



Provincial Department of Education - NWP

Third Term Test - Grade 09 - 2023
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SCIENCE

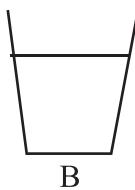
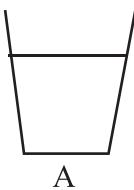
02 Hours

Name :

Part - I

- Answer to all questions.
- Underline to the most suitable answer.

01. A virus infectious disease is,
 1. Common cold
 2. Tuberculosis
 3. Malaria
 4. Cholera
02. The answer given the part of human eye and it's function in correctly is,
 1. Choroid
 2. Vitrous humor
 3. Iris
 4. Cillary muscle
 - Prevents entry of light into the eye.
 - Supports to maintain the spherical shape of eye ball.
 - Focus the light onto the retina.
 - controls entry of light into the eye.
03. The number of elements contains in a glucose ($C_6H_{12}O_6$) molecule is,
 1. 3
 2. 6
 3. 12
 4. 24
04. In A cup contains drinking water. In B cup contains two sugar spoons dissolved drinking water.



A

B

Correct answer illustrate about A and B is,

1. A is homogeneous, B is heterogeneous mixture.
2. A is heterogeneous, B is homogeneous mixture.
3. A and B both are heterogeneous mixtures.
4. A and B both are homogeneous mixtures.

05. During an accident the ear of a person is knock against on a something. Then after he felt discomfort to stand in balance. The structure being damaged may be,
 1. External auditory canal
 2. Semi circular canals
 3. Auditory nerve
 4. Ossicles
06. A perpendicular force of 50N is given on $5m^2$ area of a surface. The correct relationship given for the pressure is,
 1. $\frac{50N}{5m^2}$
 2. $50N \times 5m^2$
 3. $\frac{5m^2}{50N}$
 4. $\frac{1}{5m^2 \times 50N}$

07. In human heart the bicuspid valve locates in,

1. Between right atrium and right ventricle
2. Between left atrium and left ventricle
3. Between right ventricle and pulmonary artery
4. Between left ventricle and aorta

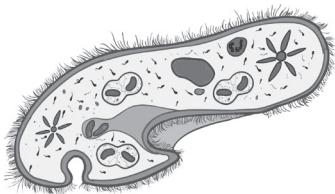
08. The process of clumping of the transfused blood in the body of the recipient is,

1. Blood agglutination
2. Blood transfusion
3. Hemorrhage
4. Leukemia condition

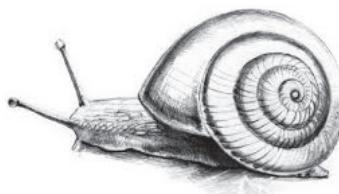
09. The artificial growth substance that can be used as a weedicide is,

1. Indole acitic acid
2. Cytasol
3. Napthalin acetic acid
4. 2.4 dichloro phenoxy acetic acid

10.



Paramecium



Snail



Amoeba

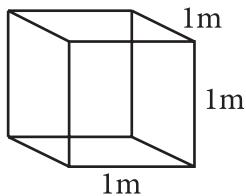
Locomotive organs of above animals in order is,

1. False feet, flagella, limbs	2. Muscular foot, flagella, false feet
3. Cillia, muscular foot false feet	4. Cillia, Limbs, false feet

11. A living fossil is,

1. Snail	2. Thilapia	3. Cockroach	4. Mosquito
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12. The mass of given cube is 1000kg, find its density.



1. 100Kgm^{-3}
2. 1000Kgm^{-3}
3. 1100Kgm^{-3}
4. 3000Kgm^{-3}

13. The animal identified as an invasive organism is

1. Mannawa	2. Bulath hapaya	3. Asoka pethiya	4. Hirikanaya
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14. A living - non living relationship in an environment

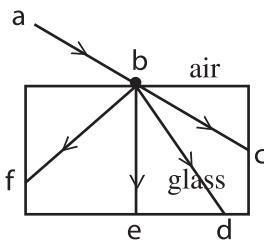
1. Decaying of waste matters	2. Animal consuming plants as food
3. Soil erosion by water	4. Rusting of iron

