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GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, May - 2021

(Eighth Semester)

BELOE 8031 - GREEN TECHNOLOGIES

(Mechanical Engineering)

Time: 2 hrs

Maximum: 50 Marks

Answer ALL Questions**The figures in the right hand margin indicate marks.****PART – A: (Multiple Choice Questions)****(1 x 10 = 10 Marks)****Q.1. Answer ALL questions**

	[CO#]	[PO#]
a. The percentage composition of oxygen in dry air on the earth is	1	1
(i) 0.9%		
(ii) 78%		
(iii) 0.03 %		
(iv) 21%		
b. Global sea level rise has been averaging at _____ per year.	1	1
(i) > 2mm		
(ii) 5 to 10mm		
(iii) 1 to 2 mm		
(iv) > 50mm		
c. The Delhi metro is estimated to have reduced the equivalent of _____ cars on the roads.	1	1
(i) 58000		
(ii) 51000		
(iii) 75000		
(iv) 175000		
d. Expand CCS.	2	1
(i) Carbon control strategy		
(ii) Controlling carbon surge		
(iii) Code for carbon safety		
(iv) Carbon capture and storage		
e. Alternate sources of energy in development stage is	2	1
(i) Bio fuels		
(ii) fossil fuel		
(iii) wave energy		
(iv) hybrid		
f. BEE refers to	3	1
(i) Bureau of Electrical Engineers		
(ii) Board of Electrical Efficiency		
(iii) Bureau of Electronics Engineers		
(iv) Bureau of Energy Efficiency		
g. The reaction between ammonia and sulphuric acid gives	3	1
(i) fluorapatite		
(ii) Phosphate rock		
(iii) ammonium sulphate		
(iv) urea		
h. Cooperative service centres provide assistance to	3	1
(i) green building		
(ii) smart city		
(iii) group of villages		
(iv) an individual village		
i. The efficiency of solar PV panels is	4	1
(i) 5%		
(ii) 10-15%		
(iii) 28%		
(iv) 82%		
j. Which state has planned to develop model city DOLERA following green principles?	4	1
(i) Gujarat		
(ii) Kerala		
(iii) Ta		
(iv) Punjab		

PART – B: (Short Answer Questions)

(2 x 5 = 10 Marks)

Q.2. Answer ALL questions

	[CO#]	[PO#]
a. List out the names of three gases that are emitted from industries and are also responsible for ozone depletion.	1	1
b. Write any 4 important aspects of NAPCC.	1	1
c. Expand LEEDS and GRIHA.	3	2
d. Compare manufacturing emissions and secondary emissions.	3	1
e. List out the elements of a carbon capture and sequestration scheme.	4	1

PART – C: (Long Answer Questions)

(6 x 5 = 30 Marks)

Answer ANY FIVE questions

	Marks	[CO#]	[PO#]
3. Infer the concept of long half-life and point out the existence of various gases.	(6)	1	2
4. Assess the development of mitigative measures for global reduction of carbon.	(6)	1	2
5. List out the essential steps for control of carbon emissions and accumulation. Also point out the different levels in which various measures need to be adopted in each country.	(6)	2	3
6. Appraise the function of hydropower in India.	(6)	2	4
7. How the carbon emission can be reduced at personal level?	(6)	3	2
8. How soon will India's national action plan take us to a low-carbon path?	(6)	3	3
9. Point out the reasons to prevent deforestation.	(6)	4	2
10. What are the issues involved in planning CCS projects?	(6)	4	4

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