



Jaffna Hindu College

1st Term Evaluation Exam - 2022

Grade - 11

Science

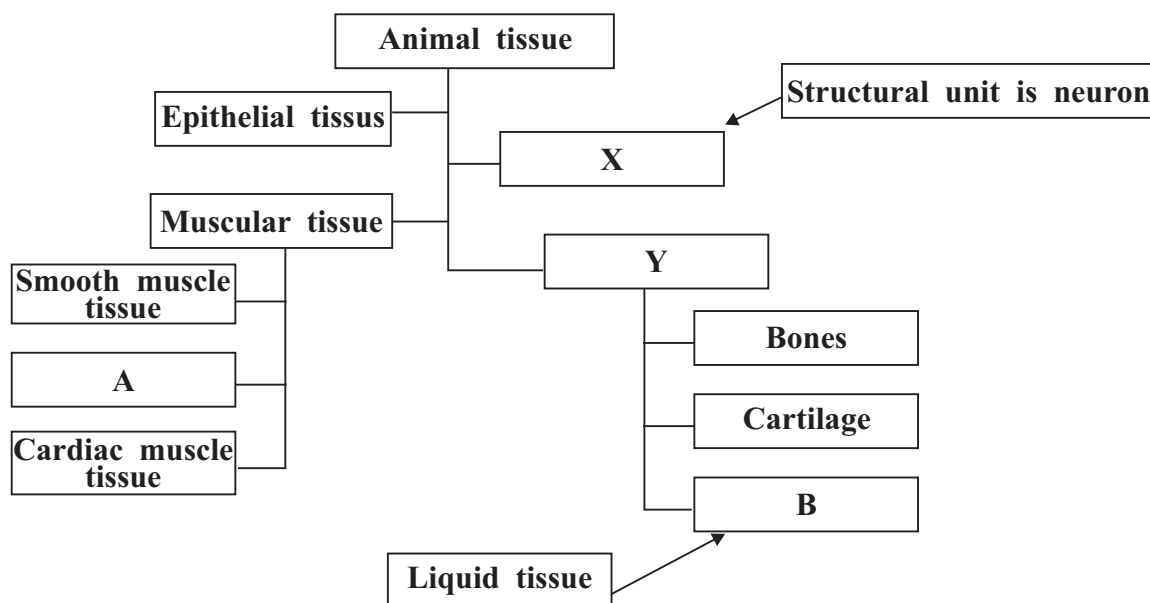
Time : 2.00 Hours

Name / Index No :

Part - II B

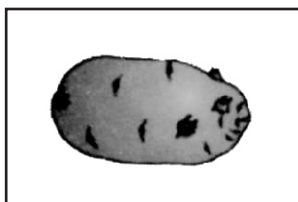
❖ Of the questions No 5,6,7,8 and 9 answer any three questions only.

05. A. A tissue is a group of cells, in close proximity, organized to perform one or more specific functions.

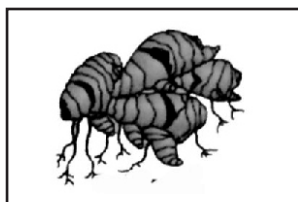


- Identify A, B, X and Y.
- Write two special features of epithelial tissue.
- Write a difference between A and smooth muscle tissue.
- Name two cells present in B.
- What is the function of X?

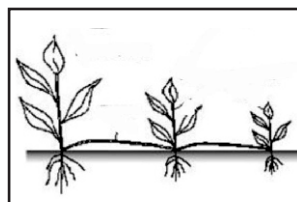
B. Using the given pictures and answer the following.



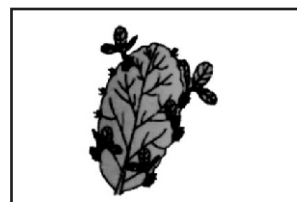
A



B



C

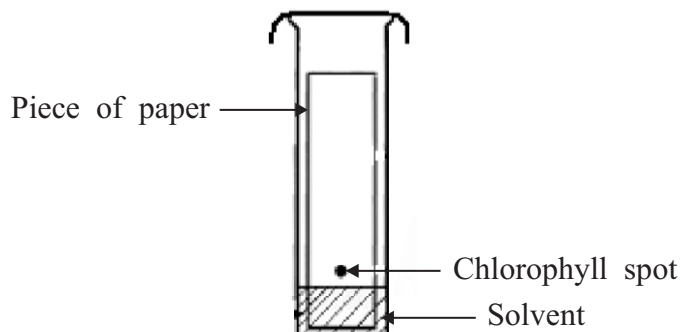


D

- Name the vegetative part which help for the vegetative reproduction in A, B, C and D?
- What is the common name given to A and B?
- Write two advantages of vegetative reproduction.