15. Which fact does not considered as a green concept centered agriculture.?

1. Use of organic fertilizers to fertile the soil.
2. Crop rotation for controlling pests
3. Use of chemical fertilizers to improving harvest
4. Drip irrigation method

16. The correct path of ab light ray is,

1. b c
2. b d
3. b e
4. b f



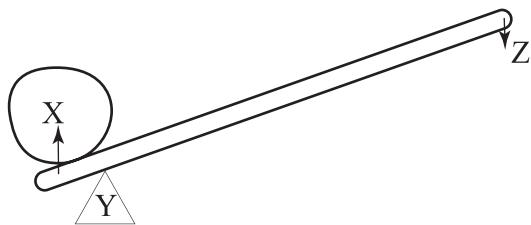
17. Bio diversity,

1. Increases the competition between the species
2. Makes disequilibrium in an Eco system
3. Increases environmental pollution
4. Supports to maintain favorable climatic conditions

18. Considered as a mineral is,

1. Graphite
2. Granite
3. Basalt
4. Gneiss

19. Figure below shows a lever,



The places represented in X, Y and Z are

X	Y	Z
1. Fulcrum	Load	Effort
2. Effort	Fulcrum	Load
3. Load	Fulcrum	Effort
4. Fulcrum	Effort	Load

20. Considered about given statements.

A - In lightning during discharging of charges, released much heat too.
B - In lightning air expands at once and given the sound of thunder.

From above statements,

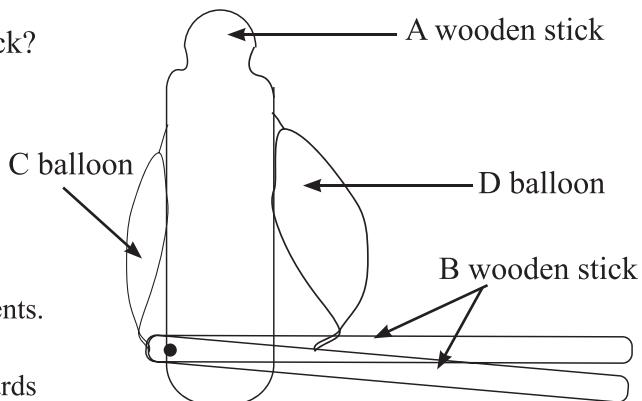
1. Both A and B are true
2. Both A and B are false
3. A is true, B is false
4. A is false, B is true

Part - II

- First question is compulsory.
- Answer for five questions including first one.

01. A. Given below is a figure of set-up prepared to demonstrate function of the elbow joint. C and D are some air filled balloons.

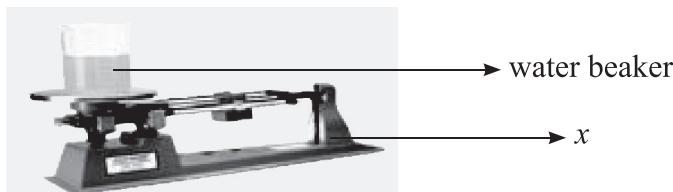
- What is the bone illustrated by A wooden stick? (01 mark)
- In which letter illustrated the bicep muscle? (01 mark)
- Which muscle provides energy to stretch the hand? (01 mark)
- Mention a special characteristic of muscle cell which important to support for the body movements. (01 mark)
- A stem of a plant grows upwards and bends towards the light even the plant pot falls down.
 - Explain this phenomena as a positive tropic movement. (01 mark)
 - Growing of stem away from the ground is what type of tropic movement? (01 mark)
- Mention a type of plant shows nyctinastic movements. (01 mark)



B Sir Lanka is a country rich with bio diversity Bio diversity can be discussed under different levels.

