

PROVINCIAL DEPARTMENT OF EDUCATION - NORTH WESTERN PROVINCE

Second Term Test 2018 SCIENCE

Grade 9 SCIENCE Time: 2 hours

Name / Index No.

Part I

- Answer for all the questions.
- Underline the correct or most suitable alternative.
- 01. The group which the micro-organisms in the picture belong is,
 - (1) Protozoa
- (2) Algae
- (3) Bacteria
- (4) Fungi





- 02. Followings are three statements about micro-organisms presented by a student,
 - A. Micro-organisms can be used in medical field usefully.
 - B. Microbial activities are essential for the existance of the earth.
 - C. The adverse effects of micro-organisms are minimum in relative to their uses.

The correct statements are,

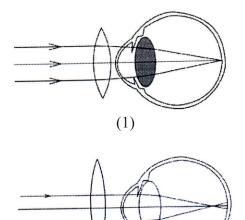
- (1) A and B
- (2) A and C
- (3) B and C
- (4) A, B and C

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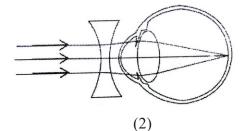
- 03. Most common eye defects exists in the present are,
 - (1) hypermetropia and myopia
- (2) hypermetropia and glucoma

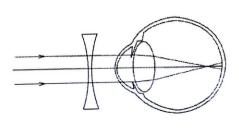
(3) Glucoma and cataract

- (4) Cataract and myopia
- 04. The correct diagram of the vision obtained after applying the remedy for myopia is,



(3)





(4)

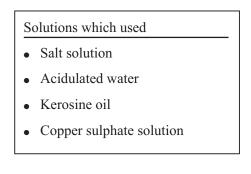
05.	Wha	at is the symbol of the element calcium	?												
	(1)	K (2) Ca	(3)	C (4) C	1										
06.	Che	mical formula of Carbon dioxide and s	odium ch	loride respectively are,											
	(1)	CO ₂ and NaCl (2) CO and NaC	C1 (3)	CO ₂ and SOC1 (4) C	O and SOC1										
07.	Wha	at are the elements present in Calcium (Carbonate	conate (CaCO ₃)?											
	(1)	Calcium, Oxygen, Carbonate	(2)	Calcium, Carbonate, Oxy	ygen										
	(3)	Carbon, Oxygen	(4)	Calcium, Carbon											
08.	The	diagram shows a graphical representat	tion of two	o forces,											
				←											
	_			Q L											
	The	correct statement regarding the two for	rces abov	e is,											
	(1)	The two forces are equal in magnitude.													
	(2)	(2) The two forces act for the same direction.													
	(3)	The magnitude of force Q is greater the	han P.												
	(4)	The magnitude of force P is greater th													
09.	Ther	eason for fixing many tires for the vehi	icle given	in the figure is, අධ්යාද	ට න										
	(1)	To reduce the weight of the vehicle.		Mr pr f i'r											
	(2)	To increase the weight of the vehicle.													
	(3)	To reduce the pressure exert by the ve	ehicle.	WOVIL ALC	202 - 200										
	(4)	To increase the strength of the vehicle	e.	tuchus Confession Conf	1011-101										
10.	Theb	plood vessel which combines to the right	ht ventricl	e is,											
	(1)	Superior vena cava	(2)	Systematic artery											
	(3)	Pulmonary artery	(4)	Pulmonary vein											
11.	The	hemical substances that regulate the gr	rowth of p	lants are,											
	(1)	Plant hormones	(2)	Growth substances											
	(3)	Inhibitors	(4)	Stimulators											

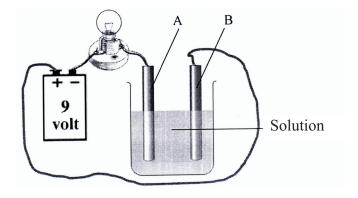
12.	Ther	e are three types	of plant moven	nents are give	n be	low.	
	A. S	Shrinking the lea	ives when touch	ning.			
	В. 3	Shrinking the lea	ves in the dark.				
	C. (Growing of plant	t roots towards	ground.			
	Then	nastic movement	ts that showing	by the mimos	sa pla	ants are,	
	(1)	A and B	(2) A and C	(3) H	3 and	dC (4) A	A, B and C
13.	The	organism that bo	rn very first dur	ing the evolu	tion	was,	
	(1)	Cockroach	(2) Mo	nkey	(3)	Earth worm	(4) Bacteria
14.				-	_	ring the density	of three liquids by using a
	(1)	A and B					
	(2)	A and C	Educ	ation (
	(3)	B and C		10			
	(4)	C and A					
15.	Apro	oduct of electroly	sis of water giv	ves a 'pop' sou	ınd v	when introducing	a glowing splint to identify
	it. W	hat is this gas?					
	(1)	Oxygen		((2)	Hydrogen	
	(3)	Carbondioxide	9	((4)	Methane	
16.	Biod	liversity is,					
	(1)	Diversity amor	ng eco systems				
	(2)	Diversity amor	ng organisms li	ve in eco syst	ems		
	(3)	Differences an	nong organisms	s due to the ge	neti	c diversity.	
	(4)	Diversity amor	ng eco systems	, genetics and	spe	cies.	

