

This question paper contains 2 printed pages]

W—47—2018

FACULTY OF SCIENCE

B.Sc. (Fifth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS Pattern)

BOTANY

Paper XII

(Plant Physiology)

(Saturday, 13-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—Two Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

1. Attempt any *four* of the following (Each of 2 marks) : 8
 - (a) Plasmolysis
 - (b) Seismotropic movement
 - (c) Role of zn and mn in plants
 - (d) Vernalization and Devernalization
 - (e) Biological functions of starch
 - (f) B-sheet of protein.

2. Attempt any *two* of the following (Each of 4 marks) : 8
 - (a) What is ascent of sap ? Describe the mechanism of ascent of sap.
 - (b) Describe the process of Diffusion and Imbibition.
 - (c) What is Translocation of organic solutes ? Add a note on munch's mass flow hypothesis.

3. Attempt any *one* of the following (Each of 8 marks) : 8
 - (a) What is Transpiration ? Add a note on K^+ pump theory.
 - (b) What are major and minor elements ? Add a note on role of mg and N in plants.

P.T.O.

WT

(2)

W-47-2018

4. Attempt any *two* of the following (Each of 4 marks) : 8
- (a) What is seed germination ? Add a note on factors affecting seed germination.
 - (b) What are LDP, SDP and Day neutral plants ?
 - (c) Biological functions of Tannings.
5. Attempt any *one* of the following (Each of 8 marks) : 8
- (a) What is Growth ? Explain different phases of growth.
 - (b) What is seed dormancy ? Explain methods of breaking of seed dormancy.

Botany - (45) Extra

This question paper contains 2 printed pages]

W-61-2018

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS Pattern)

BOTANY

Paper XIII

(Plant Pathology-I) (Optional-I)

(Tuesday, 16-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. — (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw neat and well labelled diagrams wherever necessary.

1. Attempt any *four* of the following : 8
 - (a) Importance of plant pathology
 - (b) Dispersal of plant pathogens by insects
 - (c) Control of angular leaf spot of cotton
 - (d) Symptoms of white rust of Mustard
 - (e) Isolation of plant pathogens from soil
 - (f) Causal organism of green ear of Bajra
2. Attempt any *two* of the following : 8
 - (a) Koch's postulates for pathogenicity
 - (b) Effect of moisture on disease development
 - (c) Pure culture technique
3. Attempt any *one* of the following : 8
 - (a) Describe classification of plant diseases on the basis of causal organism.
 - (b) Describe mode of entry of pathogens through stomata and wounds.

P.T.O.

WT

(2)

W-61-2018

4. Attempt any *two* of the following : 8
- (a) Anthracnose of Mango
 - (b) Leaf spot of Tomato
 - (c) Sigatoka disease of Banana
5. Attempt any *one* of the following : 8
- (a) Describe symptoms, causal organism, disease cycle and control measures of red rot of Sugarcane.
 - (b) Describe symptoms, causal organism, disease cycle and control measures of powdery mildew of Pea.

W-61-2018

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X-22-2019

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) (Regular) EXAMINATION

OCTOBER/NOVEMBER, 2019

(New/CBCS Pattern)

BOTANY

Paper XII

(Plant Physiology)

(Tuesday, 15-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) Draw neat and well labelled diagrams wherever necessary.

1. What are major elements ? Describe the role and deficiency symptoms of Nitrogen and Potassium. 15

Or

(a) Starch-sugar hypothesis 8

(b) Transpiration pull theory. 7

2. What is seed dormancy ? Describe causes and breaking of seed dormancy. 15

Or

(a) Classification of proteins 8

(b) Biological functions of lipids and alkaloids. 7

3. Write short notes on (any two) : 10

(a) Diffusion

(b) Role and deficiency symptoms of Zn

(c) Practical applications of Gibberellins

(d) Biological functions of terpenoids.



This question paper contains 2 printed pages!

