

PROVINCIAL DEPARTMENT OF EDUCATION NORTHERN PROVINCE



Diagnostic Test – 2021

SCIENCE

Index No :	Grade :- 9	Time :- 2. 00 hours
	PART - I	
Select the most suitable answer	er.	
01. The measuring unit of pressure is,		
(1) Nm^2 (2) Nm^{-2}	(3) m ²	(4) N
02. Which of the following is not include	ded in protozoa?	
(1) Amoeba (2) Parame	ecium (3) Euglena	(4) Chlamydomonas
03. The method of separating various f	fuels from crude oil is.	
(1) Steam distillation	(2) Crystallization	1
(3) Fractional distillation	(4) Vaporization	
04. The micro- organism that is used at (1) Streptococcus thermophiles(3) Lacto bacillus	s biological weapon is, (2) Anthrax bacteria (4) Methano coccus	59
 (1) Short sight, concave lens (2) Short sight, convex lens (3) Long sight, concave lens (4) Long sight, convex lens 	used for its correction are res	pectively
06. What are the blood types that can (1) A and B (2) A and 0		ith blood group B? (4) B and AB
07. Which gas is contributed to make to (1) Methane (2) Oxyger		n? (4) Water vapor
08. The given figure shows a stone whereading is taken. Weight of the stone (1) 30N (3) 3N	· ·	300g

09. An end	emic species of	Sri Lanka is,		
(1) Elep	hant	(2) Blue magpie	(3) Turtle	(4) Whale
with silve used as (1) Silve (2) Cop (3) Silve	ver. Which of th s an electrolyte er	cion	ring Silver	Copper
	of the following ronmental poll	is not a cause for the ution		ersity? f invasive organisms
(3) Incre	ease in human	population	(4) Studies rela	ted to bio diversity
\	nple of insitu co attu reserve	onservation is,	(2) Peradeniya	park
(3) Kum	iana		(4) All of them	
13. Which (; animal has binoccular (2) Dog	r vision. (3) Loris	අධ්යාල්4) Cow Loris
	ease that resul aqueous humo	•	essure inside the e	eye due to the blockage of the
(1) Cata	ract	(2) Glaucoma	(3) Night Bli	ndness (4) Eye infection
given fig A- Aux B- Aux inte less C- The	gure. in produced in in concentrate nsity of light fa in the side of cells at which l	tements regarding to the apex diffuses dow more in the side of pl lls is high and concent plant with low intensit low intensity of light fa	vn wards. ant where trates y of light fall. alls grow more	sunlight sunlight sun light.
Which (atements are correct? (2) B and C	(3) A and C	(4) A, B and C

16. Origin of life took	place,		
(1) 3 billion years	ago	(2) 3.5 billion yea	ars ago
(3) 5.5 billion yea	rs ago	(4) 4.5 billion yea	ars ago
17. Mass of 0.25 m ³ o	of liquid is 200 kg. Calcu	late the density of that	t liquid?
(1) 80 kg m ⁻³		(2) 800 kg m ⁻³	
(3) 8000 kg m ⁻³		(4) 8 kg m ⁻³	
18. The species of inv	vasive organism is,		
 (1) Ganda pana /ľ	_	(2) Parthenium	
(3) Tank Cleaner 1		(4) All of them	
19. Part of the ear t	hat contributes to maint	ain the balance of boo	dv.
(1) Tympanic mer		(2) Semi circular	
(3) Cochlea		(4) Eustachian tu	
20. The given statem	ents are related to an ed	cosystem .	
	ccur between living com		
	ows through one way st		
c- There are con of biosphere.	stant interaction within	the ecosystem which	ensures the existence
of biospilere.			400000
Which of the abo	ve statements are corre	ct?	
(1) A and B	(2) A and C	(3) B and C	(4) A, B and C
			(20× 2 = 40 Marks)



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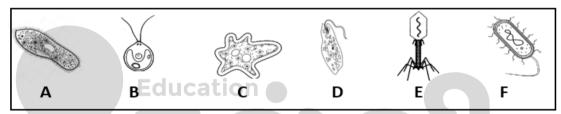
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Index No :	Grade :- 9	Part II

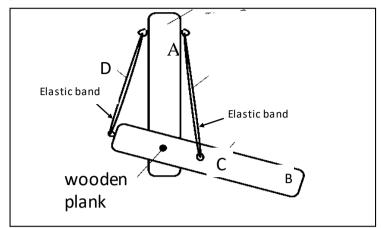
Answer any five questions only.

01. (A) Micro – organisms have the ability to survive in different environmental conditions and modes of locomotion. Pictures Some of those micro –organisms are given below.



1.	Identify the micro –organisms A,B,C,D,E and F.
	A
2.	Write the alphabet letter in the dotted line related to the micro –organisms, that shown the following features. (a) Possess Chlorophyll
3.	(e) Give the structures of the following micro- organisms which are used for their locomotion. A- B-
4.	Micro- organisms are used in industries .Write 2 such industries?

(B) The given diagram shows the model of human elbow.



