

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024

(First Semester)

Branch- BOTANY

PLANT DIVERSITY- I

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

Question No.	Question	K Level	CO
1	The thallus of <i>Voucheria</i> is a) Colonial b) Filamentous c) Unbranched d) Coenocytic	K1	CO1
2	This condition is not applicable to the formation of auxospores in Pennales. a) Autogamy b) Oogamy c) Parthenogenesis d) fusion of conjugating cells	K2	CO1
3	The aplanospores with a structure similar to parent cell are called: a) Akinetes b) Autospores c) Exospores d) Endospores	K1	CO2
4	Tubular fermenters are specifically used in the cultivation of: a) <i>Chlorella</i> b) <i>Nostoc</i> c) <i>Spirulina</i> d) <i>Anabaena</i>	K2	CO2
5	Which of the following is considered as organisms of uncertain affinity? a) Agaricales b) Mucorales c) Stemonitales d) Acrasiales	K1	CO3
6	The terminal swollen structure of germ tube is called: a) Haustorium b) Sclerotium c) Appressorium d) Coenobium	K2	CO3
7	Heterothallic fungi show difference in strains of their thalli in respect of: a) sex b) compatibility c) Habit d) Both (a) & (b)	K1	CO4
8	The algal layer of the lichen thallus is also called: a) Apothecial layer b) Gonidial layer c) Myco layer d) Phyco layer	K2	CO4
9	In bryophytes sex is determined by: a) sex chromosomes b) environment c) sporophyte d) Both (a) & (b)	K1	CO5
10	The antheridium of <i>Polytrichum</i> is covered by a whorl of specialized leaves, called: a) pinnate leaves b) paraphyses c) perigonial leaves d) operculum	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

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

Question No.	Question	K Level	CO
11.a.	List the parameters considered significant for the classification of algae by Fritsch.	K1	CO1
	(OR)		
11.b.	Why diatoms are considered as articulated organisms?		
12.a.	Organize the pattern of phylogenetic thallus variations among the algae.	K3	CO2
	(OR)		
12.b.	Apply your knowledge and interpret that algal biofuel could be an alternate for conventional energy resource.		
13.a.	Trace the contributions of Indian mycologists.	K3	CO3
	(OR)		
13.b.	Examine the fruit bodies of Cleistothecium and Perithecium.		
14.a.	Analyse the mechanism of fungal spore dispersal.	K4	CO4
	(OR)		
14.b.	Distinguish between homothallic and heterothallic properties of fungi.		
15.a.	Evaluate the trends of gametophyte structure from subterranean to erect nature.	K5	CO5
	(OR)		
15.b.	Compare the structure of sporophytes of <i>Anthoceros</i> and <i>Polytrichum</i> .		

SECTION - C (30 Marks)

Answer ANY THREE questions

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

Question No.	Question	K Level	CO
16	Show that algae play a vital role in the economy of agriculture and pharmaceutical industry.	K1	CO1
17	Construct a technical map showing the steps involved in mass cultivation of <i>Spirulina</i> .	K3	CO2
18	Identify and explain various stages of reproductive structures of <i>Puccinia</i> .	K3	CO3
19	Examine the attributes of lichens towards biomedical applications.	K4	CO4
20	Critically assess the economic and ecological importance of bryophytes.	K5	CO5

Z-Z-Z END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

Branch - BOTANY

PLANT DIVERSITY- II

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Question No.	Question	K Level	CO
1	Which of these is associated with leaf trace formation in pteridophytes? a) Culmination b) Venation c) Enation d) Planation	K1	CO1
2	Carinal canal is characteristic of: a) <i>Nephrolepis</i> b) <i>Selaginella</i> c) <i>Psilotum</i> d) <i>Equisetum</i>	K2	CO1
3	In <i>Marsilea</i> the leaf lamina is usually divided into: a) 2 lobes b) 3 lobes c) 4 lobes d) 5 lobes	K1	CO2
4	The emergence of heterospory is highly attributed to: a) microspore b) megaspore c) auxospore d) oospore	K2	CO2
5	The secondary phloem of <i>Lyginopteris</i> composed of: a) tracheids only b) vessels only c) sieve elements only d) sieve tubes only	K1	CO3
6	Which of the following term is not related to wood characteristic of gymnosperms? a) manoxylic b) pycnoxylic c) polyxylic d) uniseriate	K2	CO3
7	The dwarf shoots of <i>Pinus</i> are otherwise called: a) heteroblast b) <i>brachyblast</i> c) Blepharoplast d) Tracheoplast	K1	CO4
8	The mature seed of <i>Taxus</i> is: a) endospermous b) non-endospermous c) perispermous d) pericarpous	K2	CO4
9	The fossils which preserve both external and internal forms are called: a) petrifications b) Compressions c) Incrustations d) impressions	K1	CO5
10	The type genus <i>Lepidocarpon</i> refers to: a) leaf b) fruit c) stem d) seed	K2	CO5