Y—55—2019

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) (Backlog) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CGPA Pattern)

BOTANY

Paper XII

(Plant Physiology)

(Thursday, 17-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw neat and well-labelled diagrams wherever necessary.

1. What is ascent of sap ? Describe in detail transpiration pull theory. 8
Or

Describe in brief :

(a) Structure of Stomata

(b) Osmosis.

2. What is translocation of organic solutes ? Explain the mechanism of translocation. 8
Or

Describe in brief :

(a) Ion-exchange theory

(b) Deficiency symptoms of Nitrogen.

3. Define photoperiodism ? Describe SDP and LDP. 8

P.T.O.

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WT

(2)

Y—55—2019

Or

Describe in brief :

- (a) Types of seed germination.
 - (b) Practical applications of Gibberellins.
4. What are secondary metabolites ? Describe Biological functions of terpenoids. 8

Or

Describe in brief :

- (a) Biological functions of starch.
 - (b) Primary structure of protein.
5. Write short notes on (any four) : 8
- (a) Imbibition
 - (b) Thigmotropic movement
 - (c) Scarification
 - (d) Practical Applications of abscisic acid.

CG-11-2020

WINTER EXAM 2020

Subject Name : RB-09_BOTANY - Plant Physiology - XII (CBCS)_V

Date : 17/03/2021

Duration : 60 min. |

Instruction / सुचना / :-

- Follow the detail instructions given on OMR Sheet
- ओ एम आर शीट सर्व सूचनांचे पालन करावे.

- Q.1 When the resins placed in water, resins swell up as a result of ? 152 152
 A) Adsorption C) Endosmosis
 B) Plasmolysis D) Diffusion
- Q.2 The movement of molecules from an area of higher concentration to an area of lower concentration is : 152 152
 A) Osmosis C) Imbibition
 B) Diffusion D) Permeability
- Q.3 The movement of curvature which occurs in response to external stimulus called as : 152 152
 A) Paratonic C) Tactic
 B) Nastic D) Nyctinastic
- Q.4 A selectively permeable membrane..... 152 152
 A) Allows all substance to enter and leave C) Allows selective substance to enter and leave
 B) Prevents all substance to enter & leave D) Allows only waste material to leave
- Q.5 Due to plasmolysis, the plant cell becomes : 152 152
 A) Turgid C) Burst
 B) Flaccid D) Swell up
- Q.6 The movement of water takes place from base of the plant to the apex of plant through xylem is called as : 152 152
 A) Osmosis C) Ascent of sap
 B) Diffusion D) Translocation
- Q.7 In higher plants, maximum water is lost from aerial parts of the plants mainly through : 152 152
 A) Stomatal transpiration C) Lenticular transpiration
 B) Cuticular transpiration D) All the above
- Q.8 The movement of leaves in Mimosa pudica are due to : 152 152
 A) Selmonasty C) Thermonasty
 B) Chemonasty D) Hydrotropism
- Q.9 Conversion of starch into glucose-1-phosphate is essential for : 152 152
 A) Stomatal closure C) Stomatal initiation
 B) Stomatal opening D) Stomatal growth
- Q.10 The process of uptake of water by the substance and the substance swell up is called as : 152 152
 A) Imbibition C) Osmosis
 B) Diffusion D) Capillary force
- Q.11 Which of the following are non-mineral essential elements ? 152 152
 A) Fe, Mn & Zn C) C, H & O
 B) P, Ca & Mg D) None of the above
- Q.12 Iron is the constituent of : 152 152
 A) Cytochromes C) Haematin
 B) Ferredoxin D) All the above
- Q.13 The minerals of soil are derived from : 152 152
 A) Rocks C) Sub-soil
 B) Clay D) Atmosphere
- Q.14 In plant nutrition, elements are classified as major or minor depending upon : 152 152
 A) Their availability in the soil C) Their relative amount required to the plants
 B) Their relative production of ash obtained after the plants burn. D) Their relative importance in the plant growth