	(1) Increase the harvest by using chemical fertilizers.
	(2) Use more powerful pesticides and agrochemicals to control pests.
	(3) Use multiple crop cultivation, crop rotation, post crop technology and genetic technology.
	(4) Move to use modern machines and modern cultivation technology instead of using traditional methods.
18.	Followings are some statements presented by a group of students about the green concept.
	A. Increase the plant cover on the earth.
	B. Minimize the emmission of green house gases.
	C. Generate electricity from solar power.
	Correct statements are, Education
	(1) A and B (2) A and C (3) B and C (4) A, B and C
19.	What is the correct statement regarding the natural eco systems?
	(1) Estuaries contain fresh water.
	(2) Lagoons contain brackish water.
	(3) Water in rivers use to generate hydro power electricity.
	(4) Tanks which are constructed by man are type of inland water body.
20.	When three immisible liquids contain in one vessel,
	(1) The liquid with greatest density is the lowest layer.
	(2) The liquid with least density is the lowest layer.
	(3) The liquid with greatest density is the topmost layer.
	(4) Water which added initially exists at the bottom.

17. A method to increase the productivity in agriculture is,

- Answer for the first question and four other questions.
- The first question carries 16 marks and each other questions carry 11 marks.
- 01. The diagram given below is to identify electrolyte and non-electrolyte liquids / solutions.





- i. State the observations separately if kerosine oil and salt solution are used as electrolyte. (02m.)
- ii. Classify salt solution, acidulated water, kerosine oil and copper sulphate solution which used above as electrolytes and non-electrolytes. (02m.)
- iii. What is the positive electrode from A and B?

(01m.)

- iv. States two reasons for using carbon or granite rods as electrodes in A and B.
- (02m.)
- v. If copper is used as the solution state the observations near the A, B electrodes and in the solution. (03m.)
- vi. State an element and a compound that can be extracted by electrolysis. (02m.)
- vii. If it is needed to coat copper around an iron nail properly,
 - a. State the substances that should be used as positive electrode and as negative electrode. (02m.)
 - b. What is the electrolyte suitable for this?(01m.)
 - c. Is it suitable to use 1.5V cell or a 9V cell for electric supply.

(16 marks)

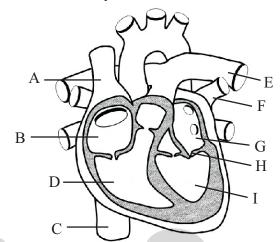
(01m.)

- 02. A The main function of the ear is receiving senses about the sound and maintain body balance.
 - i. What is the structure that the senses of sound transfers to the auditory nerve? (01m.)
 - ii. What is the structure that contributes the body balance which <u>doesn't participate in</u> <u>hearing</u>? (01m.)
 - iii. What is the function of eustachian tube?(01m.)
 - iv. What is the hearing limit frequencies of human ear? (01m.)
 - v. State a precaution should be taken to protect the ear? (01m.)

- B. Production of bio gas is an instance of using micro-organisms. Micro-organisms. act an organic substratum of organic matter and aquous solutions.
 - i. Name an organic substance that can be used to produce bio gas in Sri Lanka. (01m.)
 - ii. What is the group of micro-organism used to produce bio gas? (01m.)
 - iii. What is the main gas contains in bio gas which can be used as an energy? (01m.)
 - iv. State the two elements in the gas you mentioned above. (02m.)
 - v. State another use of producing bio gas except providing energy. (01m.)

