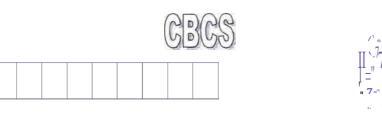


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#### Fifth semester B.E. Degree Examination, Dee."2419/Jan.2020 ····, **Energy and Environment**

Time: 3 hrs.		Max. Marks: 100		
.e.		Note: Answer any FIVE full questions, choosing ONE full question from each mo	dule.	
be treated as malpractice.		Module-I		
nalp	1	a. Discuss word energy scenario, with respect to production and consumption using releva		
as r		statistics.	(10 Marks)	
ated		b. Explain primary energy demand in India by fuel with sector wise comparison.	(10 Marks)	
e tre				
	<b>OR</b> 2 a. Outline with brief explanation the factors effects the India's energy development. (10 Marks)			
= - Z <sup>7</sup> 1	2 a.	b. Explain:	10 Marks)	
רי 7		(i) The Rajiv Gandhi Grameena Vidyutikaran Yojana (RGGVY)		
$\begin{bmatrix} -1 & -1 & -1 \\ -1 & -1 & -1 \\ -1 & -1 &$		(ii) Deen Dayal Upadhyana Grama Jyoti Yojana (DDUDJY)		
Ĕ.4		(iii) Energy Production in India - Coal (only)	(10 Marks)	
<sup>117</sup> <sup>73</sup> <sup>73</sup> <sup>4</sup> <sup>73</sup> <sup>4</sup> <sup>4</sup> <sup>73</sup> <sup>4</sup> <sup>4</sup> <sup>73</sup> <sup>4</sup> <sup>4</sup> <sup>73</sup> <sup>4</sup> <sup>1</sup> <sup>73</sup> <sup>4</sup> <sup>1</sup> <sup>73</sup> <sup>4</sup> <sup>1</sup> <sup>1</sup> <sup>73</sup> <sup>4</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup>				
=	2	<u>Module-2</u>		
01 ci,	3	a. A power plant of 200 MW installed capacity has following particulars: Capital cost = Rs. I6,000/KW installed		
c4 ₱ 8 ¥		Interest and Depreciation = 12%		
та <sub>л</sub> 5		Annual load factor = $60\%$		
Ta 77 Fo 0 CZ cci		Annual capacity factor = 54%		
7:1 Lc5		Annual Running Charges = $Rs.200 \times 10^6$		
.0.0		Energy consumed by power plant auxiliaries $= 6\%$	(10	
0 0 0 0 0 0 0 0 0 0		Calculate the cost of power generation per KWh.	(10 Marks)	
0 $10$		<sup>b.</sup> Explain: bjective of Energy Management		
Ęř		(ii) Audit		
Cr V <sup>,</sup> .t.		(iii) Sample Report Content of Energy Audit	(10 Marks)	
AZ ∎ 70 . Y	=			
=	-	OR		
8,111 to""	4 a.	. Discuss 10 steps methodology for detailed Energy Audit.	(10 Marks)	
$\frac{t}{t}$	(:) TT-	b. With a neat diagram, explain:		
11 g3 <b>'</b>	(1) Hy	ydrostorage (pumped storage) (ii) Fly wheel	(10 Marks)	
<b>u</b> <sup>2</sup> / <sub>8</sub> , <sup>2</sup> / <sub>5</sub> ,		(ii) Thy wheel	(10 10141 KS)	
e.;		Module-3		
A)	5	a. Discuss how oxygen cycle is utilized in the eco system.	(10 Marks)	
L		b. Discuss:		
t b		(i) Food		
U E		(ii) Food web	(10 Montra)	
E		(iii) Ecological pyramid	(10 Marks)	



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# OR

6	a.	Discuss how carbon cycle is utilized in the eco system.	(10 Marks)
	b. I	Described grassland eco system. What are its types?	(10 Marks)

# $\underline{Module_{-}4}$

7 a. Enumerate the water pollution causes and its effects. Mention control measures that can be				
	initiated for mitigating the same.	(10 Marks)		
	(10 Marks)			
	OR			
8	a. Discuss the role of an individuals in prevention of pollutions.	(10 Marks)		
	b. Elaborates the causes, effects and control measures of:			
	(i) Soil pollution			
	(ii) Noise pollutions	(10 Marks)		

### $\underline{Module_{5}}$

9	a. Discuss any two case studies related to pollution of environment in detail.	(10 Marks)
	b. Explain sources of Air Pollution.	(10 Marks)

# OR

10	a.	Write short notes on: Global warming		lti	(05 Marks)
	b.	Acid Rain			(05 Marks)
	c.	Ozone layer depletion	c <sup>O</sup>		(05 Marks)
	d.	Forest Conservation Act			(05 Marks)
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