Q.15 Which of the following is a Mg deficiency symptoms :	152	152	152
A)Elongation of stem B)Spindly and Woody stem		C)Chlorosis of younger leaves D)Chlorosis of older leaves	
Q.16 The transport of food material in higher plants occurs through :	152	152	152
A)Xylem B)Vessels		C)Tracheids D)Sieve elements	
Q.17 The movement of materials from the leaves to the other tissues of the plant is called as :	152	152	152
A)Tropic movement B)Guttation		C)Transpiration D)Translocation	
Q.18 Mass flow hypothesis was first put forwarded by :	152	152	152
A)Munch B)Craib		C)Fischer D)Dixon	
Q.19 Most of the mineral salts in soil enters the root by the process of	152	152	152
A)Diffusion B)Osmosis		C)Active transport D)Respiration	
Q.20 The transport of sugars from mesophyll cells to sieve tube elements in the leaf is called as :	152	152	152
A)Phloem loading B)Phloem unloading		C)Both A & B D)None of the above	
Q.21 The plant growth can be measured with the help of :	152	152	152
A)Are Indicator B)Pfeffer's auxanometer		C)Both A and B D)Ganong's potometer	
Q.22 Fruit ripening hormone is:	152	152	152
A)Auxin B)Gibberellin		C)Cytokinin D)Ethylene	
Q.23 The fungus Gibberella fujikuroi causes bakanae disease in :	152	152	152
A)Maize seedling B)Wheat seedling		C)Rice seedling D)Bean seedling	
Q.24 Which of the following is a natural germination inhibitor that induces dormancy ?	152	152	152
A)Cytokinin B)Gibberellin		C)Auxin D)ABA	
Q.25 In certain plants, seeds do not germinate immediately after harvesting even under favourable condition is due to	152	152	152
A)Vernalization B)Photoperiodism		C)Dormancy of seeds D)Senescence	
Q.26 Indole-3-Acetic Acid is the most commonly occurring plant hormone of.....	152	152	152
A)Gibberellin B)Auxin		C)Ethylene D)Cytokinin	
Q.27 Which plant hormone helps in breaking the dormancy of buds ?	152	152	152
A)Auxin B)Gibberellin		C)Cytokinin D)Ethylene	
Q.28 The term Auxin was coined by	152	152	152
A)Skoog B)Haberlandt		C)Miescher D)F. W. Went	
Q.29 When the dark period of short day plant is interrupted by brief exposure of sunlight, the plant :	152	152	152
A)Produce more flowers B)Will not produce flowers		C)Produce flowers immediately D)Turns into a LDP	
Q.30	152	152	152

Most appropriate temperature for vernalizing the seedling ranges from :

- A) 1°C to 5°C
 B) 5°C to 7°C
 C) 7°C to 12°C
 D) 0°C to 4°C

	A)a B)b	C)c D)d
Q.31 Which of the following method is not related to breaking of seed dormancy ?	152 A)Scarification B)Removal of inhibitors	152 C)Stratification D)Mechanically resistant seed coat
Q.32 The protective covering over radicle during the germination of seed is:	152 A)Coleoptile B)Coleorhiza	152 C)Suspensor D)Epithelium
Q.33 Maize seed shows	152 A)Epigeal germination B)Hypogeal germination	152 C)Epiphyary D)All the above
Q.34 Morphine is a :	152 A)Tannins B)Terpenoids	152 C)Flavonoids D)Alkaloids
Q.35 Which of the following is not short day plant ?	152 A)Tobacco B)Xanthium	152 C)Sugarbeet D)Soyabean
Q.36 Which of the following is not a sugar ?	152 A)Glucose B)Fructose	152 C)Lactose D)Starch
Q.37 Haemoglobin has	152 A)Primary structure B)Secondary structure	152 C)Tertiary structure D)Quaternary structure
Q.38 Cellulose is used in manufacturing of:	152 A)Cellophane B)Varnish	152 C)Cosmetics D)All the above
Q.39 Lipid are insoluble in water because Lipid molecules are :	152 A)Hydrophilic B)Neutral	152 C)Zwitterion D)Hydrophobic
Q.40 Which of the following is not a class of secondary metabolites ?	152 A)Amino Acids B)Terpenoids	152 C)Alkaloids D)Phenolics

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This question paper contains 2 printed pages

SB-36-2022

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS/New Pattern)

BOTANY

(Paper-XII)

(Cell and Molecular Biology)

(Friday, 10-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) Draw neat and well labelled diagrams wherever necessary.

