



**ANJUMAN-I-ISLAM'S  
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL**

Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,  
Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.

- SCHOOL OF ENGINEERING & TECHNOLOGY
- SCHOOL OF PHARMACY
- SCHOOL OF ARCHITECTURE

**DEPARTMENT OF ELECTRICAL ENGINEERING**

**DEPARTMENT OF ELECTRICAL ENGINEERING**

<b>CLASS:- S.E.</b>	<b>SEM:- III</b>
<b>SUBJECT:- AM III</b>	<b>DATE:- 22/08/17</b>
<b>DURATION:- 1 hr</b>	<b>MARKS:- 20</b>

**UNIT TEST 01**

**Q.01 Attempt any TWO: (10 Marks)**

		Marks	CO
a)	Determine the constants a, b, c, d, e if $f(z) = (ax^4 + bx^2y^2 + cy^4 + dx^2 - 2y^2) + i(4x^3y - exy^3 + 4xy)$ is analytic	5	5
b)	Find the imaginary part of the analytic function whose real part is $e^{2x}(x \cos 2y - y \sin 2y)$	5	5
c)	Find the bilinear transformation under which 1, i, -1 from the z-plane are mapped onto 0, 1, $\infty$ of w-plane.	5	5

**Q.02 Attempt any TWO: (10 Marks)**

a)	Prove that $\nabla r^n = nr^{n-2}\bar{r}$	5	4
b)	Evaluate by Green's theorem for $\int \bar{F} d\bar{r}$ where $\bar{F} = (x^2 - xy) i + (x^2 - y^2) j$ and C is the closed curve bounded by $x^2 = 2y$ and $x = y$	5	4
c)	Use Gauss's Divergence Theorem to evaluate $\iint \bar{N} \cdot \bar{F} ds$ where $\bar{F} = x^2 i + z j + yz k$ and S is the surface of the cube bounded by $x=0, x=1, y=0, y=1, z=0, z=1$	5	4

**Innovative Teaching - Exuberant Learning**

Vision : To be the most sought after academic, research and practice based department of Electrical Engineering that others would wish to emulate.



ANJUMAN-I-ISLAM'S

**KALSEKAR TECHNICAL CAMPUS, NEW PANVEL**

Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,  
Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.

- SCHOOL OF ENGINEERING & TECHNOLOGY  
 SCHOOL OF PHARMACY  
 SCHOOL OF ARCHITECTURE

**DEPARTMENT OF ELECTRICAL ENGINEERING**

**DEPARTMENT OF ELECTRICAL ENGINEERING**

CLASS:- S.E.	SEM:- III
SUBJECT:- EEM	DATE:- 23/8/2017
DURATION:- 1 hour	MARKS:- 20

**CLASS TEST 01**

Q.01 Attempt any one: (10 Marks)		Marks	CO
A)	Explain Construction and working of PMMC instrument. Derive the equation for deflection torque $T_d$ and deflection angle $\Theta$	10	1
B)	Explain construction and working of Dynamometer type wattmeter. Also, show that the deflection of a pointer is an indication of active power.[	10	1
Q.02 Attempt any ONE: (10 Marks)			
A)	Explain working and construction of Megger.	10	3
B)	Derive expression for unknown resistance using wheatstone bridge	10	3

**Innovative Teaching - Exuberant Learning**

Vision : To be the most sought after academic, research and practice based department of Electrical Engineering that others would wish to emulate.



**ANJUMAN-I-ISLAM'S  
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL**

Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,  
Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.