(11 marks)

- 03. A. The diagram given below is used by a group of students to study about the human heart.
 - There are four Chambers.
 - A valve is in between each upper and lower chamber.
 - There are two valves at the origin places of two main arteries.
 - There are two main arteries associate with the heart.
 - There are more than one blood vessels are connected to upper chambers of the heart.



i. Name the B, D, G and I chambers respectively.

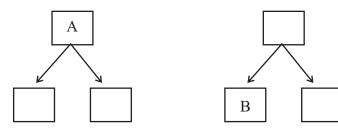
(02m.)

ii. What is the name of H valve?

(01**m.**)

iii. Name the blood vessels marked as A, C, E, and F.

- (02m.)
- iv. State the information relevant to the statements given below using the letters of the diagram. (02m.)
 - a. A blood vessel carries blood away from the heart.
 - b. A blood vessel carries blood towards the heart.
 - v. What is the name of the valves found at the origin places of main arteries? (01m.)
- B Human blood groups can be devided as A, B, AB and O. It is needed to consider the compatibility of the blood group and the Rhesus factor in a case of blood transfusion.
 - i. Draw the diagram given in your answer sheet and fill in the blanks related to compatibility of blood groups. (02m.)

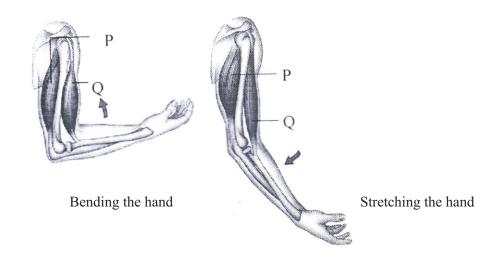


ii. Write all the blood groups with the Rhesus factor that can be received by a person with AB blood group. (01m.)

(11 marks)

04.	A.	There is a beleive of the life was established billions of years after the origin of the earth. i. State two theories about the origin of life of the earth. (02m.) ii. Name two evidences to confirm that the organisms living in the present were evoluted from initially existed organisms. (02m.) iii. What is the name given to the organisms which survive even today retaining their physical properties unchanged though million years have passed? (01m.)
	B.	Eco system diversity, species diversity and genetic diversity commonly can be taken under bio diversity.
		i. State an importance of bio diversity for organisms. (01m.)
		ii. What are the main two ways of bio degradation? (02m.)
		iii. Classify the given interactions under biotic - biotic, biotic - abiotic, abiotic - abiotic interactions. (03m.)
		a. Plants use solar energy for Photosynthesis.
		b. Soil erosion occurs by water.
		c. Animals depend on plants for food. (11 marks)
05.	A	The building unit of an element is atom. There are three types of sub atomic particles in an atom. A student was constructed following statements by naming sub atomic particles as A, B and C. Education
		A = Atomic number A in a neutral atom = B Mass number = +
		i. Identify and name the sub atomic particles given as A, B and C. (03m.)
		 i. Identify and name the sub atomic particles given as A, B and C. (03m.) ii. What are the two letters needed to write the mass number out of A, B and C? (01m.)
		ii. What are the two letters needed to write the mass number out of A, B and C? (01m.)
	В.	 ii. What are the two letters needed to write the mass number out of A, B and C? (01m.) iii. What is the lightest sub atomic particle? (01m.) iv. If an atom X has 6 of each type of sub atomic particles, what is the mass number of X atom? (01m.)
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06.	A.	iii. What are the two letters needed to write the mass number out of A, B and C? (01m.) iii. What is the lightest sub atomic particle? (01m.) iv. If an atom X has 6 of each type of sub atomic particles, what is the mass number of X atom? (01m.) Eco systems in Sri Lanka can be divided into natural eco systems and artificial eco systems. i. What are the three types of man made eco systems? (03m.) ii. State an example for a tropical rain forest under natural eco systems. (01m.) iii. What is the natural aquatic eco system which used in generating hydro power electricity? (01m.) (11 marks) Animals use different appendages for locomotion. Muscles and bones which are combined with those appendages are used for movements. Name the locomotive appendage of the animals given below. (02m.) a. Amoeba

ii. The way of folding and unfolding the hand is given by the diagram below. During this movements P and Q muscles show contractions.



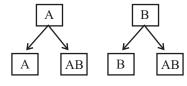
State the letter of the muscle that contract during each instance given below. (02m.)