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SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	Outline the classification of pteridophytes by Reimers, 1954.	K1	CO1
	(OR)		
11.b.	Explain the internal structure of the stem of <i>Equisetum</i> .		
12.a.	Illustrate the sectional view of the sporocarp of <i>Masilea</i> .	K3	CO2
	(OR)		
12.b.	Analyse how heterospory lead the way to seed habit in pteridophytes.		
13.a.	Trace the affinity characteristics of gymnosperms with pteridophytes.	K3	CO3
	(OR)		
13.b.	With neat sketches explain the wood characteristics of gymnosperms.		
14.a.	Assess the advance features of <i>Gnetum</i> flower.	K4	CO4
	(OR)		
14.b.	Distinguish between various types of foliar spurs of <i>Pinus</i> .		
15.a.	Examine the geological time-scale.	K5	CO5
	(OR)		
15.b.	Elucidate the fossil characteristics of <i>Rhynia</i> and show that how it paved the lineage to the advancement features of <i>Psilotum</i> .		

SECTION -C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Question No.	Question	K Level	CO
16	Discuss the life-cycle of <i>Pteridium</i> .	K1	CO1
17	Analyse the evolutionary trends of steles in pteridophyte members.	K3	CO2
18	Critically comment on the characteristic features of various classes of gymnosperms according to Sporne classification.	K3	CO3
19	Examine the economic importance of Gymnosperms.	K4	CO4
20	Describe the methods of fossilization with suitable examples.	K5	CO5

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

Branch – BOTANY

APPLIED MICROBIOLOGY

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	Which of the following is a modern approach used in bacterial taxonomy? (i) Morphological characterization (ii) Biochemical tests only (iii) Genetic sequencing (iv) Staining techniques	K1	CO1
	2	Which type of electrons does an SEM use to produce images? (i) Primary electrons (ii) Secondary electrons (iii) Neutrons (iv) X-rays	K2	CO1
2	3	What is the main purpose of bacterial staining? (i) To kill bacteria (ii) To identify the bacteria (iii) To provide nutrients for bacteria (iv) To destroy bacterial DNA	K1	CO2
	4	What pH range is ideal for the growth of most bacteria? (i) 1-3 (ii) 2-5 (iii) 6.5-7.5 (iv) 7.5 – 8.0	K2	CO2
3	5	What is sporulation in bacteria? (i) Formation of spores for survival (ii) Reproduction process (iii) Method of motility (iv) Nutrient absorption process	K1	CO3
	6	In photosynthetic bacteria, where does the light-dependent reaction take place? (i) Mitochondria (ii) Chloroplasts (iii) Thylakoid membranes or specialized cell membranes (iv) Cytoplasm	K2	CO3
4	7	What term describes a virus that infects bacteria? (i) Retrovirus (ii) Bacteriophage (iii) Oncovirus (iv) Mycovirus	K1	CO4
	8	What is a satellite virus? (i) A virus that infects bacteria (ii) A virus that can replicate independently (iii) A virus that depends on a helper virus for replication (iv) A virus that only infects plants	K2	CO4
5	9	Which type of microbial enzyme is commonly used to soften and smoothen cotton fabrics? (i) Cellulase (ii) Amylase (iii) Protease (iv) Lipase	K1	CO5
	10	Which of the following is a common benefit of probiotics in the digestive system? (i) They increase the absorption of vitamins (ii) They prevent the growth of harmful bacteria (iii) They directly digest all types of food (iv) They enhance the taste of food	K2	CO5

