

2017

(6th Semester)

BOTANY

ELEVENTH PAPER

(Plant Metabolism, Biochemistry, etc.)

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

*The figures in the margin indicate full marks
for the questions*

1. Elucidate the mechanism of DNA replication. 7

Or

Write notes on the following : $3\frac{1}{2}+3\frac{1}{2}=7$

- (a) Synthesis of cellulose
(b) Synthesis of amino acids

2. Write an account on protein synthesis. 7

Or

Give brief accounts on the following :

 $3\frac{1}{2}+3\frac{1}{2}=7$

- (a) Enzyme kinetics
(b) Induced fit model of enzyme action

3. Write notes on biosynthesis of—

- (a) auxins;
(b) gibberellins. $3\frac{1}{2}+3\frac{1}{2}=7$

Or

Write accounts on the mode of action of the following : $3\frac{1}{2}+3\frac{1}{2}=7$

- (a) Cytokinins
(b) Abscisic acid

4. Describe the mechanisms of cyclic and non-cyclic electron transports. 7

Or

Give brief accounts on the following :

 $3\frac{1}{2}+3\frac{1}{2}=7$

- (a) Reaction centers
(b) Harvestation of light energy

(3)

5. What is thermodynamics? Explain the causes of thermodynamics. $2+5=7$

Or

Define enthalpy change and entropy change with examples. $3\frac{1}{2}+3\frac{1}{2}=7$

Subject Code : BOT/VI/11

Booklet No. **A**

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Date Stamp

To be filled in by the Candidate

DEGREE 6th Semester
(Arts / Science / Commerce /
.....) Exam., **2017**
Subject
Paper

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To be filled in by the Candidate

DEGREE 6th Semester
(Arts / Science / Commerce /
.....) Exam., **2017**
Roll No.
Regn. No.
Subject
Paper
Descriptive Type
Booklet No. B

INSTRUCTIONS TO CANDIDATES

- 1. The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.
- 2. This paper should be ANSWERED FIRST and submitted within 45 minutes of the commencement of the Examination.
- 3. While answering the questions of this booklet, any cutting, erasing, overwriting or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.

Signature of
Scrutiniser(s)

Signature of
Examiner(s)

Signature of
Invigilator(s)

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(6th Semester)

BOTANY

ELEVENTH PAPER

(Plant Metabolism, Biochemistry, etc.)

(PART : A—OBJECTIVE)

(Marks : 20)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 5)

1. Put a Tick (✓) mark against the correct answer in the brackets provided : 1×5=5

(a) Prokaryotic DNA polymerase-I consists of two fragments, one of which is

(i) Okazaki fragment ()

(ii) Klenow fragment ()

(iii) leading strand ()

(iv) replication fork ()

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(2)

(b) Protein synthesis takes place in

(i) ribosome ()

(ii) Golgi body ()

(iii) cytoplasm ()

(iv) mitochondria ()

(c) The main pathway of gibberellic acid synthesis has been worked out in

(i) *Gibberella fujikuroi* ()

(ii) *Gibberella caudatus* ()

(iii) *Cannabis sativa* ()

(iv) *Phoenix dactylifera* ()

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(3)

(d) All energy absorbing pigments except chlorophyll are called

(i) essential pigments ()

(ii) accessory pigments ()

(iii) subsidiary pigments ()

(iv) secondary pigments ()

(e) Adiabatic process is

(i) one in which heat is neither gained nor lost by the system ()

(ii) one in which heat is transferred out of the system ()

(iii) one in which heat goes into the system ()

(iv) one in which heat is displaced to the surroundings ()

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(4)

SECTION—B

(Marks : 15)

2. Write notes on the following :

3×5=15

(a) Biological N-fixation

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(5)

(b) Allosteric enzymes

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(6)

(c) Biosynthesis of ethylene

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(7)

(d) Photosynthetic apparatus

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(8)

(e) Gibbs free energy

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