

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch - ZOOLOGY

APPLIED BIOTECHNOLOGY

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	Klenow fragment is derived from a) DNA Ligase b) DNA Pol-I c) DNA Pol-II d) Reverse Transcriptase	K1	CO1
	2	The vaccines prepared through recombinant DNA technology are a) Third generation vaccines b) First-generation vaccines c) Second-generation vaccines d) None	K2	CO1
2	3	Which organism has the highest number of vectors? a) Yeast b) Mammalian cells c) E.coli d) Fungi	K1	CO2
	4	Bolivar and Rodriguez constructed which vector? a) Yip7 b) R6-5 c) pUC8 d) PBR322	K2	CO2
3	5	The Golden Rice variety is rich in a) Vitamin C b) carotene and ferritin c) Biotin d) Lysine	K1	CO3
	6	Which bacterium is used in the production of insulin by genetic engineering? a) Saccharomyces b) Rhizobium c) Escherichia d) Mycobacterium	K2	CO3
4	7	Which among the following is damaging the future industrial development of some areas of biotechnology? a) Employees b) Unrealistic regulatory requirements c) Daily wages d) Bioreactors used	K1	CO4
	8	Which among the following is not a fermentation technology product? a) Coffee b) Soya sauce c) Sauerkraut d) Cheese	K2	CO4
5	9	The major cause of environmental degradation is a) Bio-magnification b) Nitrogen deposition c) Quorum quenching d) Lyophilization	K1	CO5
	10	Which of the following method of disposal of solid waste leads to release of organic pollutants into the environment? a) Land filling b) Incineration c) Phytoremediation d) Biological treatment	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.	Write notes on Southern blotting.	K3	CO1
		(OR)		
	11.b.	Discuss the principle of RFLP.		
2	12.a.	Describe the structure of PBR322.	K4	CO2
		(OR)		
	12.b.	Write notes on SV40.		
3	13.a.	Enumerate the features of stem cells and mention its types.	K4	CO3
		(OR)		
	13.b.	Narrate the gene therapy for human genetic disease.		
4	14.a.	Describe the method of single cell protein production.	K3	CO4
		(OR)		
	14.b.	Discuss the role of microbes in biofertilizers.		
5	15.a.	State the advantages and disadvantages of bioremediation.	K4	CO5
		(OR)		
	15.b.	Compare the positive and negative impacts of G M foods.		

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	Write an essay on DNA finger printing technology.	K4	CO4
2	17	Explain the types of plasmids.	K4	CO4
3	18	Explore the methods of IVF technology.	K5	CO4
4	19	Give an account on structure of bioreactor.	K6	CO4
5	20	Discuss about the components of IPR.	K4	CO4

Z-Z-Z

END