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Devi Balika Vidyalaya - Colombo

පළමු වර පරීක්ෂණය - 2012
First Term Test - 2012

Science - Part I

Grade 10


1 1/2 hours

Name :

Index No. :

* Underline the most suitable answer.

- 01) The main classification of living organisms is
- i) Plants, animals, bacteria ii) Plants, animals, vertebrate,
iii) Plants, animals, micro-organism iv) Vertebrates, invertebrates, plants
- 02) The animal groups containing worm blooded animals are
- i) Reptiles , mammal ii) Mammal , bird
iii) Amphibians, Pisces iv) Bird , Pisces
- 03) The animal having body with a shape of an unfolded umbrella and several tentacles around the edge is
- i) polyp ii) Sea anemone iii) Hydra iv) Jelly fish
- 04) Following feature, can be seen in a sample of seeds collected by a students
- a) Fruit is not available around the seed
b) Seeds are located on a cone
- The tree containing such seed can be
- i) Flowering plants ii) Monocotyledonous
iii) Dicotyledonous iv) Non-flowering plants with seeds
- 05) A 'thallus' is a
- i) A body not differentiated into parts
ii) A body differentiated into roots, stems, leaves etc.
iii) A body containing chlorophyll and differentiated into parts
iv) A body spreads on land
- 06) The main function of mitochondria
- i) control, cell activities ii) Producing food by obtaining sun light
iii) Producing energy by respiration iv) Transporting substances

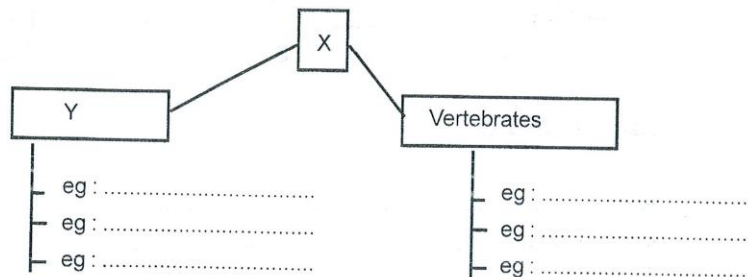
- 07) The main difference between a plant cell and an animal cell is, that in a plant cell,
 i) A cell wall is absent ii) A cell wall is present
 iii) A nucleus is present iv) A plasma membrane is present
- 08) A cell is observed by a microscope for the first time is
 i) Robert hook ii) schleidon iii) shwan iv) carrolus linnaeus
- 09) The type of cell with out containing chloophyll is
 i) Spongy paranchyma ii) pallisade paranchyma
 iii) Epidermal cell iv) Guard cell
- 10) Example of collenchyma cell is
 i) Guard cell ii) stone cell iii) phloem paranchyma iv) Epidermal cell
- 11) The bicep muscle present in the upper arm of the human hand is
 i) Unstrained ii) Involuntary iii) Skeletal muscle iv) Smooth muscle
- 12) The heart wood of a plant is
 i) xylem tissue ii) phloem tissue iii) cambium tissue iv) cortex
- 13) Following is a tissue observed under a microscope The tissue is
 i) Lower epidermis
 ii) Blood cells
 iii) Onion peel
 iv) Cheek cell
- 
- 14) Water is absorbed through root hairs by
 i) osmosis ii) Diffusion
 iii) Root pressure iv) Mass flow
- 15) A method of transportation using energy is
 i) Diffusion ii) Active transportation iii) Osmos's iv) Root Pressure
- 16) The main factor which facilitates ascent of sap is
 i) Root pressure ii) capitary action iii) Osmosis iv) Transpiration pull
- 17) The leaves are cut off when re-planting certain plants such as banana. The reason for this is
 i) To reduce transpiration ii) To prevent uprooting the plant due to wind
 iii) To make the stem - light iv) To come out buds quickly

- 18) 'Ascent of sap' means
- Water transports from root hairs to xylem in the roots
 - Transporting water & minerals upward inside the plant body, absorbed by root hairs
 - Tranlocation of food through out the plant body
 - Releasing water vapour from plant leaves
- 19) 'Heamophilia' is ,
- A diseas condition occur due to lack of iron
 - An infection spreads through contact
 - A hereditary discase disease
 - A disease spreads by mosquitoes
- 20) A method of effective participation of eradicating dengue as a school students is,
- Using mosquito net when sleeping
 - Destroying mosquito breeding places
 - Using mosquito coils
 - Applying cream on body

Part - II

* Answer only 3 Questions.

- 01) Classification & nomenclature of organisms can be done considering the characteristics of organism ?
- State the main criteria used to classify animals
 - Following is a dichotomous key used in animal classification. Name X & Y of it
X - Y -
 - Complete the dichotomous key using the follwoing organisms.
(Marchantia, Hydra , cycas , leech , Mango , Turtle , coconut , penicellium , salemantor , Bat , carb)



(Use the above key to answer question iv , v, & vi)

iv) Name a micro - organism

v) Name 2 non - flowering plants & 2 flowering plants

Non - flowering 1. 2.

flowering 1. 2.

vi) In which plant the seeds are not produced.
.....

vii) Name the group which crab belongs and write 2 characteristics of that group

i) Group

ii) Characteristics 1)

2)

viii) a) Who introduces the nomenclature.

b) What is the name of that nomenclature

ix) Name the two terms include in it.
.....

x) Name the national flower and write it's name according to above nomenclature.