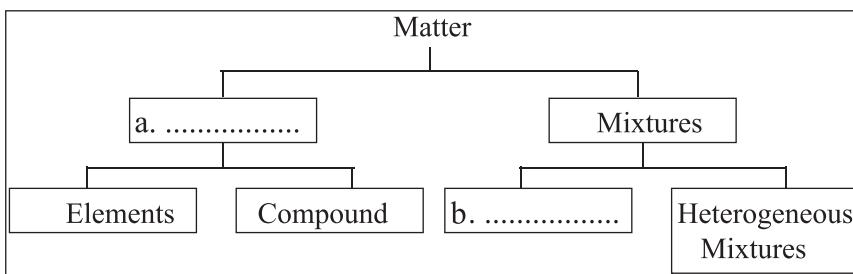
- Write an example to identify that even within the same species there are differences among the individuals. (01 mark)
- Write an example for brakish water environment. (01 mark)
- Write two aquatic Eco systems which can be used to generate electricity. (02 marks)
- Write a special Characteristic of plants in mountain forests. (01 mark)

C Given below is an instance of the activity done in school laboratory.

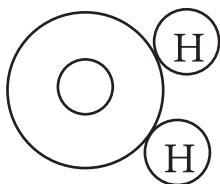


- What named as x ? (01 mark)
- If measured the mass of 500cm^3 of water and Coconut oil separately using given beaker. Mention the mass of above two liquids are equal to each other or differant to each other? (01 mark)
- Write a reason for your answer above II. (01 mark)
- Write an instance of using hydrometer. (01 mark)

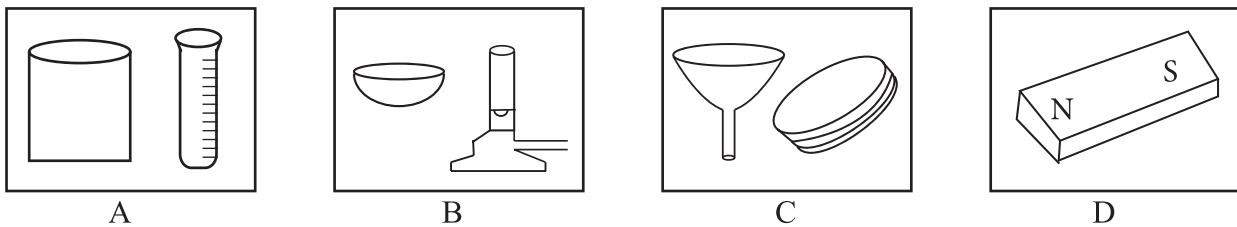
02. A. Given below is a classification of state of matter.



- Write suitable words for spaces a and b. (02 marks)
- Write a main difference between elements and Compounds. (02 marks)
- Given below is a illustration of water molecule what is the suitable place for it in the above chart. (01 mark)



B. Given below are set-ups of some device used to separate components from a mixture.



- Select most suitable set of devices can be used to separate components of mixtures given below.
 - Iron powder + Sulphur powder
 - Water + Salt
 - Chalk + Water(03 marks)
- Write another method of separating components instead of above methods. (01 mark)

C. Given below is a standard method of representing atomic number and mass number of Na atom.

²³Na

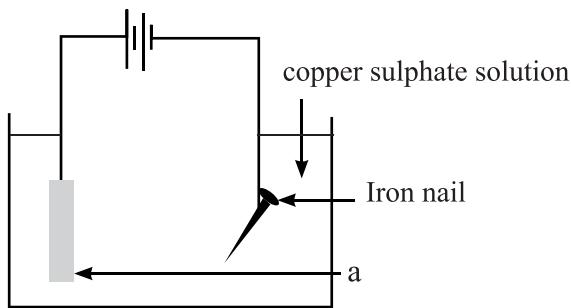
- What is the atomic number of Na atom. (01 mark)
- Write the number of neutrons of above Na atom. (01 mark)