- a. Bending the hand
- b. Stretching the hand
- iii. Draw a labeled diagram of a setup which is made to demonstrate the contraction of muscles during the bending and stretching the hand. (02m.)
- B Animals as well as plants show movements.
 - i. Write the name given to the each type of movement given below.
 - a. There is a direct interaction between the stimulus and the direction of the response. Occurs due to influence of growth substances. (01m.)
 - b. Though the stimulus affect for make the response, the direction of the stimulus doesn't affect for the response. The movement occurs for a considerable direction. (01m.)
 - ii. When the mimosa leaves are touched they shrink. What is this type of movement? (01m.)
 - iii. What is the name of the method of conserving animals in their natural habitats? (01m.)
 - iv. State a strategy that is used to conserve plants in their natural living environments. (01m.)

(11 marks)

Gra	ad	е	9				•	Sec	ond	lT	ern	ı Te	est 2	201	8					S	CIE	INCI
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(12)	1	()	13)	4	(14)	4	(13)	2	(10)	4			, ,	4	(19)	3	(20)	1				
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					electro	lyte	-Ker	osin	e oil													(01m
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	(iv)	C	ond	uct el	ectri	city															(01m
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			S	odiı	ım hy	drox	ide															(01 n
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		(ii)) S	emi	circul	ar c	anals															(01 n
		(iii	ii) Keep the pressure in and out of the tympanic membrane equal											(02n								
		(iv	v) 20 Hz - 20 000 Hz												(01 n							
		(v)	y) A suitable answer												(01 n							
	B.	(i)) Cow dung/Hag/rooten food etc.,												(01n							
		(ii)	i) Bacteria											(01 n								
		(iii	ii) Methane / CH ₄											(01 n								
		(iv) C	arbo	on, Hy	dro	gen/(C, H														(02n
		(v)	C	btai	n orga	nic	fertili	zers,	, Man	age v	waste	es										(01m
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		(iii	i) sı	uper	ior ve	na c	ava, Ir	ıferi	or ver	ıa ca	ıva, p	ulmo	onary	arter	y and	pulı	nonar	yνε	ein			(02n
		(iv) a	. E																		
			b. A/C/F												(01n							
		(v)	S	emi	lunar	valv	res															(01n

B (i)



(ii) \overline{A} , \overline{B} , \overline{AB} , \overline{O}

- (02m.) (01m.)
- 04. A. (i) Theory of special creation, spontaneous generation theory, Cosmozoic theory, Theory of biochemical evolution (02m.)
 - (ii) Fossil, comparative anatomy, geographical animal distribution (02m.)
 - (iii) Living fossils (01m.)
 - B. (i) Minimizing the environmental pollution, entertaining, Experiments, study, protect water sources etc., (01m.)
 - (ii) Natural processes (01m.)
 - Human activities (01m.)
 - (iii) a. biotic abiotic (01m.)
 - b. abiotic abiotic (01m.)
 - c. biotic biotic (01m.)
- 05. A. (i) A-Protons (01m.)
 - B-Electrons Education (01m.)
 - C Neutrons (01m.)
 - (03m.)
 - (ii) A and B (01 mark if both correct) (01m.)
 (iii) B / Electrons (01m.)
 - (iv) 12 (01m.)
 - B (i) Agricultural environments (01m.)
 - Industrial environment (01m.)
 - Settlements (01m.)
 - (ii) Sinharaja/Kanneliya/Dediyagala/Nakiyadeniya (01m.)
 - (iii) Rivers (01m.)
- 06. A (i) a-Pseudopodia b-Muscular feet c-Wings/legs
 - d-Wings (02m.)
 - (02 marks if all correct 01 mark if 03 or 02 answers are correct)

 - (iii) To a diagram in the page 91 in act 8.2

or any suitable diagram (01m.)

Lable at least 2 parts (01m.)

- B (i) a Tropic movements (01m.)
 - b Nastic movements (01m.)
 - (ii) Nyctinastic movements (01m.)
 - (iii) In-sity conservation (01m.)
 - (iv) Sensitive zones of environment/strickly reserved forests/reserved forests (01m.) (11m.)

Part I - $2 \times 20 = 40$ Part II - 16 + 11 + 11 + 11 = 60 Total marks = 100

ONLINE CLASSES - 2025. VEW ADMISSIONS

2ம் தவணை வகுப்புகள்

தரம் 6 முதல் O/L வரை

அனைத்து பாடங்களும் ஒரே கல்வி நிறுவனத்தின் கீழ் ...



இலங்கையின் எப்பாகத்திலிருந்தும் ZOOM APP மூலம் எமது வகுப்புகளில் இணைந்து கொள்ள முடியும்

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