1. Describe in detail ultrastructure and functions of Nucleus. 15

Or

Describe in brief :

(a) Polytene chromosome 8

(b) Structure of typical chromosome. 7

2. What are nucleic acids ? Describe structure of DNA. 15

Or

Describe in brief :

(a) Structure of m-RNA. 8

(b) Fine structure of gene. 7

P.T.O.

WT

(2)

SB-36-2022

3. Write notes on (any two) :

10

- (a) Ribosomes
- (b) Metaphase of mitosis
- (c) Translation
- (d) PKU.

CG-11-2020
WINTER EXAM 2020
Subject Name : RB-15_BOTANY - Systematic Botany-I - XIII (CBCS)
OR_V_18-03-2021

Date : 18/03/2021

Duration : 60
min.

Instruction / सुचना / :-

- * Follow the detail instructions given on OMR Sheet
- * ओ एम आर वरील सर्व सूचनांचे पालन करावे.

Q.1	152	152	152
The presence of interperiolar stipule is the characteristic feature of:			
A)Rubiaceae		C)Verbenaceae	
B)Apocynaceae		D)Convolvulaceae	
Q.2	152	152	152
The Carissa carandas L. (Karwand) belongs to:			
A)Rubiaceae		C)Verbenaceae	
B)Apocynaceae		D)Convolvulaceae	
Q.3	152	152	152
The Apocynaceae family belong to:			
A)Gamopetalae		C)Gentianales	
B)Bicarpellatae		D)All of the above	
Q.4	152	152	152
The Convolvulaceae family belongs to:			
A)Gamopetalae		C)Polemoniales	
B)Bicarpellatae		D)All of the above	
Q.5	152	152	152
In the Convolvulaceae family the placentation is:			
A)Axile		C)Parietal	
B)Marginal		D)Basal	
Q.6	152	152	152
Ipomoea batatus (Ratalu, Sweet potato) belongs to:			
A)Rubiaceae		C)Verbenaceae	
B)Apocynaceae		D)Convolvulaceae	
Q.7	152	152	152
Presence of didynamous stamens is a characteristic of:			
A)Acanthaceae		C)Verbenaceae	
B)Apocynaceae		D)Convolvuladceae	

Q.8	152	152	152
The Acanthaceae belongs to: A) Rubiales B) Lamiales		C) Personales D) Gentianales	
Q.9	152	152	152
Adhatoda vasica Nees. (Adulsa) belong to: A) Acanthaceae B) Apocynaceae		C) Verbenaceae D) Convolvulaceae	
Q.10	152	152	152
The Verbenaceae belong to: A) Rubiales B) Lamiales		C) Personales D) Gentianales	
Q.11	152	152	152
The Papaveraceae family belongs to subclass: A) Polypetalae B) Gamopetalae		C) Apetalae D) None of the above	
Q.12	152	152	152
In the plants of Papaveraceae the placentation is: A) Axile B) Marginal		C) Parietal D) Free central	
Q.13	152	152	152
In the plants of Combretaceae the placentation is: A) Axile B) Marginal		C) Parietal D) Free central	
Q.14	152	152	152
The Myrtaceae family belongs to: A) Calyciflorae B) Gamopetalae		C) Apetalae D) None of the above	
Q.15	152	152	152
Eucalyptus lanceolatus L. (Nilgiri) belongs to: A) Papaveraceae B) Myrtaceae		C) Rutaceae D) Cucurbitaceae	
Q.16	152	152	152
Aegle marmelos L. (Wood apple, Bael) belongs to: A) Papaveraceae B) Myrtaceae		C) Rutaceae D) Cucurbitaceae	