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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.	Explain the Bergey's system of bacterial classification.	K2	CO1
		(OR)		
	11.b.	Explain the principle and working of Phase- contrast microscope.		
2	12.a.	Apply a few techniques to measure microbial growth.	K3	CO2
		(OR)		
	12.b.	List and discuss the key factors affecting microbial growth.		
3	13.a.	Analyze the stages of exospore formation in <i>Streptomyces</i> .	K4	CO3
		(OR)		
	13.b.	Analyze the role of photosynthetic bacteria in carbon cycle.		
4	14.a.	List out the structural properties of viruses.	K4	CO4
		(OR)		
	14.b.	Classify the viruses based on their structure.		
5	15.a.	Assess the role of prebiotics in health.	K5	CO5
		(OR)		
	15.b.	Explain the role of probiotics in health and disease.		

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	Compare the structure and function of Gram Positive and Gram Negative Bacterial cell walls.	K5	CO1
2	17	Analyze the chemostat and turbidostat systems in bacterial continuous culture.	K4	CO2
3	18	Analyze the stages of endospore formation in <i>Bacillus</i> species.	K4	CO3
4	19	List and discuss various assays for detecting plant viruses.	K4	CO4
5	20	Explain the role of microbial enzymes in textile and leather industry.	K5	CO5

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

Branch - BOTANY

PLANT GENETICS AND BREEDING

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	In what mode of inheritance the F1 progeny exhibit characteristics of both the parents? a) Complete dominance b) incomplete dominance c) co-dominance d) multiple allelism	K1	CO1
	2	Show which is pseudoallele? a) Allele with similar function b) Allele with similar structure c) Allele with similar function and structure d) Alleles with similar function and different structure	K2	CO2
2	3	Find out the crossing over takes place in a) Pachytene stage b) Anaphase stage c) Diakinesis stage d) Leptotene stage	K1	CO1
	4	Linkage results in a) Formation of more dominant phenotype b) Formation of more wild phenotype c) Formation of more parental phenotype d) Formation of more recombinant phenotype	K2	CO2
3	5	What is the inheritance of characters by plasmogenes known as? a) Extrafield inheritance b) Maternal inheritance c) Extrachromosomal inheritance d) Paternal inheritance	K1	CO1
	6	Why cytoplasmic male sterility is employed in plant breeding? a) To control male gametes b) To control female gametes c) To produce nonviable eggs d) To produce hybrid seeds	K2	CO1
4	7	Pure lines and inbreed lines are a) Homogenous and homozygous b) Homogeneous and heterozygous c) Heterogenous and heterozygous d) Heterogenous and homozygous	K1	CO2
	8	-----is unrelated processes to hybridization? a) Emasculation b) Selection of parents c) Bagging d) crossing or artificial pollination	K2	CO2
5	9	Mention which is not a necessary condition of Hardy Weinberg Equilibrium? a) Large population b) Random mating c) No mutation d) Migration of individuals	K1	CO1
	10	Interpret which of the following is not involved in classical plant breeding practices? a) The hybridization of pure lines b) Molecular biology c) Artificial selection of plants d) Desirable traits of higher yield	K2	CO2

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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.	Analyze the mechanism of incomplete dominance.	K4	CO3
	(OR)			
	11.b.	Categorize the various types of lethal factors.		
2	12.a.	List out the different kinds of linkage and its significance.	K4	CO3
	(OR)			
	12.b.	Distinguish between coupling and repulsion with suitable examples.		
3	13.a.	Evaluate the various causes of polyploidy with suitable examples.	K5	CO5
	(OR)			
	13.b.	Critically analyze the cytoplasmic male sterility in Maize.		
4	14.a.	Compile the objectives of Plant Breeding.	K6	CO4
	(OR)			
	14.b.	Elaborate account on the procedure of pure line selection.		
5	15.a.	Explain the different types of mutation breeding.	K5	CO5
	(OR)			
	15.b.	Evaluate the farmer's rights.		