03. A Given below are some components of blood.

a - Red blood cells b - White blood cells c - Platelets d - blood plasma

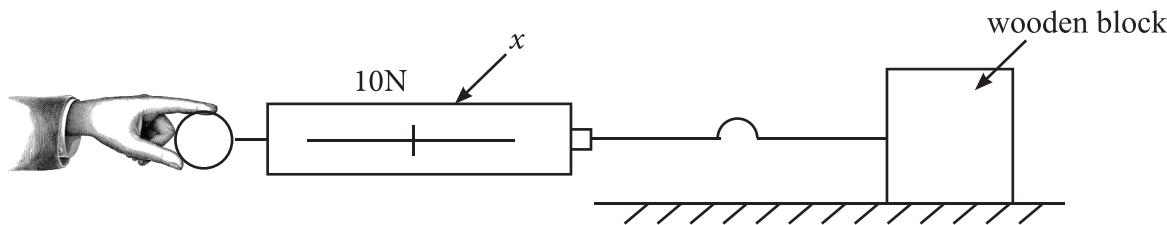
- What is the most abundant component of blood from above. (01 mark)
- Write the function of white blood cells. (01 mark)
- Mention the artery which carries blood from heart to lungs. (01 mark)
- Define what is blood transfusion. (01 mark)
- What is the blood group of donor can be transfused blood to the recipient with O⁻ blood group? (01 mark)
- Write a favorable habit should be followed to maintain healthy blood circulatory system. (01 mark)

B The diagram shows a set-up used to applying copper metal on iron nail.



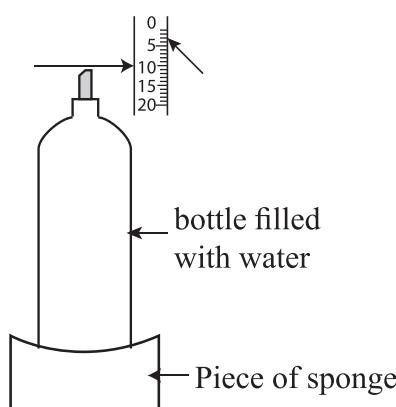
- Name a in the set-up (01 mark)
- Is iron nail belongs to negative electrode or positive electrode in the set-up? (01 mark)
- What is the colour of the solution? (01 mark)
- Is colour change occurred in the solution during the activity? (01 mark)
- Write a strategy can be followed to get the high quality electroplating. (01 mark)

04. A The diagram shows an activity done by students.



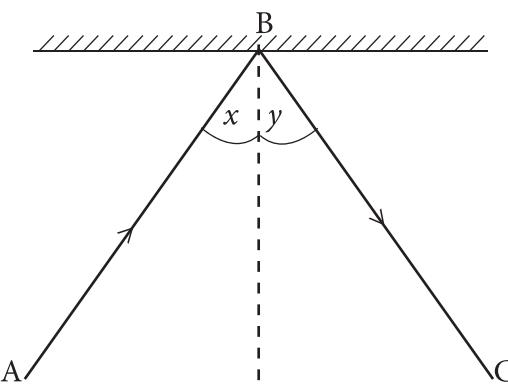
- Name the instrument which use to mesure force denoted as x in the diagram. (01 mark)
- Represent the above force in standard method. (03 marks)
- Write a change can be occurred in an object due to applying a force. (01 mark)
- Write a reason for the force is known as a vector quantity. (01 mark)

B A bottle filled with water place on the piece of sponge as shown in the diagram and get the reading of indicator.

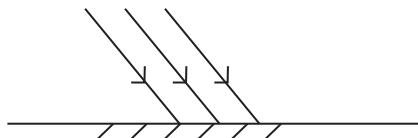


- The reading of above indicator decrease or increase while the bottle place inverted on the sponge? (01 mark)
- Write the reason for your answer. (02 marks)
- What is the affected factor of pressure explain through the activity. (01 mark)
- Write an instance of increasing the pressure in day to day activities. (01 mark)

05. Given below is a diagram represent the reflection of light by plane mirror.



- Define reflection of light. (01 mark)
- Name BC ray of the diagram. (01 mark)
- Write a relationship between x and y angles according to the laws of reflection. (01 mark)
- Write two characteristics of images formed by plane mirrors. (02 marks)
- Given below is a incomplete ray diagram of light rays incident on to the smooth surface. Complete the reflected ray of it. (02 marks)



- Name an instrument used to obtain spectrum in laboratory. (01 mark)

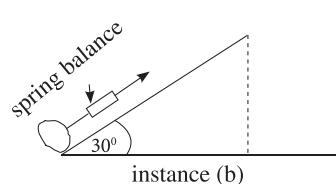
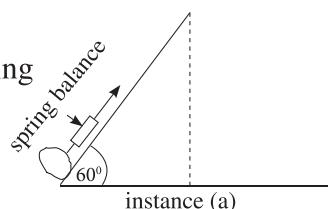
B The Sound waves occurred in environment are constantly subjected to reflection due to obstacle.

