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. Life Science (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.)

BIODIVERSITY, EVOLUTION AND ENVIRONMENTAL BIOLOGY – I

1. Explain the methods of identification of Biodiversity.
2. Write short notes on: (i) Modern Theory of Evolution; (ii) Energy Flow in Ecosystems; and (iii) Biofuels.
3. Define Toxicology. Explain the management of acute intoxication in detail.
4. Give a detailed account on Solid waste management methods.
5. Explain the principle of generation of hydroelectric power and geo thermal energy.

CELL, MICRO & MOLECULAR BIOLOGY – II

1. Explain the structure and classes of antibodies and discuss antigen and antibody reaction in brief.
2. Write short notes on: (i) Ultra structure of Bacteria; (ii) Topoisomerases; (iii) Viroids and (iv) Role of second messenger in signal transduction.
3. Explain the process of Recombination and its types in detail.
4. Define vector. Explain the types of vectors and their role in cloning.
5. Explain the process of transcription and its regulation at various levels.

MEASUREMENTS AND TECHNIQUES IN BIOLOGY – III

1. Give a detailed account on graphical representation of data.
2. Explain the principle and working of Electron Microscopy and Differential Centrifugation.
3. Write short notes on: (i) Arithmetic Mean; (ii) Standard Error; and (iii) Binomial Distribution.
4. Give a detailed account on Spectroscopy and Western Blotting.
5. What do you mean by Normal Distribution? Explain with example. Also, give its importance and properties.

NEUROSCIENCE, PHYSIOLOGY AND DEVELOPMENT BIOLOGY - IV

1. Give a detailed account on the physiology of Nervous system.
2. Explain the pathway of Glycolysis along with the consumption and generation of ATP molecules.
3. Explain the structure, function and regulation of hormones secreted by Pituitary Gland.
4. Explain different stages in development of anther and Microsporogenesis in detail.
5. Write short notes on the following:
   (i) Biological Clock; (ii) Senescence in Plants; (iii) Role of Abscisic acid in Stomatal Movement.

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