



DPB – 510 (BOT)

M.Sc. Final (Botany) Degree Examination, July/August 2011
Directorate of Distant Education
Paper – V : Plant Physiology

Time : 3 Hours

Max. Marks : 75/85

Note : 1) Attempt ALL questions.
2) Repeaters shall answer questions from Sections A, B and C. (Marks 75).

SECTION – A

I. Answer **any SEVEN** of the following : **(7×3=21)**

- 1) Endoplasmic reticulum
- 2) Electro osmosis
- 3) Diffusion pressure
- 4) Robert Hill
- 5) Evaporation
- 6) ATP
- 7) 2, 4-D
- 8) Photoperiodism
- 9) RUBISCO
- 10) Dayneutral plants

SECTION – B

II. Answer **any THREE** of the following : **(3×8=24)**

- 11) Photoperiodism
- 12) Types of transpiration
- 13) Light reaction
- 14) Vernalization
- 15) Role of auxins in plants.

P.T.O.



SECTION – C

III. Answer **any TWO** of the following :

(2×15=30)

- 16) Write an account of stomatal movements.
- 17) Highlight the importance of major elements in Plant growth.
- 18) Write an account on cyclic and non cyclic photo phosphorylation.
- 19) Give a detailed account of citric acid cycle and terminal oxidation.

SECTION – D

(This Section shall be answered by students having total of **85** marks as paper maximum, in addition to Sections **A, B** and **C**.)

IV. Answer **any ONE** of the following :

(1×10=10)

- 20) Describe the ecological significance of C-4 and CAM pathways.
 - 21) Compare the xylem and phloem transport mechanism in plants.
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M.Sc. Final (Botany) Examination, July/August 2011
Directorate of Distance Education
Paper — VI: MEDICINAL PLANTS AND ECONOMIC BOTANY

I Time : 3 Hours

Max. Marks : 75/85

- Note :** 1) Attempt *all* the questions.
2) Repeaters shall answer questions from Sections A, B and C
(Marks 75).

SECTION — A

I. Answer *any SEVEN* of the following : **(7x3=21)**

- 1) Charaka
- 2) Pharmacopoea
- 3) Spirulina
- 4) MPCA
- 5) Strychnine
- 6) Ficus bengalensis
- 7) Triphala churna
- 8) Linen
- 9) RET plants
- 10) Endemism.

SECTION — B

II. Answer *any THREE* of the following : **(3x8=24)**

- 11) Fiber and floss yielding plants.
- 12) Adulteration of herbal drugs and detection.
- 13) Spices of India and their medicinal importance.
- 14) Export and import potentials of less known medicinal plants of India.
- 15) Uses of Centella asiatica.

P.T.O.



DPB – 530 (Bot)

**M.Sc. Final (Botany) Degree Examination, July/August 2011
(Directorate of Distance Education)**

Paper – VII : ANGIOSPERM EMBRYOLOGY

Time: 3 Hours

Max. Marks: 75/85

*Note : 1) Attempt all questions.
2) Repeaters shall answer questions from Sections A, B and C only. (75 marks)*

SECTION – A

I. Answer **any SEVEN** of the following : **(7×3=21)**

- 1) Bisporic embryosac
- 2) Orthotropus ovule
- 3) Generative cell
- 4) Aeropalynology
- 5) Endothecium
- 6) Perianth
- 7) P. Maheshwari
- 8) Albuminous seeds
- 9) True polyembryony
- 10) Caruncle

SECTION – B

II. Answer **any THREE** of the following : **(3×8=24)**

- 11) Flower and floral parts
- 12) Pollen wall layers
- 13) Development of male gametophyte
- 14) Types of ovules in flowering plants
- 15) Types of embryosac
- 16) Development of pollen tube

P.T.O.



SECTION – C

III. Answer **any TWO** of the following :

(2×15=30)

- 17) Describe the development of dicot embryo.
- 18) Give an account of microsporogenesis in flowering plants.
- 19) Write a detailed account of apomixis.
- 20) Describe the development of seed and seed coat.

