda sent peace keepers to

country marked Z to maintain peace
32.a) Camels b) They protect their heads from receiving direct sunrays c) Oases have water to support crop growing/ Oases have fertile soils d) by carrying out irrigation farming
33. i)led Lamogi rebellion ii) led Maji Maji rebellion iii) military leader of Mau Mau rebellion iv) led Hehe rebellion
34.a) Uganda National Roads Authority (URA) b) Petroleum/ crude oil/ limestone c) Shortage of funds Corrupt officials d) Feeder roads help to connect local farmers to main roads/ market centres/ transport farmers produces to market centres
35.a) It is an election organized to decide on an important political issue in a country. b) Voter bribery/Multiple voting/ Campaigning on the Election Day/ Ballot stuffing (putting pre-ticked ballot papers in the ballot box before elections) / Stealing ballot boxes c) It is where election results are recorded after counting elections of different candidates
36.a) Corruption/embezzlement b) It leads to loss of government funds /It leads to poor social

service delivery /It leads to poorly constructed roads/ schools/ hospitals in a country /It leads to stealing of medicine in government hospitals c) By arresting corrupt officials/ by educating the public about the dangers of corruption/ by employing faithful civil servants
37.a) Common Market for Eastern and Southern Africa/COMESA b) To promote regional trade To promote regional cooperation/ unity/ friendship/ security/ peace c) Economic Community of West African States Monitoring Group d) Shortage of funds Insecurity in some member states Production of similar goods Lack of a common currency
39. Either: a) A martyr is a person who accepts to die for his/her faith in God b) Saint Stephen c) He was stoned to death d) To be faithful to God /To accept suffering even if we meet some persecutions /To be brave/ courageous / Never to denounce God Or: a)A martyr is a person who accepts to die for his/her faith in Allah b) Sumayyah c) She was speared to death d) To be faithful to Allah /To accept suffering even if we meet some persecutions /To be brave