Model Question Paper-3 with effect from 2019-20 (CBCS Scheme)

USN

Fourth Semester B.E. Degree Examination
Cell Culture Techniques

TIME: 03 Hours   **Max. Marks: 100**

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

		Module -1	***Bloom's Taxonomy Level**	**Marks**
Q.01	a	Write a note on Liquid nitrogen freezers and water purification system	L1	10
	b	Describe Aseptic concepts and Maintenance of sterility	L2	10
		OR		
Q.02	a	Describe Inverted stage microscope and Autoclave	L2	10
	b	Write a note on Sterile handling area and Incubation	L1	10
		Module-2		
Q. 03	a	Define types of cell culture media for plants	L2	06
	b	Explain the importance of Antibiotics and growth supplements in cell culture media	L3	10
	c	Give an account on Buffers	L2	04
		OR		
Q.04	a	Write a note on Ingredients of media and Physiochemical properties	L1	10
	b	Explain the process of Preparation and sterilization of cell culture media	L5	10
		Module-3		
Q. 05	a	Explain the process Cell separation and disaggregation of the explants	L3	10
	b	Describe Primary cell culture and Secondary cell culture	L2	10
		OR		
Q. 06	a	Write a note on characterization and maintenance of cell lines	L1	08
	b	Explain the application of animal cell culture for *in vitro* testing of drugs	L3	12
		Module-4		
Q. 07	a	Describe Organogenesis and factors affecting organogenesis	L2	10
	b	Explain Industrial application of secondary metabolites and Molecular farming.	L3	10
		OR		
Q. 08	a	Give an account on Somatic Embryogenesis and Synthetic Seeds	L2	10
	b	Describe the production of double haploids and their Applications	L2	10
		Module-5		
Q. 09	a	Write a note on Screening and preservation of microbial products	L1	10
	b	Describe Enumeration and screening of novel microbial secondary metabolites	L2	10
		OR		
Q. 10	a	Illustrate Auxotroph isolation by replica plating technique	L2	08
	b	Explain the process production of antibiotics	L5	08
	c	Write a note on microbial leaching	L2	04

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.