



MATS UNIVERSITY

मैट्स विश्वविद्यालय मुक्त एवं दूरवर्ती शिक्षा कार्यक्रम आरंग, रायपुर (छ0ग0)  
MATS UNIVERSITY OPEN & DISTANCE LEARNING CENTRE ARANG, RAIPUR (C.G.)

**सत्रीय कार्य / Assignment Work – 2014 -15**

**M.SC.BOTANY (FINAL)**

**Max Marks – 30**

**Min Marks - 12**

**निर्देश :-** सत्रीय कार्य के प्रत्येक विषय में कुल 30 अंक हैं। सभी प्रश्नों के अंक समान होंगे। सभी प्रश्न हल कीजिए। (Assignment Work of each paper carries 30 Marks. All questions carry equal marks. Attempt all questions.)

***PLANT DEVELOPMENT AND REPRODUCTION - I***

1. Write short notes on the following:  
(a) Seed germination (b) Hormonal control of seed germination (c) Phototropism.
2. Explain the various theories to understand the structure and function of shoot apical meristem?
3. Describe formation of male gametes.
4. Write notes on polyembryony and apomixis.
5. Senescence is essential for plants. Justify the statement.

***PLANT ECOLOGY - II***

1. Describe Ecological niche with their types.
2. Explain the mechanism of ecological succession.
3. Explain the methods for determination of primary productivity?
4. Write short notes on the following –  
(a) Measurement of Biodiversity (b) Genetic Drift (c) Biodiversity hotspots.
5. Ozone: useful or harmful to us? Discuss the threats to its depletion in atmosphere.

***PLANT RESOURCE UTILIZATION & CONSERVATION - III***

1. Write short notes on the following-  
(a) Biodiversity conservation (b) Function of Biosphere Reserve (c) Formation of Coral Reef.
2. Explain the establishment, ecology and biology of mangrove.
3. Give an account of conventional methods of ex-situ conservation.
4. Explain the method of in-vitro storage of germplasm and cryopreservation.
5. Give a general account of important Institutions:  
(a) BSI (b) NBPGR (c) IARI (d) SCIR (e) DBT.

***BIOTECHNOLOGY, GENETIC ENGINEERING BIOTECHNOLOGY & GENETIC ENGINEERING OF PLANTS AND MICROBES - IV***

1. Explain the technique of plant tissue culture. Also, write a note on embryo culture.
2. Describe micropropagation, artificial seed and Germplasm conservation.
3. Explain the requirements or tools of recombinant DNA technology.
4. Explain – (a) Mechanism of T-DNA transfer (b) Intellectual Property Right.
5. Give a detailed account on microarrays.

***ETHNOBOTANY - V***

1. What is ethnobotany? Write briefly the relevance to ethnobotany of the following disciplines: Ecology, Medicine, Agriculture, Linguistics, and Archaeology.
2. What is indigenous culture? Describe in brief some plants of Indian mythology.
3. Give the local name and use of the following plants:  
(a) Argemone mexicana (b) Butea frondosa (c) Syzygium cumini (d) Tinospora cordifolia.
4. Explain the ethnobotanical importance of the following plants -  
(a) Allium sativum; (b) Aloe vera; (c) Cassia fistula; (d) Jatropha curcas (e) Ricinus communis.
5. Give a detailed account of the plants used in the treatment of:  
(a) Skin diseases; (b) Bronchial inflammation and Asthma; (c) Malaria and (d) Jaundice.

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