

CONCEPT BASED QUESTIONS

JASON DAVID

9625499941

Class 9

Science

20/12/2021

Question : Do plants like Peepal and Tulsi take in carbon dioxide and give out oxygen during night because they are considered as sacred plants ?

Answer : There are 3 photosynthesis pathways adapted by plants for carbon fixation namely C3 pathway (Calvin cycle), C4 pathway and CAM pathway (Crassulacean Acid Metabolism). C3 and C4 are common among land plants and among these two, C3 is the most common. In photosynthesis, the source of oxygen is water. The photolysis of water (split of water in presence of light) can take place only in presence of sunlight. During night there is no sunlight and hence no photolysis of water to release oxygen. Therefore these plants can not release oxygen during night.

CAM pathway can be seen in desert plants and epiphytes (i.e. plants that live on other plants). Unlike C3 and C4 plants, these plants keep their stomata closed during day and open them during night for fixing CO₂ in the form of malate and releases O₂. They do it so, to prevent loss of water due to sunlight. During the day, they breakdown the malate and use the released CO₂ through Kalvin cycle to produce sugars, similar to C3 plants. So, CAM plants release oxygen during night.

However, it is not true that they release large amounts of oxygen during the night. The amount of oxygen is very less and that can be utilized in photorespiration.

Other plants that give out oxygen (in very less amount) at night are Areca Palm, Neem tree, Snake plant, Aloe Vera, Gerbera and Tulsi

Source: google search from different websites.

AMANKUMAR

9582373515

Class 10

Science

Question : Respected sir/mam, I had attended the science open merit test (SOMT) in 10th class but the results have not been declared yet. Please give me any update regarding it's result.

Answer : Dear Aman, last SOMT test was held in December 2019 and its result was declared in March 2020 which is available in DSSTF website www.dsstf.org Mention your year of appearance, school, roll number, father's name etc. Merit list and Appreciation list is also

available for other years. You can observe yourself in website or contact on (M) number 9313602293.

PRIYA **8700747314** **Class 10** **Science** **08/12/2022**

Question:

Why is this exam conducted and what will be the syllabus, pattern of exam What is the motive of this exam What are the benefits of this exam What is the cut off criteria of the exam Please tell me the above information as fast as possible because the exam is going to held on following Sunday please sir/ma'am answer my question as possible. (About SOMT)

Answer:

For information about SOMT go to SOMT Circular, you will get all related information.

RISHI **9643210159** **Class 10** **Science** **19/01/2023**

Question : Do all cells in our body have exactly the same DNA ?

Answer: Please find below the answer of the question, you may do the changes if required.

As I don't have the access of link on DSSTF website (forgotten the password).

"Yes, almost all cells of our body have the same DNA (Except RBCs which don't have DNA at all and the sperm or egg cells which have only half the amount of DNA of other body cells)."

Though each body cell has the same genomic content, but the requirements of the production of proteins is different of each cell of the body which is decided by about 20,000 of genes present on the chromosomes and therefore the portion of the DNA sequence (gene) which gets expressed in any region is influenced by the functional need of the body cell.