22BTU632BN

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(Sixth Semester)

Branch - **BIOTECHNOLOGY**

MAJOR ELECTIVE COURSE – II ALLIED AGRO TECHNOLOGY

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Find the name of the land left without cultivation for one or less than one agricultural year. i) Barren ii) Culturable iii) Current Fallow iv) Wasteland	K1	CO1
	2	Specify agroforestry system that involves growing agricultural crops between rows of planted trees. i) Agri cultivation ii) Alley cropping iii) Shifting culture iv) Silvipasture	K2	CO1
2	3	Identify the impact of the presence of earthworms on the soil pH by creating what environment. i) Acidic ii) Alkaline iii) Optimum iv) Non fertlie	K1	CO2
	4	What is the main principle of an Integrated Farming System? i) Maximize monoculture ii) Minimize animal usage iii) Recycling waste iv) Depend on external inputs	K2	CO2
3	5	Which phytochemical is known for its antioxidant and cardiovascular health benefits, often found in high concentrations in grapes and wine? i) Allicin ii) Caffeine iii) Lycopene iv) Resveratrol	K1	CO3
	6	Mention the component in *Spirulina*, widely recognized as a valuable source. i) Iodine ii) High quality protein iii) Low quality starch iv) Saturated fats	K2	CO3
4	7	Which technique involves pruning side shoots in orchid cut flower production to produce one high-quality main spike? i). Deshooting ii). Disbudding iii) Pinching iv). Ratooning	K1	CO2
	8	Name the hydrolytic enzyme overexpressed using metabolic engineering to improve resistance against fungal pathogens. i) Amylase ii) Cellulase iii) Chitinase iv) Lipase	K2	CO2
5	9	Spell the fundamental method of representing geographical entities in GIS, often used for satellite imagery. i). Network ii). Point iii) Raster iv) Vector	K1	CO3
	10	What is the protection for new plant varieties in India called? i) Farmers patents ii) Intellectual Property Right iii) Plant Breeders Rights iv) Plant Patents	K2	CO3

Cont…

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Exemplify agriculture and resource management from the prescriptive of farmers, scientists and Government.	K2	CO1
		(OR)		
	11.b.	Demonstrate import and export of agricultural commodities and its impact on GDP.		
2	12.a.	Relate vermicomposting and role of earth worm in soil and soil biota.	K2	CO2
		(OR)		
	12.b.	Illustrate Integrated farming system with milch animals		
3	13.a.	Elaborate on the herbal resources in south India, isolation of active principle, bioprospecting and forest products	K3	CO2
		(OR)		
	13.b.	Show the production of button oyster, paddy straw mushrooms, their cultivation, economics and products.		
4	14.a.	Explain tissue culture, micropropagation as commercial venture and give an overview of metabolic engineering.	K3	CO3
		(OR)		
	14.b.	Outline the concept of floriculture, ornamental and cut flower technology.		
5	15.a.	Infer the challenges, possibilities of utility of IoT, AI in agriculture and patenting in agrosector.	K3	CO3
		(OR)		
	15.b.	Summarize the various funding agencies for establishing agriculture entreprises, Govt and private NGOs		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Elaborate on types of irrigation depending on land types, availability of water resources and novel methods.	K3	CO1
2	17	Describe organic farming and development of organic grains, vegetables and eggs.	K3	CO2
3	18	Summarize the phytochemical products potential for export, their uses in diseases, antidiabetic, anti lipidemic and anticancer.	K3	CO3
4	19	Demonstrate rDNA technology for production of abiotic, biotic stress tolerant crops with suitable examples and give the role of plantibodies.	K3	CO3
5	20	Explain Precision farming and the future of innovations in agro technology.	K3	CO3

Z-Z-Z END