

M.Sc. Final (Botany) Examination, August/September 2008  
Directorate of Correspondence Course  
Paper – V : PLANT PHYSIOLOGY

Time : 3 Hours

Max. Marks : 75

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

(7×3=21)

- 1) Vernalization
- 2) Water potential
- 3) Cohesion mechanism
- 4) CAM
- 5) Phytochrome
- 6) RQ
- 7) Characteristics of a bioassay
- 8) Chelating agents
- 9) Hydroponics
- 10) Biological clock.

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

(3×8=24)

- 11) Nutrient deficiency symptoms of essential elements.
- 12) Stomatal dynamics.
- 13) Effect of low temperature stress.
- 14) Principles of solute absorption.
- 15) Theories of ascent of sap.

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

(2×15=30)

- 16) Describe biosynthesis, bioassay and physiological effects of auxins.
- 17) Describe PP pathway add a note on its significance.
- 18) Discuss the photorespiration. Add a note on its ecological importance.
- 19) Write an account of Nernst equation and its significance.

M.Sc. Final (Botany) Examination, August/September 2008  
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Paper – VI : MEDICINAL PLANTS AND ECONOMIC BOTANY

Time : 3 Hours

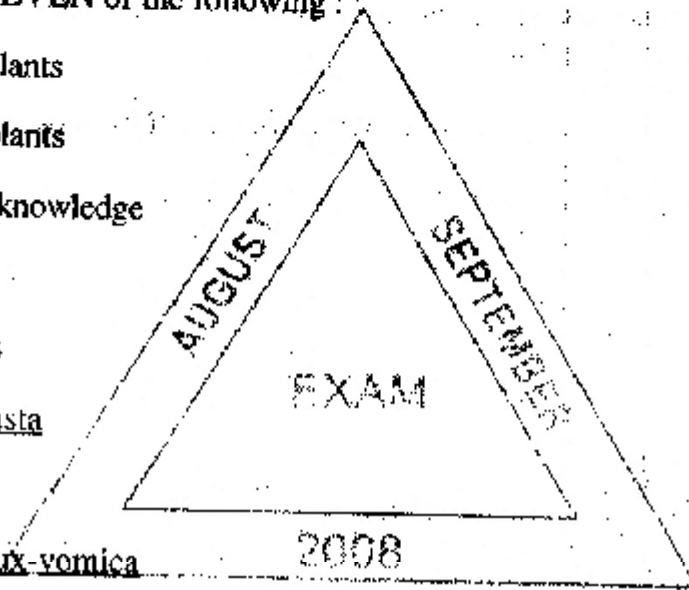
Max. Marks : 75

- Note : 1) Answer all the questions.  
2) Draw diagrams wherever necessary.

PART – A

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

- 1) Aromatic plants
- 2) Piscicidal plants
- 3) Traditional knowledge
- 4) Reserpine
- 5) Floss plants
- 6) Coffea robusta
- 7) Nutmeg
- 8) Strychnus nux-vomica
- 9) Churna
- 10) Aloe vera.



PART – B

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

- 11) Classification of medicinal plants based on chemical composition.
- 12) Chemistry of plant toxins.

P.T.O.