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	Prove the Mendel's Laws of inheritance with suitable experiments.	K5	CO5
2	17	Explain the mechanism of crossing over and its significance.	K5	CO5
3	18	Analyze the various types of chromosomal aberration and its genetic significance.	K4	CO3
4	19	Categorize the various steps involved in hybridization techniques.	K4	CO3
5	20	Elaborate account on Hardy Weinberg law and its applications.	K6	CO5

Z-Z-Z END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)
Branch - BOTANY

TAXONOMY OF ANGIOSPERMS AND ECONOMIC BOTANY

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	What does ICBN stand for? (A) International Code of Botanical Nomenclature (B) International Classification of Biological Nomenclature (C) International Council of Botanical Names (D) International Convention of Botanical Nomenclature	K1	CO1
	2	Infer which system groups organisms based on evolutionary relationships? (A) Morphological classification (B) Phylogenetic classification (C) Numerical taxonomy (D) Natural system of classification	K2	CO2
2	3	Which family does the water lily belong to? (A) Magnoliaceae (B) Nymphaeaceae (C) Myrtaceae (D) Fabaceae	K1	CO1
	4	Infer the plants of Fabaceae family are commonly known as (A) Caper plants (B) Legumes (C) Water lilies (D) Myrtles	K2	CO2
3	5	Which family is known as the Coffee Family? (A) Sapotaceae (B) Oleaceae (C) Bignoniaceae (D) Rubiaceae	K1	CO1
	6	Show that the edible fruit of the sapodilla tree belongs to (A) Oleaceae (B) Sapotaceae (C) Boraginaceae (D) Pedaliaceae	K2	CO2
4	7	The fig tree belongs to which plant family? (A) Chenopodiaceae (B) Moraceae (C) Araceae (D) Commelinaceae	K1	CO1
	8	Show the plant family that includes palms. (A) Arecaceae (B) Poaceae (C) Araceae (D) Moraceae	K2	CO2
5	9	What part of Eucalyptus spp. is primarily utilized for essential oils? (A) Fruits (B) Wood (C) Leaves (D) Seeds	K1	CO
	10	Show the common name of the <i>Gossypium hirsutum</i> . (A) Eucalyptus (B) Upland Cotton (C) Cork Oak (D) Cardamom	K2	CO2

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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.	List the salient features of the ICBN.	K4	CO4
	(OR)			
	11.b.	Distinguish between intended and bracketed keys in taxonomy.		
2	12.a.	Compare and contrast the vegetative adaptations of Portulacaceae and Combretaceae.	K5	CO5
	(OR)			
	12.b.	Explain the key features of the family Fabaceae.		
3	13.a.	Discuss the economic importance of Oleaceae.	K6	CO6
	(OR)			
	13.b.	Elaborate the key features of the family Boraginaceae.		
4	14.a.	Explain the floral characters of family Amaryllidaceae.	K5	CO5
	(OR)			
	14.b.	Compare the vegetative characters of family Piperaceae and Moraceae.		
5	15.a.	List the economic importance and uses of <i>Mangifera indica</i> .	K4	CO4
	(OR)			
	15.b.	Analyze the significance of Eucalyptus spp. in forestry and industry.		

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	Compare and contrast the Natural and Phylogenetic systems of classification.	K4	CO4
2	17	Explain the vegetative and floral characters of Cucurbitaceae.	K5	CO5
3	18	Explain the vegetative and floral characters Pedaliaceae.	K5	CO5
4	19	Discuss about vegetative and floral characters of Araceae with its economic importance.	K6	CO6
5	20	Analyze the importance of cork oak in sustainability and economic sectors.	K4	CO4