- Write an instance can be occurred by reflection of sound. (01 mark)
- Write an advantage of reflection of sound. (01 mark)
- Write a strategy can be applied to prevent reflection of sound when it is become a disadvantage. (01 mark)

06. A Complex machines are created by several simple machines.

- Define what is simple machine. (01 mark)
- Write simple machines used in given places of the bicycle. (01 mark)
- a) Padle (01 mark)
- b) Brakes (01 mark)

- Given below are diagrams representing drawing an object of 10 kg by changing the inclination of an inclined plane.

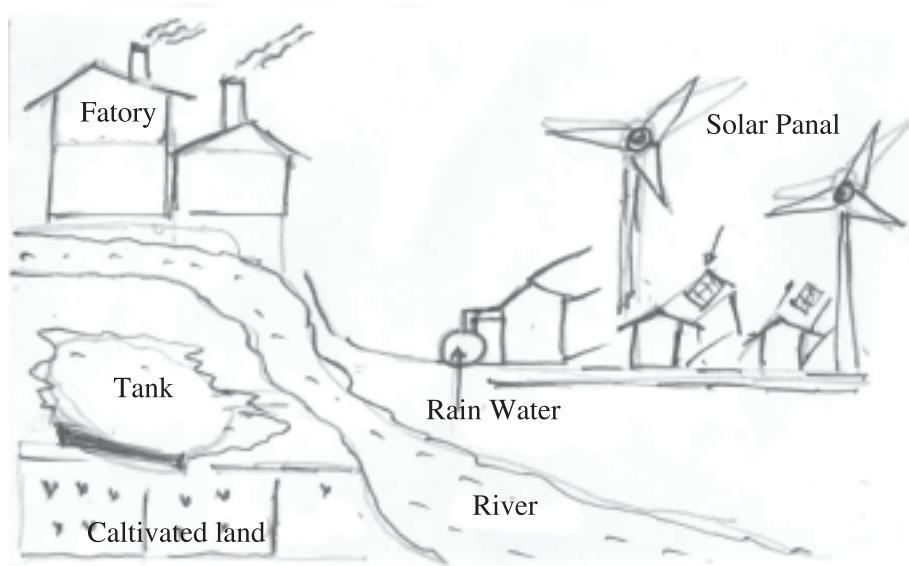


- What is the instance of reading of spring balance is high? (01 mark)
- What is the conclusion based on those observations? (01 mark)
- Write two examples for using inclined planes. (02 marks)

B There is an evaluation can be created in the world due to nano technology.

- What is the range of nano scale can be used to produce most efficient nano products? (01 mark)
- Name a natural nano system. (01 mark)
- Name a basic nano product. (01 mark)
- Write a harmful effect of nano technology. (01 mark)

07. A The diagram shows a certain environment drawn in the pupils environmental field book.



- i. Explain what is Eco system. (02 marks)
- ii. Write a natural Eco system from above diagram. (01 mark)
- iii. What is the Eco system which contributes for rain water management? (01 mark)
- iv. Write an adverse effect of industries to the environment. (01 mark)
- v. Write a traditional method of controlling pests in agricultural land. (01 mark)
- vi. Write an evidence to confirm that green buildings are used in this area. (01 mark)

B There is a number of natural disasters affecting Sri Lanka. The scientists indicates main reason for above is increasing the global warming.

- i. What is the main factor affected on global warming? (01 mark)
- ii. Mention the mechanism that distributes the solar energy received by equator to the other parts of the globe. (01 mark)
- iii. Write a strategy to minimize the harmful effect of natural disasters. (01 mark)
- iv. Write a reason for occurring tsunami. (01 mark)



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SCIENCE

Answer Sheet

Part - I

Answer No.	Answer
01.	1
02.	2
03.	1
04.	4
05.	2
06.	1
07.	2
08.	1
09.	4
10.	3

Answer No.	Answer
11.	3
12.	2
13.	1
14.	1
15.	3
16.	2
17.	4
18.	1
19.	3
20.	1

(marks 2×20=40)