1.	Identify the parts of human elbow denoted by A, B, C and D.
	A B
	C
2.	Name the following movements occur in plants .
	(a) Stem tip growing towards the light .
	(b) Growth of the pollen along the tube towards the ovule.
	(c) Clinging of the coiling of tendrils in passion fruit with the support .
	(f) Shrinking of mimosa leaves when the stimulus is touched .
	(12 Marks)

02. In our day to day life, we use various chemical substances for various purpose. Some of them are given below. Sulphur, Glucose, copper, Carbon, Salt solution, Copper sulphate, Mercury, pure water, Zinc, Calcium Carbonate, Fruit salad, ice cream, Aluminum, Compounds, Pure substances, Homogeneous mixture Complete the following blanks by using the above given substances. Matter Mixtures 1..... Heterogeneou 6..... Elements 2..... mixture Salt solution Copper Sulphate 8..... Metal 3....Education Copper Carbon 5..... 4..... a. Give a coloured compound from given substances?..... (2) b. What are the elements it contains? c. Give the chemical Formula of it? Write the Latin name and symbol of copper? (3) Latin name...... Symbol...... (4) Standard method of writing the element carbon is given below. a. Atomic number of carbon b. Mass number of carbon c. Number of electrons in carbon

(5) The molecular structure of a Methane molecule is shown here.

Denote the atoms in the given structure.



(6) Complete the given table by using following words.

Homogeneous, Heterogeneous, pure substance, impure substance

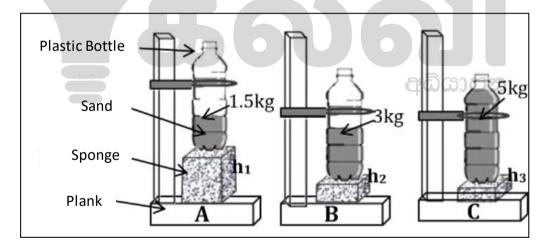
	Mixture	Compound	
1.			
2.			

(12 Marks)

03. (A) The given figure shows the setup that was arranged by a group of grade 09 students to study a factor affecting the solid pressure.

The reading of the height of the sponges which were affected by the pressure of the different masses of sand in the bottle are h_1 , h_2 and h_3 .

In the instances A,B and C the area of the plastic bottles, in contact with the piece of sponge is the same.



1. Which factor affecting the pressure is investigated by this setup?

2. What is the other factor that affecting the solid pressure, except the factor investigated by this activity?

3. In which piece of sponge was affected by high pressure?

.....

	In the instances A,B and C the pessure exerted on the piece of sponge are P_A , P_B , an P_C . Fill in the cases by using the symbols greater than (>) or less than (<).
	P _A P _C
	5. What is the quantity of force is applied in the instance A?
	6. What is the conclusion drawn by this activity?
(B)	The figure shows the activities that done by the students by using the instruments in the science laboratory.
	Activity I 1. Name the instruments A and B? A
	3. Mass of wooden block is 200 g. It is placed on a table. The area of the block that tauched on the surface of the table is 0.2 m ² . Find the pressure exerted by the wooden block on the surface?
	4. Which liquid has higher density in activity II?

04 (4)	
04. (A)	Some components of human blood are given below. Red Blood cells White Blood cells Platelets Glucose Ca ²⁺ Urea
	From the above components ,
	1. (a) Which type of corpuscle found in high amount in blood?
	(b) State 2 components consist in blood plasma?
	2. State the function of white blood cell?
	3. The blood transfusion is taken place a person who has faced an accident and lost more blood.(a) Write 2 factors should be considered during the transfusion of blood?(b) Write 2 physical fitness of the donor should be considered?
(B)	Longitudinal section of the human heart given below.
	අධ්යාපන
	1. Identify the parts A,B,C,D,E and F? A
	C D
	E F
	2. How to call the blood vessel which carries the blood away from the heart?

	3.	What are the blood vessels open into the part A?
	4.	There are two valves between the atrium and ventricles. Give the names of the valves and state the function of it?
	5.	Give 2 differences between the artery and vein?
		(12Marks)
05. (A)		agriculture field. Natural and artificial growth substances are used. What do you mean by plant growth substances?
	2.	Mention the growth substances related to following instances. (a) Positive Phototropic movement
		(b) Ripening of fruits
		(c) Accelerate the cell division.
	3.	State an instance that artificial growth substances are used in agriculture and write an example for it?
	4.	Pruning of plant apex is practiced in horticulture to maintain bushy plants. State the reason for it?
(B)		ere are many theories on origin of life on the earth were put forwarded by any scientists .
	1.	(a) Give 2 theories related to origin of life on the earth?
		(c) Which theory is accepted today for the origin of life on the earth?
	2.	What is the first organism, continued from the first form of life on the earth that is a simple unicellular bacteria?
	3.	(a) How does we call the process of gradual development from simple organism to modern complex organism?

4.	Give 2 example for living fossils?
	(12Mark
	cosystem contains living organisms and non living components. What do you mean by eco system?
2.	Give 2 examples for natural ecosystem?
3.	Give an importance of tropical rain forest?
	Which grass is very common in dry patana? Write 2 example for the damana?
6.	Give 2 environmental problems which causes the biodiversity degradation?
	Carbon rods Coppersulphate Solution
	diagram shows the electrolysis of copper sulphate solution by using carbon electrometric From the electrodes A and B which functioning as positive electrodes?
2.	Give 2 observations that you will see a while after?

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