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch - **BOTANY**

ECOLOGY AND PHYTOGEOGRAPHY

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	Which of the following is considered a topographic factor in ecology? (a) Soil composition (b) Altitude (c) Humidity (d) Wind speed	K1	CO1
	2	Infer, which of one the following is producer in a food chain? (a) Herbivores (b) Carnivores (c) Plants (d) Decomposers	K2	CO2
2	3	Which of the following is a functional attribute of an ecosystem? (a) Community structure (b) Ecological succession (c) Trophic structure (d) Species richness	K1	CO1
	4	Show the component that is responsible for energy fixation in an ecosystem (a) Primary consumers (b) Producers (c) Decomposers (d) Secondary consumers	K2	CO2
3	5	Which of the following describes an "r-selected" species? (a) Long lifespan and stable population size (b) High reproductive rate and low parental care (c) Late maturity and few offspring (d) Strong competition for limited resources	K1	CO1
	6	Show the difference between a fundamental niche and a realized niche (a) A fundamental niche is broader than a realized niche (b) A realized niche is the full range of environmental conditions an organism can tolerate (c) A fundamental niche is determined by competition (d) Realized niche occurs only when there is no competition	K2	CO2
4	7	What is the primary goal of environmental education? (a) Promote scientific research (b) Encourage industrial development (c) Raise awareness about environmental issues (d) Focus on economic growth	K1	CO1
	8	Infer the program that is associated with the conservation of ecosystems while promoting sustainable use. (a) UNDP Programme (b) Man and Biosphere (MAB) Programme (c) WHO Health Programme (d) Global Water Partnership	K2	CO2

Cont...

5	9	Which of the following vegetation types is dominant in the Western Ghats of India? (a) Tropical Rainforest (b) Alpine Forest (c) Desert Vegetation (d) Mangroves	K1	CO1
	10	Infer the term for species that are native to a particular region and found nowhere else (a) Cosmopolitan species (b) Endemic species (c) Migrant species (d) Invasive species	K2	CO2

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.	Analyze the concepts and principles of ecology.	K4	CO4
	(OR)			
	11.b.	List the importance of the physical environment in determining the structure of ecosystems.		
2	12.a.	Analyze the concept of an ecosystem. Describe its components.	K4	CO4
	(OR)			
	12.b.	Distinguish between a food chain and a food web.		
3	13.a.	Compare the fundamental and realized niches.	K5	CO5
	(OR)			
	13.b.	Explain the types of ecological succession.		
4	14.a.	Evaluate the relationship between human health and environmental change.	K5	CO5
	(OR)			
	14.b.	Explain the objectives and scope of the Man and Biosphere programme and highlighting its impact on biodiversity conservation.		
5	15.a.	Elaborate the major vegetation types of India.	K6	CO6
	(OR)			
	15.b.	Discuss the concept of continuous, discontinuous, and endemic distribution with examples.		

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	Discuss the divisions of ecology and their significance.	K6	CO6
2	17	Examine the characteristics and functions of ecological pyramids with examples.	K4	CO4
3	18	Explain the concept of species interactions and provide examples of the different types.	K5	CO5
4	19	Analyze the role of governmental and non-governmental organizations (NGOs) in promoting environmental conservation in India.	K4	CO4
5	20	Explain the principles of Geographic Information System (GIS) and remote sensing and their applications in environmental studies.	K5	CO5

Z-Z-Z END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)
Branch - BOTANY

TRENDS IN PLANT RESEARCH

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	When the power of ocular lens is 10 X and objective lens is 20 X, the magnification is? a) 30 times b) 20 times c) 200 times d) 2000 times	K1	CO1
	2	Which of the following is the formula for pH calculation? a) $\log_{10}[H^+]$ b) $-\log_{10}[H^+]$ c) $\log_2[H^+]$ d) $-\log_2[H^+]$	K2	CO1
2	3	What is the Principle of centrifugation? a) Evaporation principle b) Sedimentation principle c) Filtration principle d) size reduction principle	K1	CO2
	4	Who invented centrifugation? a) GG Stokes b) Antonin Prandtl c) Louis Pasteur d) Johnstone	K2	CO2
3	5	Square root of the mean of square deviation is known as a) Variance b) Median c) SD d) Mean	K1	CO3
	6	When the size of samples is increasing then variance of sample means is also; a) Increases b) Decreases c) Constant d) None of the above	K2	CO3
4	7	The term "WIPO" stands for:- a) World Investment policy organization b) World intellectual property organization c) Wildlife Investigation and Policing organization d) World institute for Prevention of organized crime	K1	CO4
	8	Which of the following can you copyright? a) Literary work b) Ideas c) Choreographic work d) Fashion	K2	CO4
5	9	UGC Stands for a) University Governance Council b) Union Government Commission c) University Grants Commission d) Union government Council	K1	CO5
	10	The last state of research process is: a) Review of literature b) Report writing c) Research design d) Analysis of data	K2	CO5