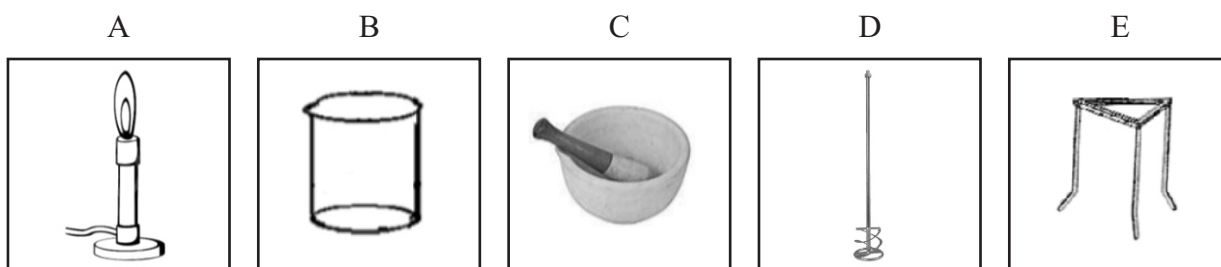
- iv. Flowers are sexual organs of flowering plant
 - a. Name the main two process of sexual reproduction in a flower.
 - b. Sexual reproduction in plants is better than asexual reproduction. Explain why?

06. A. Paper chromatography was used to find the composition of chlorophyll.



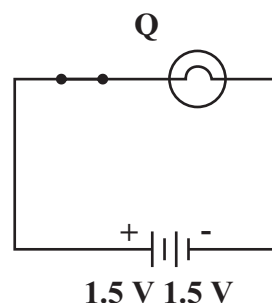
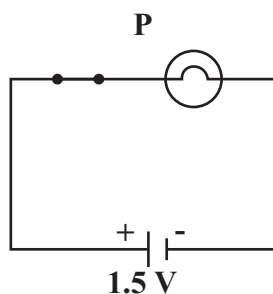
- i. Name a suitable solvent for this experiment.
- ii. What would your observation after some time?
- iii. Write two uses of paper chromatography.

B. A group of students conduct an experiment to separate salt from rock by using the given experiment.

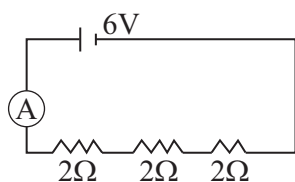


- i. Which equipment was used to grind up the rock salt at the beginning of the experiment?
- ii. The rock salt was placed in a container and hot water added. The mixture was then stirred to allow the salt dissolve.
 - a. Name the in which the crushed rock salt was placed before the hot water was added?
 - b. Why hot water was addend to dissolve the rock salt?
 - c. After dissolving the rock salt what type of mixture obtained.
 - d. Name the solvent and solute of the above mixture?
- iii. 5.85g of NaCl was added to the volumetric flask and the total volume of the solution formed was 100 cm^3 .
 - a. Name the glass wear which is used to measure NaCl?
 - b. Find the number of moles of NaCl added? ($\text{Na}=23, \text{Cl}=35.5$)
 - c. Calculate the concentration of NaCl in the solution.

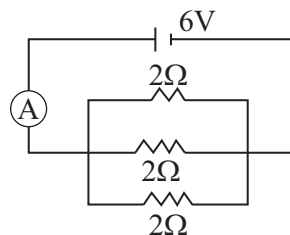
07. A. Use the diagram below to answer the following questions.



- i. What is the total voltage in each circuit?
- ii. How much current would be measured to each circuit if the light bulb has a resistance of 3 ohms?
- iii. Is the bulb brighter in circuit P or circuit Q why?
- iv.



