PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2023

(First Semester)

Branch - ENVIRONMENTAL SCIENCE

ENERGY RESOURCES AND CONSERVATION

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

 $(10 \times 1 = 10)$

ALL questions carry EQUAL maiks				
Module No.	Question No.	Question	K Level	CO
1	1	A natural resource that can be replaced in the same rate at which it is consumed or used is known as a) Artificial Resources b) Natural Resources c) Renewable Resources d) Nonrenewable Resources	K1	CO1
	2	India's total forest cover accounted for of the geographical area of the country. a) 35.62 % b) 24.62% c) 20.54 % d) 40.32%	K2	CO1
2	3	Heat transfer takes place according to which of the following law? a) Newton's second law of motion b) First law of thermodynamics c) Newton's law of cooling d) Second law of thermodynamics	K1	CO2
	4	Which group consists of non-renewable organic resource? a) Water, air and minerals b) natural gas, oil and coal c) wood, water and natural pastures d) sand, air and clay	K2	CO2
3	5	World Energy Needs are rising due to a) deforestation b) increasing population and Industrialization c) inflation d) natural calamities	K1	CO3
	6	The splitting of a nucleus into smaller nuclei is a) Fusion b) Fission c) Half-life d) gamma -radiation	K2	CO3
4	7	Which of the following is not a part of energy audit as per the Energy Conservation Act, 2001? a) monitoring and analysis of energy use b) verification of energy use c) submission of technical report with recommendations d) ensuring implementation of recommended measures followed by review	K1	CO4
	8	Which of the following green rating systems are currently working in India? a) LEED b) GRIHA c) Both A and B d) None of above	K2	CO4

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Cont...

5	9	c) PAT	aims at reducing Specific Energy b) EEFP d) FEEED	K1	CO5
	10	International Sol year. a) 2015 c) 2017	ar Alliance was launched in the b) 2016 d) 2018	K2	CO5

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

 $(5 \times 7 = 35)$

Module No.	Question No.	Question	K Level	СО
1	11.a.	Comment on the factors influencing availability and distribution of natural resources.		
	(OR)		K4	CO1
	11.b.	Mention the role of an individual in conserving natural resources.		
2	12.a.	What do you mean by material balance? Mention its environmental significance.	We	000
	(OR)		K5	CO2
	12.b.	Comment your views on Indian energy scenario.		
	13.a.	Give a brief account on environmental problems associated with fossil fuels.	W.C	CO3
3	(OR)		K6	COS
	13.b.	Write short notes on CNG and Hydrogen fuel.		
	14.a.	Comment on renewable energy audit.		
4	(OR)		K5	CO4
	14.b.	Describe different types of luminaries fixtures and its specifications.		
5	15.a.	Give a brief note on energy audit subsidiary schemes.	- K4	CO5
	(OR)		IX-4	005
	15.b.	Write short notes on International Solar Alliance.		

SECTION -C (30 Marks) Answer ANY THREE questions

ALL questions carry EQUAL Marks

 $(3 \times 10 = 30)$

Module No.	Question No.	Question	K Level	СО
1	16	Explain the forest management tools and add a note on ecotourism.	K4	CO1
2	17	Explain the laws of thermodynamics, heat transfer processes relevant to environment.	K6	CO2
3	18	Explain the classification, composition and physicochemical characteristics of fossil fuels.	K5	CO3
4	19	Describe the energy audit types and stage wise process of energy audit.	K4	CO4
5	20	Give a detailed account on various schemes for energy conservation followed in India.	K5	CO5