



Chilaw educational Zone

Grade 11

Practice Test 2023

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II

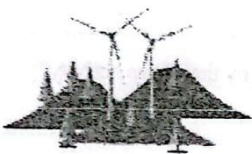
Science II

Duration - 3 hours

- Answer the four questions in part A ,in the space provided
- Of the five questions in part B answer three questions only
- After answering, tie part A and the answer script of part B together and hand over.

Part A

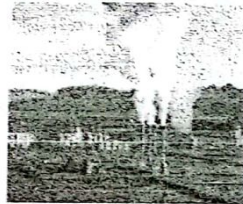
1. (A) The energy crisis is increasing day by day in Srilanka .Focusing on energy management and use of alternative energy sources is the solution for the energy crisis .Some alternative sources of energy are shown below.



Wind power



solar power



geothermal power



Sea waves

(i) Which of the above four forms of energy are currently being used in Srilanka and which are not?

Used : Not used : (02)

(ii) Which of the following is the most suitable form of energy that can be used in Srilanka.Give a reason for your answer.....

.....(02)

(iii) Write two reasons for energy crisis

..... (02)

(iv) Mention two things that should be considered in order to reduce the electricity bill at home

..... (02)

(v) A students says that the use of electric vehicle is not a solution for the energy crisis .Do you agree with the above statement. Give reasons.

.....(02)

(B) Following figures shows changes in the environment with the time in a certain area

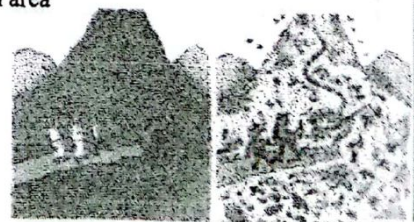
(i) How can this environmental change be called?

.....(01)

(ii) Give an example each for the things added to the environment

and removed from the environment by human being

Added :(01) Removed : (02)



iii)Mention any two ways in which environmental conditions can be restored.....(01).

.....(01)

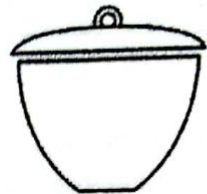


2. (A) Below are the steps of an activity arranged to identify the most abundant elements in living matter.

(P) A few green gram seeds which are in dry condition were put in a crucible and heated for a few minutes and the crucible was closed and heated strongly .There were small droplets of a liquid on the lid of the crucible.

(Q) When the lid was removed and reheated strongly, the seeds turned into black and lines drawn when rubbed against a white paper.

Crucible



(i) Mention a method to identify the liquid deposited on the lid is water

.....(02)

(ii) What are the three most abundant elements in living matter that can be confirmed by the above activity?

.....(02)

(iii) Mention a property of water that is important for the existence of organism and state how that property contributes to the existence

.....(01)

(B) Below is an incomplete table regarding the classification of vertebrates?

A	B	Aves	Amphibian	C
Sea horse	Crocodile	Penguin	Frog	Stag
Thilapiya	Tortoise	D.....	E.....	F.....

(i) Name the phyla A,B and C

A. B. C.(03)

(ii) Select the organisms for spaces D,E and F out of Salamander,bat,ostrich

D. E. F.(03)

(iii) A students says that whale can be included in "A" group .Do you agree with the above statement give reasons

.....(02)

(iv) State a characteristic which is common to aves which can't be seen in other vertebrate

groups.....(01)



3. (A) when two different atoms bond with each other they get polarized due to the difference of their electro negativities.

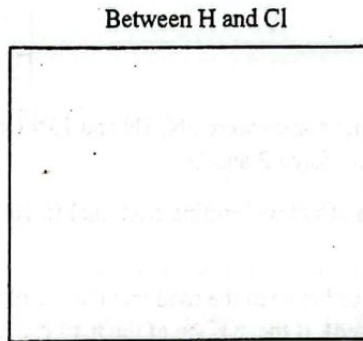
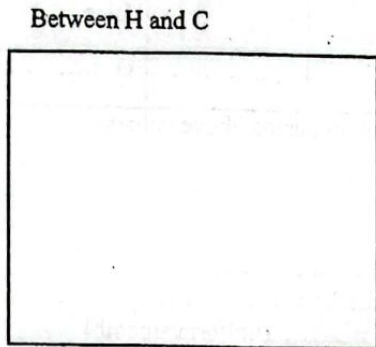
(i) Atomic number of Cl atom isand electron configuration is chloride ion hascharge and it haselectrons. (04)

(ii) Which element has highest electronegative out of C and Cl(01)

(iii) If H forms covalent bonds with C and Cl,

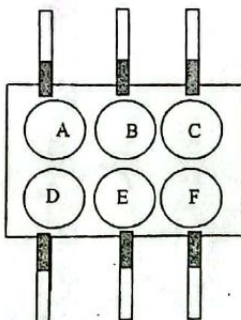
(a) Which element forms polar covalent bonds with H due to polarization(01)

(b) Draw Lewis dot structures for the bonds form between the elements H with C and Cl



(02)

(B) A group of students used a spot plate to identify acids, bases and salts 0.5ml each of aqueous solutions named A,B,C,D,E and F were put into the holes of the spot plate colours shown by pH papers were given below



Aqueous solutions	Given colour	An acid	A base
A	Yellow		
B	Blue		
C	Red		
D	Orange		
E	Dark green		
F	Purple		

(i) Identify acids and base according to the given colour and put \checkmark mark in relevant column. (02)

(ii) Arrange the aqueous solutions according to the ascending order of pH value(01)

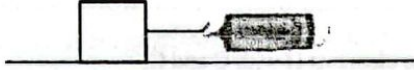
(iii) State the strong acid and the weak base out of the aqueous solutions
 Strong acid Weak base (02)

(iv) Mention the difference between a strong acid and a weak acid

(02)

4. (A) The figure given below shows how force applies on a wooden block kept on a uniform surface

By using a newton balance .some data collected during the activity were given in the table



Instanc e	Nature of the motion of wooden block	Force	Name of the frictional fore
1	Stationary	P.....
2	Motion just start	Limiting frictional force
3	Move	Q.....

(i) Readings of newton balance were 5N, 8N and 10N. Complete the column using above values (02)

(ii) Name two types of force P and Q (02)

(iii) Mention 2 factors affect on limiting frictional force

(a)..... (b)..... (02)

(iv) The frictional force between the road and the tire of a vehicle should be
(Increased/decreased) If the surface of the road is(uniform/smooth)
it is easy to move . (02)

(B)The figure shown below is a setup prepared by a group of students to release a water rocket.

(i) A glass bottle or a plastic bottle is more suitable for this ativity
.....(01)

(ii) Write down the reason for your answer in part (i)
.....(01)

(iii) Out of Newton's three laws which one can be used to explain the upward motion of the bottle
.....(01)

(iv) One students says that the air in the environment does not provide the force necessary for the bottle to rise up. Do you agree with this statement ?
.....(01)

(v) what is the momentum of the bottle at its maximum height
.....(01)

(vi) If the initial velocity of the bottle is 30ms^{-1} and if the bottle reached its maximum height within 3s assuming that the motion changed uniformly draw the velocity -time graph for the bottle to reach to it's maximum height (02)