SECTION – D

This Section shall be answered **only** by freshers having marks **85** as paper maximum, in addition to Sections **A, B** and **C**.

IV. Answer **any ONE** of the following :

(1×10=10)

- 21) Explain double fertilization and add a note on the role of synergids during fertilization.
 - 22) Write an account of formation of tapetum and append a note on its types and functions.
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DPA – 540 (Bot)

M.Sc. (Previous) Degree Examination, July/August 2011

Directorate of Distance Education

BOTANY

Paper – IV : Microbiology

Time : 3 Hours

Max. Marks : 75/85

Note : 1) Attempt all questions.

2) Repeaters shall answer questions from Sections A, B and C only (Marks 75).

SECTION – A

I. Answer **any SEVEN** of the following :

(7×3=21)

- 1) Louis Pasteur
- 2) Endotoxin
- 3) VAM
- 4) Anthrax
- 5) Pycnidiospore
- 6) Rhizomorph
- 7) Halophiles
- 8) Ti-plasmid
- 9) Mollicutes
- 10) Blastospore

SECTION – B

II. Answer **any THREE** of the following :

(3×8=24)

- 11) Contributions of Robert Koch
- 12) Food Preservation
- 13) Dairy products
- 14) Transduction in Bacteria
- 15) Classification of Mycoplasma.

P.T.O.



SECTION – C

III. Answer **any TWO** of the following :

(2×15=30)

- 16) Discuss in detail the ‘Golden Age of Microbiology’.
- 17) Write an account of classification of fungi up to the level of orders with suitable examples.
- 18) Give an account on industrial production of enzymes.
- 19) Write an account of role of biofertilizers in agriculture.

SECTION – D

(This Section shall be answered only by **freshers** having **85** marks as paper maximum in addition to Sections **A, B** and **C**)

IV. Answer **any ONE** of the following :

(1×10=10)

- 20) Describe the methods employed in analysis of air microflora.
- 21) Explain the principles and structure of electron microscope.



DPB – 540 (Bot)

M.Sc. Final (Botany) Examination, July/August 2011

Directorate of Distance Education

Paper – VIII : PLANT BREEDING AND PLANT BIOTECHNOLOGY

Time: 3 Hours

Max. Marks: 75/85

*Note : 1) Attempt **all** the questions.*

*2) Repeaters shall answer questions from Sections A, B and C
only. (Marks 75)*

SECTION – A

I. Answer **any SEVEN** of the following : **(3×7=21)**

- 1) Polyethylene glycol
- 2) Doubled haploid
- 3) Tetrazolium test
- 4) E. M. Southern
- 5) Restriction endonuclease
- 6) Recessive gene
- 7) Inversion
- 8) Ethidium bromide
- 9) Restorer line
- 10) IRRI

SECTION – B

II. Answer **any THREE** of the following : **(3×8=24)**

- 11) Undefined supplements in tissue culture media.
- 12) Synthetic seeds and their applications.
- 13) Differentiate between embryo rescue and IVF.
- 14) Techniques and methods in plant breeding.
- 15) Merits and demerits of mutation breeding.

P.T.O.



SECTION – C

III. Answer **any TWO** of the following :

(2×15=30)

- 16) Write a general account of plant tissue culture techniques.
- 17) Describe cloning vectors used in r-DNA technology.
- 18) Discuss the techniques in hybrid seed production.
- 19) Classify mutagens. Write their importance in mutation breeding of self pollinated crop plants.

SECTION – D

(This Section shall be answered only by freshers having **85** marks as per maximum, in addition to Sections **A, B, and C**)

IV. Answer **any ONE** of the following :

(1×10=10)

- 20) Explain short-term and long-term germ plasm conservation methods.
 - 21) Describe different types and applications of blotting techniques.
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