Q.17

The Mimosaceae family belongs to:

- A) Rosales
B) Gamopetalae

- C) Apetalae
D) Non of the above

152

Q.18

In the plants of Mimosaceae the placentation is:

- A) Axile
B) Marginal

- C) Parietal
D) Free central

152

152

152

Q.19

In the plants of Cucurbitaceae the placentation is:

- A) Axile
B) Marginal

- C) Parietal
D) Free central

152

152

152

Q.20

The Nyctaginaceae family belongs to:

- A) Curvembryae
B) Gamopetalae

- C) Polypetalae
D) None of the above

152

152

152

Q.21

A branch of Botany which deals with description, identification, nomenclature, classification and documentation of plants is called as:

- A) Plant taxonomy
B) Plant physiology

- C) Plant cytology
D) Plant morphology

152

152

152

Q.22

The father of Botany is:

- A) Theophrastus
B) Bentham

- C) Hutchinson
D) Prantl

152

152

152

Q.23

The Phylogenetic classification is proposed by:

- A) Bentham and Hooker
B) Theophrastus

- C) Engler and Prantl
D) Linnaeus

152

152

152

Q.24

The classification of plants is published in a famous book Genera Plantarum by:

- A) Bentham and Hooker
B) Hutchinson

- C) Engler and Prantl
D) Linnaeus

152

152

152

Q.25

The famous book Die Natürlichen Pflanzen is divided into:

- A) 21 Volumes
B) 22 Volumes

- C) 23 Volumes
D) 24 Volumes

152

152

152

Q.26

152

152

152

The famous book families of flowering plants is divided into:

- A) 02 Volumes
B) 03 Volumes
C) 04 Volumes
D) 05 Volumes

Q.27

152

152

152

According to classification of Bentham and Hooker Angiosperms are divided into:

- A) 22 Orders
B) 23 Orders
C) 24 Orders
D) 25 Orders

Q.28

152

152

152

According to classification of Engler and Prantl Angiosperms are divided into:

- A) 273 Families
B) 274 Families
C) 275 Families
D) 276 Families

Q.29

152

152

152

According to classification of Hutchinson Angiosperms are divided into:

- A) 111 Orders
B) 112 Orders
C) 113 Orders
D) 114 Orders

Q.30

152

152

152

According to classification of Bentham and Hooker dicotyledons are divided into:

- A) 14 Series
B) 15 Series
C) 16 Series
D) 17 Series

Q.31

152

152

152

The branch of palynology which deals with the study of pollen grains in relation to some allergic diseases like asthma and hay fever is called as:

- A) Aeropalynology
B) Medical palynology
C) Melittopalynology
D) Copropalynology

Q.32

152

152

152

The branch of palynology which deals with the study of pollen grains and spores with regards to animal excreta is called as:

- A) Aeropalynology
B) Medical palynology
C) Melittopalynology
D) Copropalynology

Q.33

152

152

152

The branch of palynology which deals with the study of pollen grains and spores from the air is called as:

- A) Aeropalynology
B) Medical palynology
C) Melittopalynology
D) Copropalynology

Q.34

152

152

152

One of the two good holotypes designated by the author to serve as a model type specimen for correct description and naming of a plant is called as:

- A) Isotype
B) Holotype
C) Lectotype
D) Syntype

152
152
152
Q.35

One of the good isotypes designated by the author to serve as a model type specimen, when as long as the holotype is missing for correct description and naming of a plant is called as:

- A) Isotype
- B) Holotype
- C) Lectotype
- D) Syntype

Q.36

A herbarium sheet or a drawing of a photography of plant specimen with description used as a model for correct authentic description and name of a plant is called as

