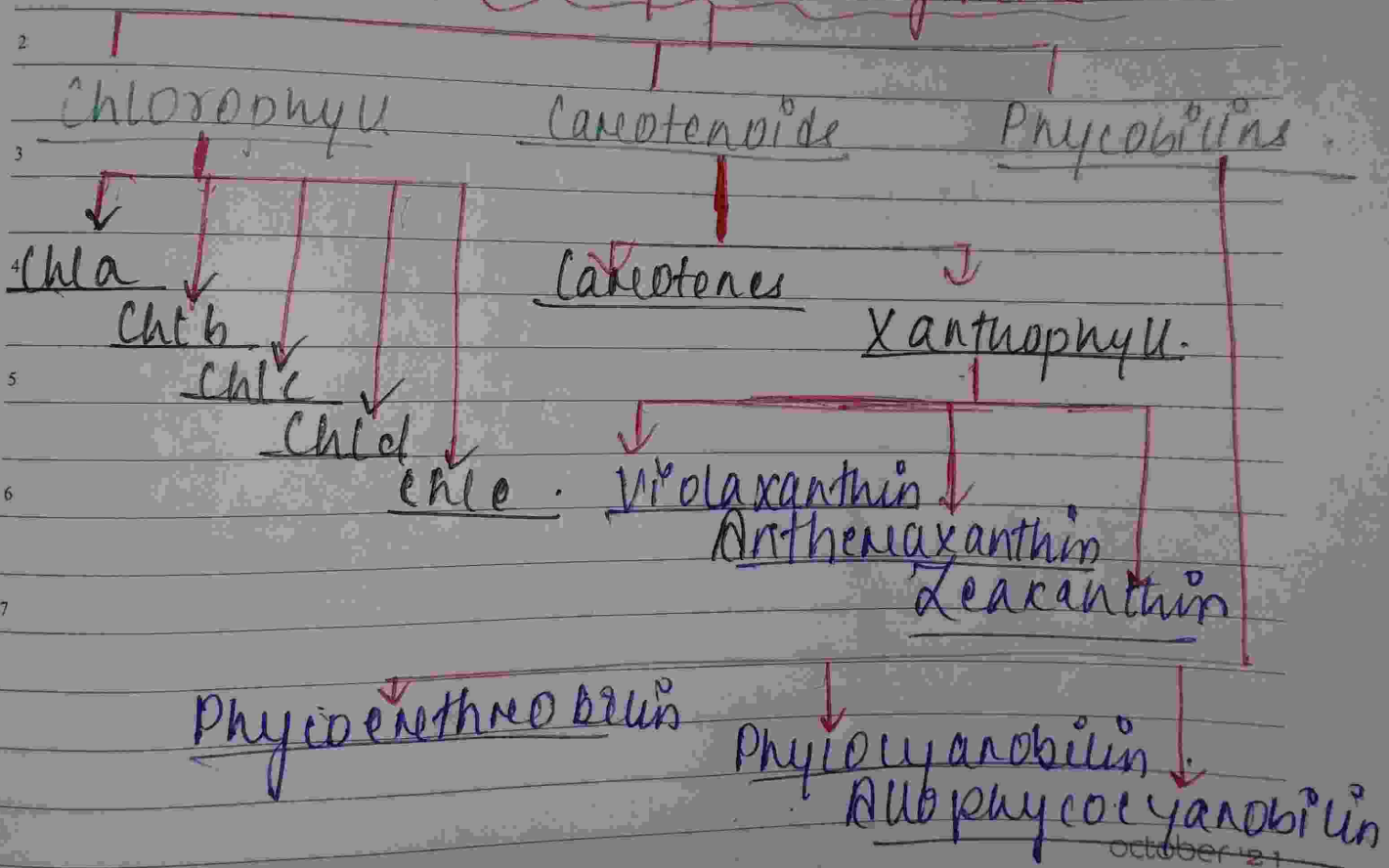


① Phycobilins :- Phycobilins are noncyclic linear tetrapyrrole structures, which are structurally similar to the bile pigment biliverdin. The three photosynthetic Phycobilins are -

- i. Phycoerythrobilin
- ii. Phycocyanobilin
- iii. Allophycoyanobilin.

Photosynthetic Pigments



NOTES

October '21

Su	Mo	Tu	We	Th	Fr	Sa
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

of anoxygenic photosynthetic organisms contain different types of bacteriochlorophyll: ~~Bchl a~~ Bchl a, Bchl b, ~~Bchl c~~ Bchl c, Bchl d, and Bchl e. Bacteriochlorophyll molecules absorb light of longer wavelength as compared to chlorophyll molecules.

(B) Carotenoids — Carotenoids are long-chain, conjugated hydrocarbons containing a string of isoprene residues and distinguished from one another by their end groups. Carotenoids are known as the accessory pigments which absorb light in the near-ultraviolet region, where chlorophyll does not absorb strongly. Carotenoids are lipid-soluble pigments. Carotenoids are divided into two types —

- i) Carotene
- ii) Xanthophyll, Xanthophyll contain oxygen and carotenes contain purely hydrocarbons and contain no oxygen.

Further Xanthophyll are divided into 3 types —

1. Violaxanthin
2. Antheraxanthin
3. Zeaxanthin

September '21

Su	Mo	Tu	We	Th	Fr	Sa
✓			1	2	3	4
✓	5	6	7	8	9	10
✓	12	13	14	15	16	17
✓	19	20	21	22	23	24
✓	26	27	28	29	30	

NOTES

## Photosynthetic Pigments :

The solar energy required for photosynthesis is captured by photosynthetic pigments molecules. Different types of photosynthetic pigments participate in these process. Three types of photosynthetic pigments are present in oxygenic photosynthetic organism. These pigments are →

- ① Chlorophyll
- ② Carotenoids
- ③ Phycobillins

① Chlorophyll → Chlorophyll are present in all oxygenic photosynthetic organism. The chlorophyll pigment molecules are lipid-soluble and absorb light most strongly in the blue and red but poorly in the green portions of the electromagnetic spectrum. Chlorophyll is a chlorin and porphyrin derivative. Porphyrin consists of four pyrrole rings. There are several types of chlorophyll molecules like → chl a, chl b, chl c, chl d and chl e.

NOTES

\* Anoxygenic photosynthetic organism contain bacterial chlorophyll molecule. They are related to chlorophyll molecules. Different group

October '21

Su	Mo	Tu	We	Th	Fr	Sa
31					1	2
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The people who influence you are the people who believe in you. - Henry Drummond