A



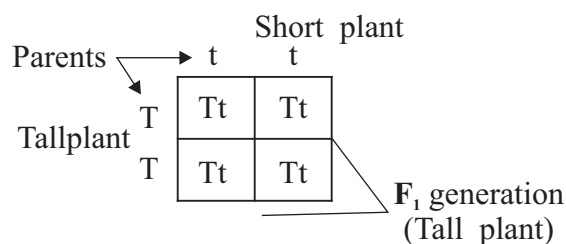
B

- a. In which circuit, resistors are connected in parallel.
- b. What is the equivalent resistance in B.
- c. What is the ammeter reading in circuit A?

B. A electric motor lifts an elevator 10 m in 20 sec by exerting an upward force of $1.5 \times 10^3 \text{ N}$.

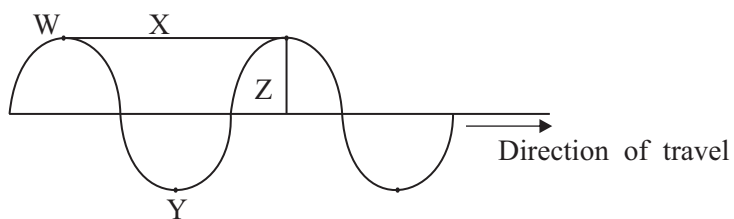
- i. Write two types of energy created here.
- ii. Calculate the work done.
- iii. What power does the motor produce?

08. A. The given punnet chat explain the mendel's monohybrid Cross.



- i. What are the contrasting characters used in the mono hybrid cross?
- ii. Write the genotype of tall plant in parent?
- iii. In which instance does meiosis occur.
- iv. According to the above instance, show using a diagram, how characters are inherited in F₁ generation.
- v. Write the phenotypes of the offsprings obtained in F₂ generation, and the ratio of it.

B. Answer the question by using the given wave.



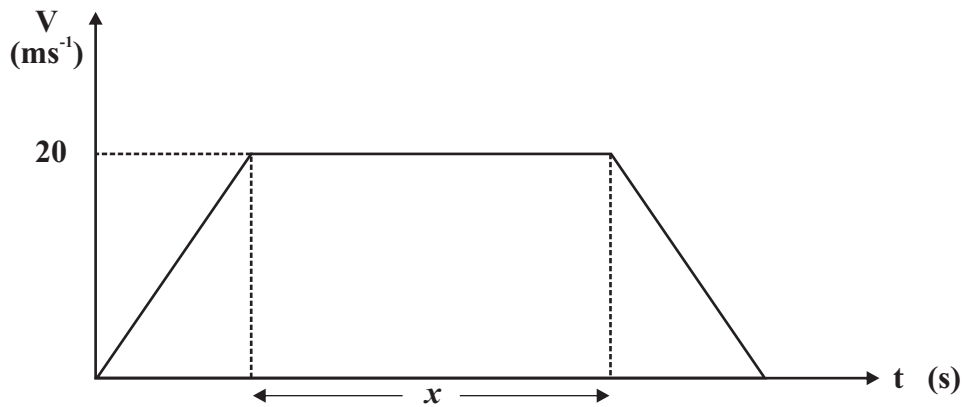
- i.
 - a. What kind of wave is shown above?
 - b. Label W, X, Y and Z.
 - c. Which one is affect the loudness of sound?
 - d. In what direction would the particles in this wave move, relative to the direction of wave travel?
- ii. A hack saw blade makes 10 vibrations in 20 seconds.
 - a. Calculate the frequency of its vibration.
 - b. Vibration is necessary for producing sound explain why the sound produced by every vibrating body cannot be heard by us.

09. A. A reactivity series of metals given below.

K	
← A	
Ca	
Mg	
Al	
B →	
Fe	
Sn	
Pb	
Cu	
← C	
Au	
Pt	

- i. Identify the elements A, B and C.
- ii. Which element has the most reactivity
- iii. Name two nobel metals.
- iv. Write the balanced chemical equation for the reaction of magnesium with hot water.
- v. Write two uses of reactivity series.

B.



The above velocity - time graph represents the journey of a train traveling along a straight horizontal track between two stations, which are 1.7 km apart. The train leaves the first station accelerating uniformly from rest for 50sec until it reaches a velocity of 20 ms^{-1} . The train then maintains this velocity of x seconds before decelerating uniformly at 1 ms^{-2} coming to rest at the next station.

- i. Find the acceleration of train during the first 50 sec of its journey.
- ii. How far does the train travel with the above acceleration.
- iii. Find the value of x .
- iv. Find the total time taken for the journey of the train.