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.	Construct a Flame Photometer.	K3	CO1
		(OR)		
	11.b.	Construct the Clinical Centrifuge System.		
2	12.a.	Examine the Principles of Column Chromatography.	K4	CO2
		(OR)		
	12.b.	Understand the Function and Applications of Atomic Absorption Spectroscopy.		
3	13.a.	Analyze the Student's t-test Procedure.	K4	CO3
		(OR)		
	13.b.	Distinguish between the Chi-square test and F-test.		
4	14.a.	Determine Copyright Regulations.	K5	CO4
		(OR)		
	14.b.	Explain the Biosafety Cabinets.		
5	15.a.	Discover the Components of Thesis Writing.	K4	CO5
		(OR)		
	15.b.	Assess the Criteria for Reference Styles.		

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	Evaluate the working principle of Fluorescence microscopy.	K5	CO1
2	17	Discuss the Principle and Applications of various uv – visible double beam Spectrophotometer.	K6	CO1
3	18	Compare and Contrast Correlation and Regression Analysis.	K5	CO3
4	19	Elaborate the Principles of Good Laboratory Practices (GLP) and their importance in Research.	K6	CO4
5	20	Explain the Characteristics and Types of Research Problems.	K5	CO5

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch- **BOTANY**

MAJOR ELECTIVE COURSE – II :HORTICULTURAL TECHNIQUES

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	Horticulture is the branch of----- a) Agriculture b) Nursery and Gardening c) Forestry d) Agronomy	K1	CO1
	2	Who is the father of Horticulture in India? a) M.H.Marigowda b) M.S.Swaminathan c) M.H.Gowda d) P.Maheswari	K2	CO1
2	3	Cutting method of propagation is not suitable for a) Lime b) Sugar cane c) Oleander d) Tapioca	K1	CO2
	4	A common example of stem tuber is a) Ginger b) Garlic c) Potato d) Tomato	K2	CO2
3	5	The study of flowers is called as a) Olericulture b) Floriculture c) Arboriculture d) Pomology	K1	CO3
	6	India is the ----- largest flower growing country. a) First b) Second c) Third d) Fourth	K2	CO3
4	7	Indoor plants are generally----- a) Sun loving b) Shade loving c) Sea water d) None of the above	K1	CO4
	8	Technique to control shape, size and direction of plant growth is known as a) Thinning b) Topiary c) Disbudding d) Training	K2	CO4
5	9	At the time of fruit ripening----- a) Level of ABA decreases b) Level of ABA increases c) Remains constant d) None of the above	K1	CO5
	10	Transportation of fruits is affected by----- a) Method of packaging b) Stage of ripening c) Distance of market d) All of the above	K2	CO5

Cont....

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Questions	K Level	CO
1	11.a.	List out the scope of horticulture in India.	K4	CO1
		(OR)		
	11.b.	Examine the different types of soil used in horticulture practices.		
2	12.a.	Identify the common diseases that affecting the horticultural crops.	K4	CO2
		(OR)		
	12.b.	Develop the various layering methods followed in horticulture.		
3	13.a.	Explain the role of floriculture in developing country.	K5	CO3
		(OR)		
	13.b.	Evaluate the factors affecting plant growth and also flower production.		
4	14.a.	Prove: The good infrastructure make higher yield in gardening.	K5	CO4
		(OR)		
	14.b.	Examine the importance of gardening.		
5	15.a.	Discuss about the factors affecting fruiting stage of plant.	K6	CO5
		(OR)		
	15.b.	Analyze the recent storage methodology of fruits.		

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	Examine the water irrigation system in horticulture and its types.	K4	CO1
2	17	Survey the plant propagation mechanism by plant tissue culture.	K4	CO2
3	18	Evaluate the cultivation process of <i>Anthurium andreanum</i> crop.	K5	CO3
4	19	Explain in detail about the different styles of bonsai in horticulture.	K5	CO4
5	20	Elaborate the methods of pruning that is very important to fruit crops.	K6	CO5

Z-Z-Z END