- A) Type specimen or simply a Type
- B) Genus
- C) Species
- D) Family

Q.37

The Division-III of the ICN mainly deals with provisions for:

- A) Principles of ICN
- B) Good governance of ICN
- C) Appendices of ICN
- D) Rules and Recommendations of ICN

Q.38

The Division-I of the ICN mainly deals with:

- A) Principles of ICN
- B) Good governance of ICN
- C) Appendices of ICN
- D) Recommendations of ICN

Q.39

The current code for botanical nomenclature is:

- A) ICBN
- B) ICN
- C) Both ICBN and ICN
- D) None of the above

Q.40

The famous book Pinax is related with:

- A) Bentham and Hooker
- B) Hutchinson
- C) Engler and Prantl
- D) Linnaeus

This question paper contains 2 printed pages!

SB—52—2022

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS/New Course)

BOTANY

(Paper-XIII)

(Plant Pathology-I)

(Monday, 13-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2.30 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Illustrate your answers with suitably labelled diagram wherever necessary.

1. Describe classification of plant diseases on the basis of causal organisms.

15

Or

Write in brief :

(a) Green ear of bajra.

8

(b) Whip smut of sugarcane.

7

2. Describe symptoms, causal organism, disease cycle and control measures of powdery mildew of pea.

15

Or

Write in brief :

(a) Role of temperature and moisture in disease development.

8

(b) Red rot of sugarcane.

7

P.T.O.

3. Attempt any *two* of four :

10

- (a) Koch's postulates
- (b) Mode of entry of plant pathogens through stomata and root hairs
- (c) Anthracnose of Mango
- (d) Sigatoka disease of Banana.

This question paper contains 2 printed pages]

W—43—2018

FACULTY OF SCIENCE

B.Sc. (Third Year) (Sixth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(New Course)

BOTANY

Paper XIV

(Plant Metabolism, Biochemistry and Biotechnology)

(Friday, 12-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw neat and well labelled diagrams wherever necessary.

1. What is photophosphorylation ? Describe the process and significance of cyclic photophosphorylation. 8

Or

Write in brief :

(a) Ultrastructure and functions of chloroplast

(b) Lactic acid fermentation.

2. Define Nitrogen fixation. Describe symbiotic nitrogen fixation. 8

Or

Write in brief :

(a) Induced fit model of enzyme action

(b) Classification of enzymes.

3. What is micropropagation ? Describe technique and applications of micropropagation. 8

Or

Write in brief :

(a) Synthetic seeds

(b) Production of disease free plants.

P.T.O.

4. Define genetic engineering. Describe various cloning vectors used in genetic engineering. 8

Or

Write in brief :

- (a) Transgenic plants
 - (b) Restriction endonuclease.
5. Write short notes on (any four) : 8
- (a) Significance of Glycolysis
 - (b) Structure of ATP
 - (c) Holoenzyme
 - (d) Nitrification
 - (e) Explant
 - (f) *Agrobacterium tumefaciens*.

This question paper contains 2 printed pages]

Y—49—2019

FACULTY OF SCIENCE

B.Sc. (Sixth Semester) (Backlog) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CGPA Pattern)

BOTANY

Paper XIV

(Plant Metabolism Biochemistry and Biotechnology)

(Wednesday, 16-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw neat and well-labelled diagrams wherever necessary.

1. What is photophosphorylation ? Describe non cyclic photophosphorylation. S

Or

Write in brief :

(a) Significance of photosynthesis

(b) Ultrastructure of chloroplast.

2. Elaborate new system of classification of enzymes and add a note on their nomenclature. S

Or

Explain in short :

(a) Induced fit theory

(b) Ammonification.

3. What is Micropropagation ? Explain the stages involved in the micropropagation. S

P.T.O.

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WT

(2)

Y—49—201

Or

Explain in brief :

- (a) Culture media
- (b) Somatic hybridization.