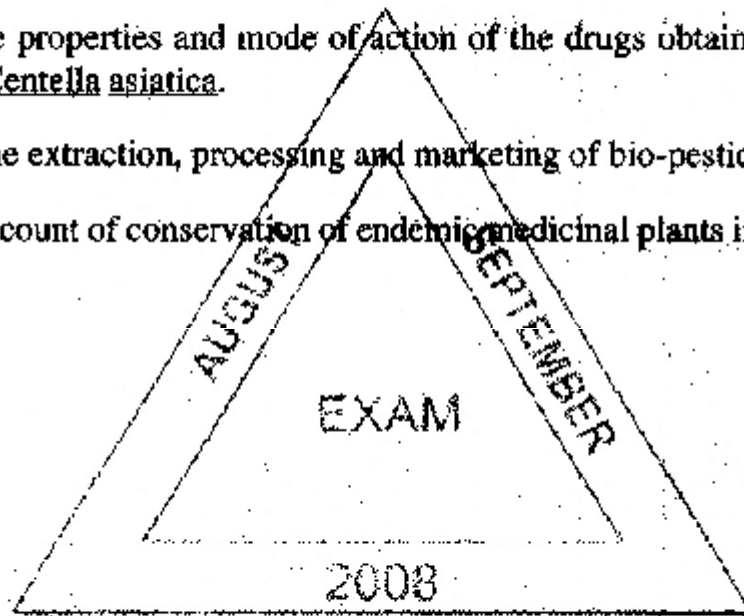


- 13) Oil-yielding plants.
- 14) Cryptogamic medicinal plants.
- 15) Inventorying of medicinal plants.

PART - C

III. Answer any TWO of the following (2×15=30)

- 16) Write an account on the historical development of ethnobotanical research in India.
- 17) Explain the properties and mode of action of the drugs obtained from Vinca rosea and Centella asiatica.
- 18) Describe the extraction, processing and marketing of bio-pesticides.
- 19) Write an account of conservation of endemic medicinal plants in Karnataka.



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**Paper – VII : ANGIOSPERM EMBRYOLOGY**

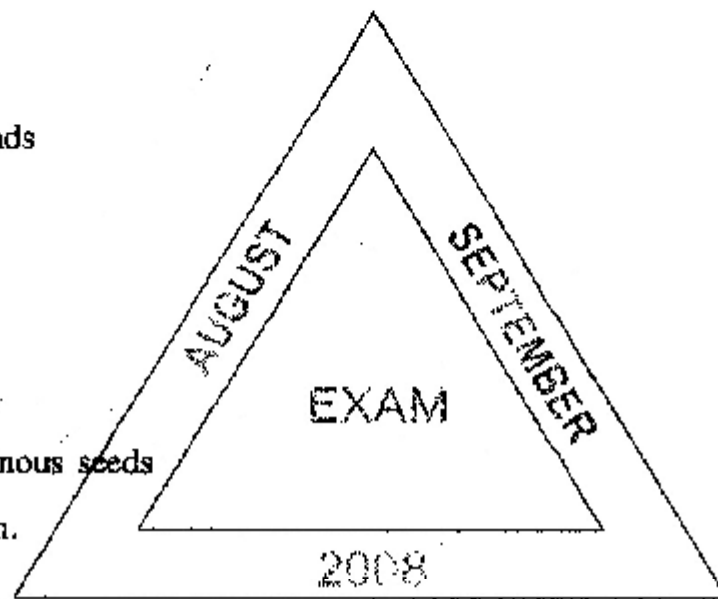
Time : 3 Hours

Max. Marks : 75

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

(7×3=21)

- 1) Theophrastus
- 2) Perianth
- 3) Ovary
- 4) Spore tetrads
- 5) Synergids
- 6) Plumule
- 7) Tapetum
- 8) Aril
- 9) Ex-albuminous seeds
- 10) Operculum.

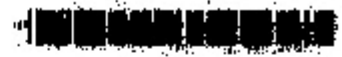


II. Write **any THREE** of the following :

(3×8=24)

- 11) Describe a typical angiosperm flower.
- 12) Explain development of microsporangium wall layers.
- 13) Write a short account on importance of palynology.
- 14) Write an account on development of male gametophyte.
- 15) Write the significance of double fertilization.