- SCHOOL OF ENGINEERING & TECHNOLOGY  
 SCHOOL OF PHARMACY  
 SCHOOL OF ARCHITECTURE

**DEPARTMENT OF ELECTRICAL ENGINEERING**

REV:00	<b>QUESTION PAPER CLASS TEST 01</b>	EXM-04 A
CLASS:- <u>SE</u>		SEM:- <u>III</u>
SUBJECT:- <u>EDC</u>		DATE:- <u>/ 08 / 2017</u>
DURATION:- <b>60 min.</b>		MARKS:- <b>20</b>
<b>Q.01 Attempt any 02 (10 Marks)</b>		
	<b>Marks</b>	<b>CO</b>
a) Explain the Need of Biasing in BJT and mention the types.	05	CO2
b) Explain Zener diode as a voltage regulator.	05	CO1
c) Write a short note on Schottkey diode.	05	CO1
<b>Q.02 Attempt any 01 (10 Marks)</b>		
a) Draw and explain the block diagram of DC power supply and explain the significance of 1. Rectification efficiency, 2. ripple factor, 3. PIV	10	CO1
b) Explain the types of Rectifiers and write a short note on Full Wave Bridge Rectifier with waveforms.	10	CO2
c) Draw the construction and working of PN junction diode and explain using VI characteristics.	10	CO1



ANJUMAN-I-ISLAM'S  
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,  
Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.

- SCHOOL OF ENGINEERING & TECHNOLOGY  
 SCHOOL OF PHARMACY  
 SCHOOL OF ARCHITECTURE

DEPARTMENT OF ELECTRICAL ENGINEERING

DEPARTMENT OF ELECTRICAL ENGINEERING			
CLASS:- SE		SEM:- III	
SUBJECT:- CNCPG		DATE:-	
DURATION:- 1 Hr		MARKS:- 20	
CLASS TEST 01			
Q.01 Attempt any TWO: (10 Marks)		Marks	CO
a	Draw layout of thermal power plant.	5	CO2
b	Explain types of tariff methods.	5	CO1
c	Write a short note on Load curve and Load Duration curve.	5	CO1
Q.02 Attempt any ONE: (10 Marks)			
a	Write and Explain effect of fluctuating load on generating station.	10	CO2
b	The peak load on power plant is 60 MW. The maximum demands of 30 MW, 20MW, 10 MW & 14MW are connected to the power plant. The capacity of power plant is 80MW. And annual load factor is 0.5. Estimate average load, energy supplied peryr, demand factor, And diversity factor.	10	CO1

Innovative Teaching - Exuberant Learning

Vision : To be the most sought after academic, research and practice based department of Electrical Engineering that others would wish to emulate.



ANJUMAN-I-ISLAM'S  
**KALSEKAR TECHNICAL CAMPUS, NEW PANVEL**

Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,  
Recognised by : Directorate of Technical Education, Govt. of Maharashtra, Affiliated to : University of Mumbai.

- SCHOOL OF ENGINEERING & TECHNOLOGY  
 SCHOOL OF PHARMACY  
 SCHOOL OF ARCHITECTURE

**DEPARTMENT OF ELECTRICAL ENGINEERING**

DEPARTMENT OF ELECTRICAL ENGINEERING			
CLASS:- SE		SEM:- III	
SUBJECT:- EMC-1		DATE:- 24/8/17	
DURATION:- 1hr		MARKS:- 20	
CLASS TEST 01			
Q.01 Attempt any TWO: (10 Marks)		Marks	CO
1.	Explain armature reaction in DC machines and methods to minimize it.	5	CO3
2.	Explain the following, d) Hysteresis loss and factors affecting it. e) Eddy current loss and factors affecting it. f) Leakage flux In each of above cases, how do we minimize it?	5	CO1
3.	Explain the principle of electromechanical energy conversion from considerations of various energies involved. Develop the model for an electromechanical energy conversion device.	5	CO2
Q.02 Attempt any ONE: (10 Marks)			
1.	Derive expression for torque developed in doubly excited m/c with neat schematic.	10	CO2
2.	Derive EMF and torque equation of DC machine.	10	CO3

**Innovative Teaching - Exuberant Learning**

Vision : To be the most sought after academic, research and practice based department of Electrical Engineering that others would wish to emulate.