4. What is recombinant DNA technology ? Explain tools and technique used in r-DNA technology.

Or

Explain in brief :

- (a) C-DNA Library
- (b) Plasmid.

5. Write short notes on (any four) :

- (a) Lactic acid fermentation
- (b) Ultrastructure of mitochondria
- (c) Sources and forms of Nitrogen
- (d) Concept of Holoenzyme
- (e) Productions of haploid
- (f) Transgenic plant.

This question paper contains 2 printed pages]

Y—60—2019

FACULTY OF SCIENCE

B.Sc. (Third Year) (Sixth Semester) (Backlog) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CBCS Pattern)

BOTANY

Paper XV

(Plant Pathology-II)

(Friday, 18-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) All questions carry equal marks.

(iii) Draw neat and well labelled diagrams wherever necessary.

1. Attempt any *four* of the following :

8

(a) Hot water treatment

(b) Crop rotation

(c) Integrated pest management

(d) Leaf curl of tomato

(e) Symptoms of Wilt of tur

(f) Control measures of stem rust of wheat.

2. Attempt any *two* of the following :

8

(a) Scope and importance of aerobiology

(b) Antibiotics in plant disease control

(c) Phytoalexins.

P.T.O.

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3. Attempt any *one* of the following : 8
- (a) What are seed-borne pathogens ? Write in detail *methods for detection* of seed-borne pathogens.
 - (b) Describe in detail different types of copper fungicides used in *plant disease control*.
4. Attempt any *two* of the following : 8
- (a) Uredial and Telial stage of *Puccinia graminis tritici*
 - (b) Rust of soybean
 - (c) Symptoms of tikka disease of groundnut.
5. Attempt any *one* of the following : 8
- (a) Describe symptoms, causal organism, disease cycle and *control measures* of Loose smut of wheat.
 - (b) Describe symptoms, causal organism, disease cycle and *control measures* of Downy mildew of grapes.

This question paper contains 2 printed pages]

SB-11-2022

FACULTY OF SCIENCE & TECHNOLOGY
B.Sc. (Third Year) (Sixth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS/New Pattern)

BOTANY

Paper-XIV

(Plant Metabolism, Biochemistry & Biotechnology)

(Tuesday, 7-6-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Figures to the right indicate full marks.

(iii) Illustrate your answers with suitable labelled diagram wherever necessary.

1. Describe Kreb's cycle in detail. 15

Or

(a) Describe nomenclature and IUB classification of enzymes. 8

(b) Describe process of ammonification and nitrification in Nitrogen cycle. 7

2. Describe Agrobacterium mediated gene transfer in plants. 15

Or

(a) Describe application of tissue culture in production of secondary metabolites. 8

(b) Describe somatic hybridization. 7

P.T.O.

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WT

(2)

SB—11—2022

3. Write short notes on (any two) :

10

- (a) Ultrastructure of mitochondrion
- (b) Sources and forms of nitrogen
- (c) Protoplast culture
- (d) NCBI.

SB—11—2022

21/03
This question paper contains 2 printed pages]

W—53—2018

FACULTY OF SCIENCE

B.Sc. (Third Year) (Sixth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

BOTANY

Paper XV

(Plant Pathology—II)

(Monday, 15-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :— (i) Attempt All questions.
(ii) All questions carry equal marks.
(iii) Draw neat and well labelled diagrams wherever necessary.

1. Define Aerobiology. Write in detail disease forecasting.

Or

Write in brief :

- (a) Blotter paper method
(b) Seed borne pathogen.

2. Describe in detail pre and post infectional structural defense mechanism in plant.

Or

Write in brief :

- (a) Phytoalexins
(b) Antibiotics.

3. Describe symptoms, causal organisms, disease cycle and control measures of Ergot of Bajra.

Or

Describe in brief :

- (a) Little leaf of Brinjal
(b) Rust of Jowar.

P.T.O.

