

HTV

HALF YEARLY EXAMINATION - 2022**10** - Std**SCIENCE**

--	--	--	--	--	--

Time : 3.00 hrs.

Marks : 75

PART - I**Answer all the questions.****12 X 1 = 12**

- Impulse is equal to
 - Rate of change of momentum
 - Rate of force and time
 - Change of momentum
 - Rate of change of mass
- Unit of temperature is
 - Celsius
 - Kelvin
 - Fahrenheit
 - None of the above
- Gamma radiations are dangerous because
 - it affects eyes
 - it affects tissues
 - it produces genetic disorder
 - it produces enormous amount of heat
- Which of the following is a triatomic molecule?
 - Glucose
 - Helium
 - Carbon di oxide
 - Hydrogen
- Which of the following is a the universal solvent?
 - Acetone
 - Benzene
 - Water
 - Alcohol
- is used as anesthetics.
 - Carboxylic acids
 - Ethers
 - Esters
 - Aldehyde
- Rectified spirit in an aqueous solution which contains about of ethanol.
 - 95.5%
 - 75.5%
 - 55.5%
 - 45.5%
- The coelomic fluid of beech contains
 - lymph
 - haemoglobin
 - cerobro fluid
 - spiral fluid
- Node of Ranvir is found in
 - Muscles
 - Axons
 - Dendrites
 - Cyton
- The plant which propagates with the help of its leaves is
 - Onion
 - Neem
 - Ginger
 - Bryophyllum
- Which type of cancer affects lymph nodes and spleen?
 - Carcinoma
 - Sarcoma
 - Leukemia
 - Lymphoma
- Which software is used to create animation?
 - Paint
 - PDF
 - MS Word
 - Scratch

PART - II**7 X 2 = 14****Answer any seven questions. Question No. 22 is compulsory.**

- State Boyle's law.
- Why are traffic signals red in colour?

HTV 10 - அறிவியல் (EM) பக்கம் - 1

15. Match the following.

- | | | |
|-------------------------|---|-----------|
| 1) Electric current | - | Volt |
| 2) Potential difference | - | Ohm meter |
| 3) Specific resistance | - | Watt |
| 4) Electrical power | - | Joule |
| 5) Electrical energy | - | Ampere |

16. State true or false. (If false give the correct statement)
Sodium Chloride dissolved in water forms a non-aqueous solution.
17. What is rust? Give the equation for formation of rust.
18. Differentiate reversible and irreversible reactions.
19. Write a short note on mesophyll.
20. Why are thyroid hormones referred as personality hormone?
21. What are allosomes?
22. Calculate the gram molecular mass of the Water.

PART - III**7 X 4 = 28****Answer any seven questions. Question No. 32 is compulsory.**

23. Define inertia. Give its classification.
24. Differentiate convex lens and concave lens.
25. List the merits of LED bulb.
26. Write notes on i) Saturated solution and ii) Unsaturated solution
27. Differentiate soaps and detergents.
28. List out the parasitic adaptations in leech.
29. Write a neat labeled diagram of a neuron.
30. How do you differentiate homologous organs from analogous organs?
31. Enumerate the importance of forest.
32. Calculate the pH of 0.001 molar solution of HCl.

PART - IV**Answer all the questions.****3 X 7 = 21**

33. State and prove the law of conservation of linear momentum. **(OR)**
Differentiate the eye defects : Myopia and Hypermetropia.
34. How does PH play an important role in every day life? **(OR)**
How is ethanol manufactured from sugarcane?
35. Where are estrogens produced? What is the role of estrogens in the human body? **(OR)**
Discuss the importance of biotechnology in the field of medicine.

HTV 10 - அறிவியல் (EM) பக்கம் - 2

Tiruvannamalai (DT)

21/12/22

Half yearly Examination - 2022

Science - Answer key

PART-I

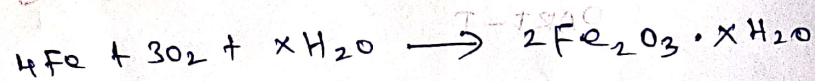
- 1 c. change of momentum
- 2 b. kelvin
- 3 c. it produces genetic disorder
- 4 c. carbon di oxide
- 5 c. water
- 6 b. ethers
- 7 a. 95.5 %
- 8 b. haemoglobin
- 9 b. Axons
- 10 d. Bryophyllum
- 11 d. Lymphoma
- 12 d. scratch

T constant

Part-II

- 13 $p \propto \frac{1}{v}$ (or) $v \propto \frac{1}{p}$
- 14 Highest wave length
Scattered least
Travels longer distance
- 15 Ampere
Volt
ohm meter
watt
joule
- 16 False
aqueous solution

17 Iron is exposed to moist air, it forms a layer of brown hydrated ferric oxide on its surface



18 Reversible

Irreversible

It attains equilibrium

Equilibrium is not attained

It is relatively slow

It is fast

It can be reversed

It cannot be reversed

19 mesophyll:

The tissue present between the upper and lower epidermis

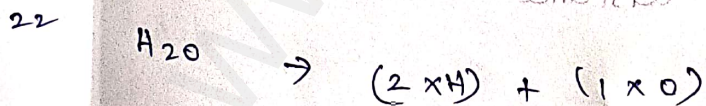
It is differentiated into palisade parenchyma and Spongy parenchyma in a dicot leaf

20 It is essential for normal physical, mental and personality development

21 Autosomes are chromosomes which are responsible for determining the sex of an individual

sex chromosomes or hetero chromosomes

two types $\rightarrow$ x, y chromosomes



$$\rightarrow (2 \times 1) + (1 \times 16) = 2 + 16 = 18g$$

32 0.001 M

$$p(H^+) = -\log_{10}(H^+)$$

$$= -\log_{10}(1 \times 10^{-3}) = 3$$