



**MJ-518**

**M.Sc. (Botany)**

**2nd Semester Examination, Jan.-June, 2022**

**Paper - IV**

**Plant Metabolism**

***Time : Three Hours]***

***[Maximum Marks : 80***

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**Note : Answer from all the Units and Question Number 1 is compulsory. All questions carry equal marks.**

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**1. Write short notes on the following :**

**(a) Biosynthesis of starch**

**(b) ATP synthesis**

**(c) Nod factor**

**(d) Ethylenes**

( 2 )

**Unit-I**

2. Give a detailed account on photosynthetic pigments and its significance.

**OR**

Write short notes on the following :

- (a) C4 cycle  
(b) CAM Pathway

**Unit-II**

3. Give a detailed account on structure and function of lipids.

**OR**

Write short notes on the following :

- (a) TCA cycle  
(b) Pentose phosphate pathway

**Unit-III**

4. Give a detailed account on mechanism of nitrate uptake and reduction.

**OR**

Write short notes on the following :

- (a) Sulphur uptake  
(b) Nodule formation

( 3 )

**Unit-IV**

5. Explain the flowering process.

**OR**

Write short notes on the following :

- (a) Auxins  
(b) Endogenous clock