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WT

(2)

W—53—2018

4. Describe symptoms, causal organism, disease cycle and control measures of Downy mildew of Grapes.

Or

Explain in brief :

- (a) Papaya mosaic
- (b) Grassy shoot of sugarcane.

5. Write short notes on any *four* of the following :

- (a) Hot water treatment
- (b) Bordeaux mixture
- (c) Leaf curl of tomato
- (d) Tylosis formation
- (e) *Phytophthora infestans*
- (f) Air-sampler.

W—53—2018

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Y—63—2019

FACULTY OF SCIENCE

B.Sc. (Third Year) (Sixth Semester) (Backlog) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CGPA Pattern)

BOTANY

Paper XV

(Plant Pathology—II)

(Friday, 18-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw neat and well labelled diagrams wherever necessary.

1. Define seed borne pathogens. Describe Blotter paper method and Agar plate method of detection of seed borne pathogens.

8

Or

Write notes on :

(a) Scope and importance of aerobiology.

(b) Chemical seed treatment.

2. Describe pre-existing and post infectional Biochemical defence mechanism in plants.

8

Or

Write notes on :

(a) Antibiotics

(b) Exclusion

P.T.O.

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3. Describe symptoms, causal organism, disease cycle and control measures of Loose smut of wheat. 8

Or

Write notes on :

- (a) Leaf curl of Tomato
(b) Little leaf of Brinjal.
4. Describe symptoms, causal organism, disease cycle and control measures of wilt of Tur. 8

Or

Write notes on :

- (a) Papaya Mosaic
(b) Symptoms and causal organism of Downy mildew of grapes.
5. Write short notes on (any four) : 8
- (a) Seed certification
(b) Bordeaux Mixture
(c) Sclerotial stage
(d) Control measures of Tikka disease of Groundnut
(e) Grassy shoot of Sugarcane
(f) Symptoms of Rust of Wheat.

This question paper contains 2 printed pages]

SB-10-2022

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (Third Year) (Sixth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS/New Pattern)

BOTANY

Paper-XIV

(Genetics and Plant Breeding)

(Tuesday, 07-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

- N.B. :— (i) Attempt all questions
(ii) Figures to the right indicate full marks.
(iii) Illustrate your answers with suitable labelled diagram wherever necessary.

1. What is supplementary gene? Describe supplementary gene action with suitable example. 15

Or

(a) Sex linked inheritance in man with reference to colorblindness. 8

(b) Allopolyploidy in Raphanobrassica. 7

Describe selection as method of plant breeding. 15

Or

(a) CMS 8

(b) Objectives mutational breeding. 7

P.T.O.

WT

(2)

SB-14-2022

10

5. Write short notes on (any two) :

- (a) Edward's syndrome
- (b) Back cross and test cross
- (c) Emasculation in hybridization
- (d) Acclimatization

SB-14-2022

2

EXHIBIT NO. 14/2022/2022

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SB-23-2022

FACULTY OF SCIENCE

B.Sc. (Sixth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS/New Course)

BOTANY

Paper-XV

(Plant Pathology-II)

(Thursday, 09-06-2022)

Time— 2.30 Hours

Time : 10.00 a.m. to 12.30 p.m.

Maximum Marks—60

- N.B. :— (i) Attempt all questions.
(ii) All questions carry equal marks.
(iii) Draw well-labelled diagrams wherever necessary.

1. Define fungicide. Describe in detail copper fungicides. 15

Or

Write notes on :

- (a) Scope and importance of Aerobiology. 5
(b) Seed borne pathogens. 7

2. Describe symptoms, causal organism, disease cycle and control measure of stem rust of wheat. 15

Or

Write notes on

- (a) Symptoms and causal organism of Ergot of Bajra. 5
(b) Tikka disease of Groundnut. 7

P.T.O.

WT

(B)

HD-24-1055

3. Attempt any two of the four :

- (a) Biodegradation of food grains
- (b) Exclusion
- (c) Cuscufa
- (d) Leaf spot of Cabbage.

10

SR-23-2022

2

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