Part - II

01. A i. Humerus (1 mark) ii. D (1 mark) iii. Triceps muscle (1 mark)
 iv. cells are arranged as fibres/ ability to contract/ ability to relax (1 mark)
 v. (a) movements to the direction of stimulus (1 mark) (b) Negative geotropism (1 mark)
 vi. Relevant answer (mimosa/ kathurumurunga) (1 mark)

B i. Suitable answer (1 mark) ii. lagoons/ estuaries (1 mark)
 iii. Sea/ River etc (2 mark)
 iv. stunted trees/ twisted stems/ smaller leaves/flat tree tops (2 marks)

C i. x - triple beam balance (1 mark) ii. unequal (1 mark)
 iii. Difference of densities (1 mark) iv. Relevant instance (1 mark) (Total mark 16)

02. A i. (a) pure substances (b) Homogeneous mixtures/ solutions (2 marks)
 ii. • Elements contain same type of atoms.
 • Compounds are contain of different types of elements. (2 marks)
 iii. Compounds (1 mark)

B i. (a) - D (b) - B (c) - C (3 marks) ii. For relevant answer (1 mark)

C i. 11 (1 mark) ii. 12 (1 mark) (Total mark 11)

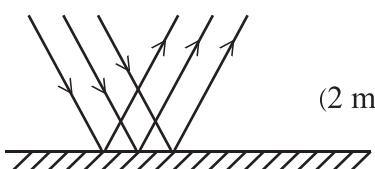
03. A i. Blood plasma (1 mark) ii. Destroying of pathogens (1 mark) iii. Pulmonary artery (1 mark)
 iv. Transfer of blood from one individual to another (1 mark) v. O blood group (1 mark)
 vi. Suitable answer (1 mark)

B i. a copper plate (1 mark) ii. - electrode (1 mark) iii. blue colour (1 mark)
 iv. Does not take place (1 mark)
 v. • The electrolyte has to be very dilute (1 mark)
 • using of very low current / low potential difference) (1 mark)
 (Total mark 11)

04. A i. Newton balance/ spring balance (1 mark)
 ii. representation of direction of force, magnitude and point of force of application (3 marks)
 iii. For a correct answer (1 mark)
 iv. with a direction and a magnitude (1 mark)

B i. Increased (1 mark) ii. Increase of pressure (2 marks) iii. Surface area (1 mark)
 iv. pointed tip of nails/ sharpening of tools/ etc (1 mark) (Total mark 11)

05. A i. Bouncing back of light ray into the same medium, when strikes (1 mark)
 ii. Reflecting ray (1 mark) iii. x and y are get same (1 mark)
 iv. Upright/ equal in size/ virtual/ lateral inversion/ equal to object distance (2 marks)

v.  (2 marks) vi. Prisms (1 mark)

B i. Echo / reverberation (1 mark)
 ii. • Ultra Sound Scanning • Finding the depth of ocean bed (1 mark)
 iii. Use of curtains/ making the walls rough (1 mark)
 (Total mark 11)

06. A i. Strategy of easy of works (1 mark)
 ii. (a) Wheel and axle (1 mark) (b) lever (1 mark)
 iii. a - instance (1 mark) b - Effort increased when decrease of inclination (1 mark)
 c - ladder/ stair case/ screw nail etc (2 marks)

B i. between 1nm to 100nm (1 mark) ii. Cell (1 mark) For relevant answer
 iii. nano tubes/ fullerene of carbon (1 mark)
 iv. for correct answer (1 mark) (Total mark 11)

07. A i. All living organisms and the physical environment together is an eco-system. (2 marks)
 ii. Rivers (1 mark) iii. lakes (1 mark)
 iv. Heavy noise/ poisonous gases and smokes/ given of excessive heat/ collect of polluted water to water bodies/ release of harmful chemicals (1 mark)
 v. For relevant answer (1 mark)
 vi. wind power stations/ use of solar panels/ use of rain water collected devices (1 mark)

B i. Increase of gobble houses (1 mark) ii. Cyclones (1 mark)
 iii. Awareness/ Adaptation/ for protective strategies etc (1 mark)
 iv. Earth quake/ land slides/ falling of meteors (1 mark)
 (Total mark 11)