



Reg.No. \_\_\_\_\_

## End Semester Examination – Nov/Dec - 2016

**Code : 11EE215/12EE215/EE253**  
**Sub. Name : Generation, Transmission and Distribution**

**Semester : 2016-17 ODD**  
**Duration : 3 hrs**  
**Max. marks : 100**

Q. No.	Questions	Marks
<b>PART-A(10X1=10 MARKS)</b>		
1.	The overall efficiency of a steam power station is-----.	(1)
2.	Why is electrical energy preferred over other forms of energy?	(1)
3.	Mention the principal components of an electric supply system.	(1)
4.	When transmission is by underground system?	(1)
5.	What is a strain insulator and where is it used?	(1)
6.	What are the factors which affect corona?	(1)
7.	What is the general criterion for the classification of cables?	(1)
8.	What do you mean by permissible current loading of an underground cable?	(1)
9.	Write the methods of obtaining 3-wire D.C. system.	(1)
10.	Can transmission and distribution systems be distinguished merely by their voltages?	(1)

<b>PART B(5 X 3= 15 MARKS)</b>		
11	Write down any Six advantages of Nuclear Power Plant.	(3)
12	Draw the layout of a typical A.C. power supply scheme by a single line diagram.	(3)
13	Discuss the advantages and disadvantages of corona.	(3)
14	Show the various parts of a high voltage single-core cable.	(3)
15	Define the terms: feeder, distributor and service mains.	(3)

PART C(5 X 15= 75 MARKS)			
16.	a.	Explain the working of a gas turbine power plant with a schematic diagram	15
(OR)			
17.	a.	The annual load duration curve of a certain power station can be considered as a straight line from 20 MW to 4 MW. To meet this load, three turbine-generator units, two rated at 10 MW each and one rated at 5 MW are installed. Determine (i) installed capacity (ii) plant factor (iii) Units generated per annum (iv) load factor and (v) utilization factor.	15
18.	a.	Enumerate the detailed comparison of DC and AC transmission system	15
(OR)			
19.	a.	Derive the expressions for advantages of the transmission of electric power is carried at high voltages	15
20.	a.	Show that in a string of suspension insulators, the disc nearest to the conductor has the highest voltage across it.	08
	b.	Explain various methods of improving string efficiency	07
(OR)			
21.	a.	Deduce an approximate expression for sag in overhead lines when Supports are at equal levels	07
	b.	Supports are at unequal levels.	08

22.	a.	Draw a neat sketch of the cross-section of the following and explain: 3-core belted cable	05
	b.	H-type cable	05
	c.	S.L. type cable.	05
(OR)			
23.	a.	Write short notes on the following : Laying of 11 kV underground power cable	05
	b.	Capacitance grading in cables	05
	c.	Capacitance of 3-core belted cables.	05
24.	a.	Explain the following systems of distribution : Radial system,	05
	b.	Ring main system ,	05
	c.	Interconnected system.	05
(OR)			
25.	a.	Write short notes on the following : Distribution transformers,	05
	b.	3-wire d.c. distribution,	05
	c.	Primary distribution.	05

ALL THE BEST