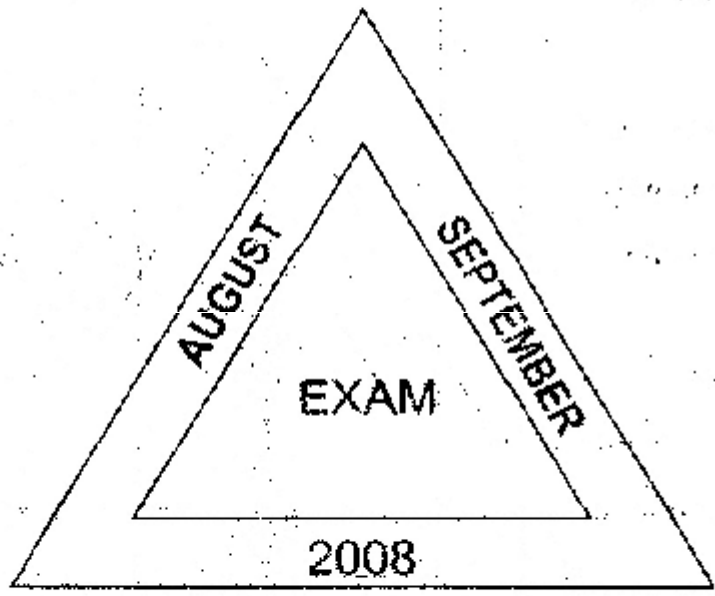
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III. Write any TWO of the following :

(2×15=30)

- 16) Give a detailed account on megasporogenesis.
- 17) Describe the development of embryo in monocots.
- 18) Describe nuclear type of endosperm. Add a note on endosperm haustoria.
- 19) What is apomixis ? Mention types and their importance.



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Paper – VIII : PLANT BREEDING AND PLANT BIOTECHNOLOGY

Time : 3 Hours

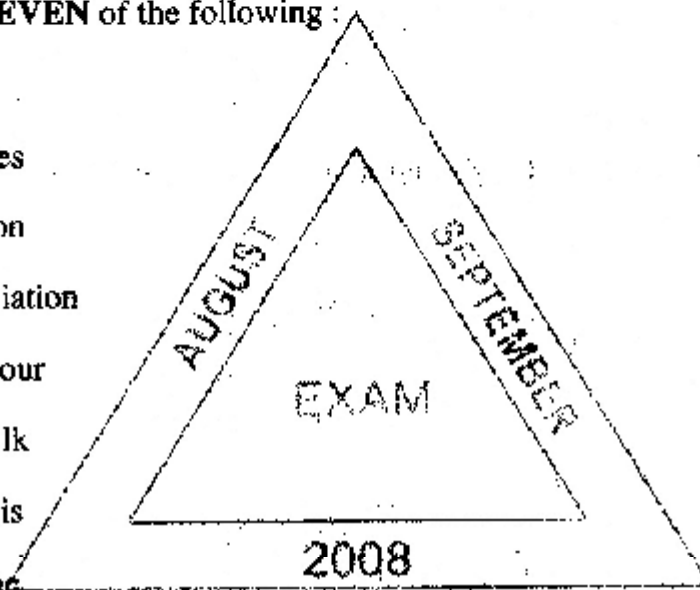
Max. Marks : 75

- Notes : 1) Attempt all questions.  
2) Draw diagrams wherever necessary.

PART – A

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

- 1) Test cross
- 2) A and B lines
- 3) Emasculation
- 4) Ionising radiation
- 5) Loss of vigour
- 6) Coconut milk
- 7) Caulogenesis
- 8) Macerozyme
- 9) Promoters
- 10) Cryopreservants.



PART – B

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

- 11) Techniques of producing hybrid seeds.
- 12) Incompatibility and male sterility.

P.T.O.



- 13) DNA fingerprinting.
- 14) Protoplast viability and testing.
- 15) Southern blotting technique.

PART - C

III. Answer any **TWO** of the following : (2×15=30)

- 16) Discuss the constraints in the breeding of crop plants.
- 17) Describe the procedures for breeding crop plants using mutagens.
- 18) Explain different methods and factors affecting somatic embryogenesis and its importance.
- 19) Write an account of the technique and applications of polymerase chain reaction.