National flower

Scientific nomenclature

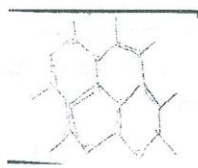
(20 marks)

02) Cell is the basic building unit of organism. A tissue is a collection of cells.

A)



A



B



C

i) Name A , B & C

A -

B -

C -

- ii) 'A' is a one type of animal tissues. Name the other two types of animal tissues.
 - a)
 - b)
- iii) State a main difference between tussue 'B' & sclerenchyma tissue.

.....
- iv) What is the function performed by the tissue containing 'C' in a plunt body.

.....
- v) Name the tissue present in herbaceous stems and near midrib of leave ?

.....
- vi) Name 2 type of Paranchyma tissues present in a plant leaf
 - a)
 - b)
- vii) Write the organizational levels of an organism.

.....

B) Removing water as water vapour through plant sarfaces during day time is known as transpiration.

- i) What is the instrument used to measure the rate of transpiation

.....
- ii) State 2 steps should be followeed when fixing the twig to this aparatus.
 - a)
 - b)
- iii) State assumptions used in here.
 - a)
 - b)
- iv) State 4 affecting factors of transpiration
 - a) b)
 - c) d)
- v) State 2 adaptations of xerophyts to reduce transpirations.
 - a) b)

vi) State 2 differences between transpiration & guttation.

1)

2)

03) A plant leaf is similar to a factory when considering the process of producing food in it

i) What are the raw materials obtained by leaf for it

1) 2)

ii) What is the energy used in it

iii) What is the main product in it

iv) What is the by-product in it

v) Draw labelled diagram of a set-up which can be used to demonstrate that above mentioned by-product is released.

vi) What is the name of the above mentioned process

.....

vii) State 2 adaptations of plant leaves to increase the efficiency of that process

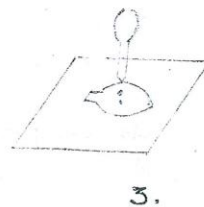
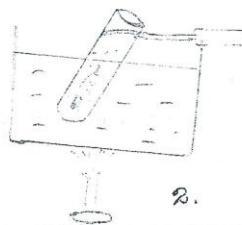
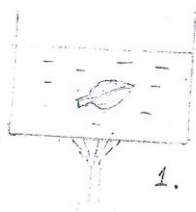
1)

2)

viii) Write a balanced equation for the above process

.....

B) Following are some steps of testing starch.

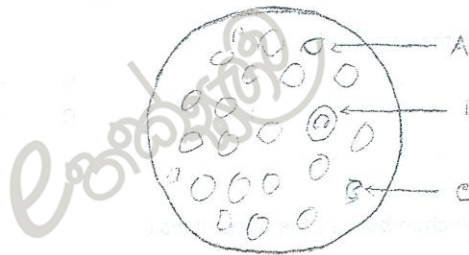


- i) Name the above steps
 1)
 2)
 3)
- ii) What are the reasons for step I & II
 i)
 ii)
- iii) What is the precaution in used

- iv) What is the reason for using such precaution.

(20 marks)

- 04) Blood transport various substances through out the body. Following is a diagram of a smear of blood under microscope



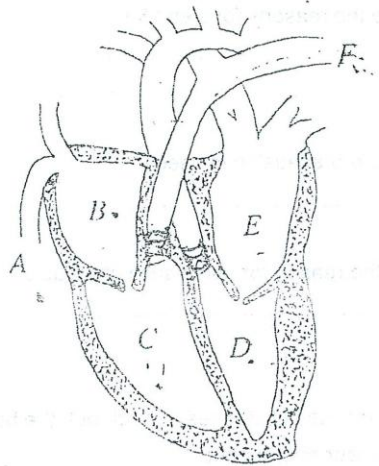
- i) Name A, B, C
 A - B -
 C -
- ii) Write the functions of
 A - B -
 C -
- iii) Human blood is red in colour. What is the Reason for it

- iv) The persons having which blood groups known as universal donar & Universla recipient in blood transfusion.
 a) Universal donar -
 b) Universal recipient -

v) Can you donate blood as a student in grade 10 Give reasons for your answer

.....
.....

B) Following diagram shows the internal structure of the human heart



i) Name the part A - F

A	-	B	-
C	-	D	-
E	-	F	-

ii) Which chamber has the thickest wall

iii) Explain the reason for it.
.....

iv) State 3 substances transported by blood plasma and give one example for each.

a)	eg :
b)	eg :
c)	eg :

v) What is the blood pressure of a healthy person.
.....

vi) State 2 steps you can follow to maintain the proper health of the blood circulatory system.

(20 marks)

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