

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(First Semester)

Branch – ENVIRONMENTAL SCIENCE

ENVIRONMENTAL TOXICOLOGY AND HEALTH

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	Coal dust and asbestos fibres are examples of _____ toxicants. a) Physical b) Chemical c) Biological d) Behavioral	K1	CO1
	2	_____ Toxicology is concerned with gathering toxicological information from animal experimentation. a) Industrial b) Forensic c) Descriptive d) Clinical	K2	CO1
2	3	Biotransformation reactions involves _____ phases. a) Two b) Three c) Four d) Five	K1	CO2
	4	When a piece of DNA is covalently bonded to a chemical toxin, it is referred as a) DNA Methylation b) DNA Adducts c) Histone Codes d) DNA Transcription	K2	CO2
3	5	When two or more chemicals combine to produce a total effect that is greater than the sum of the effects of each individual chemical, then it is known as _____ effect. a) Additive b) Synergistic c) Antagonistic d) Potentiating	K1	CO3
	6	What is meant by the therapeutic index? a) The ratio of LD ₅₀ to ED ₉₉ b) The ratio of TD ₅₀ to ED ₅₀ c) The ratio of LD ₁ to LD ₅₀ d) The ratio of ED ₉₉ to ED ₅₀	K2	CO3
4	7	The toxicity caused to liver by a toxin is referred as ____ a) Hepatotoxicity b) Pulmonary toxicity c) Nephrotoxicity d) Neurotoxicity	K1	CO4
	8	_____ is a disease caused by an allergy to the mold in certain crops. a) Byssiniosis b) Bagassosis c) Farmers Lung d) Pnuemonia	K2	CO4
5	9	The main organ involved in the detoxification of a toxin is ____ a) Kidney b) Liver c) Heart d) Brain	K1	CO5
	10	The _____ process determines whether exposure to a chemical can increase the incidence of adverse health effect. a) Hazard identification b) Exposure assessment c) Toxicity assessment d) Risk characterization	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.	Define Toxicology. Mention branches and applications.	K4	CO1
	(OR)			
	11.b.	Narrate the significance of descriptive animal toxicity studies.		
2	12.a.	Discuss the role of the biotic and abiotic factors influencing toxicity.	K5	CO2
	(OR)			
	12.b.	Differentiate bioaccumulation and biomagnification with suitable examples.		
3	13.a.	How toxic chemicals interact with one another after entering into the living system?	K4	CO3
	(OR)			
	13.b.	Explain the Dose-response relationship with example.		
4	14.a.	How does nephrotoxicity is caused by an environmental toxicant? Explain.	K3	CO4
	(OR)			
	14.b.	Comment your views on occupational health hazards.		
5	15.a.	Describe the stages involved in risk assessment.	K5	CO5
	(OR)			
	15.b.	Discuss the roles of environmental health agencies of India.		

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	Explain the historic developments and evolution of modern toxicology in chronologic order.	K4	CO1
2	17	Critically analyze the impacts of various toxic chemicals in the environment.	K5	CO2
3	18	Discuss about various types of toxicity assays' and its significance.	K5	CO3
4	19	Illustrate the neurotoxicity and pulmonary toxicity mechanisms with suitable examples.	K4	CO4
5	20	Describe the detoxification mechanism of toxins in a living system.	K5	CO5

Z-Z-Z

END