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	DEPARTMENT OF ELECTRICAL ENGINEERING	EXM-04(a)
CLASS:- TE		SEM:- V
SUBJECT:- ELECTROMAGNETIC FIELD AND WAVE		DATE:- 24 /10/ 2017
DURATION:- 60 min.		MARKS:- 20

CLASS TEST 02

	Q.01 Attempt any TWO: (10 Marks)	**Marks**	**CO**
a)	State and explain Biot savart law and Amperes circuital law	05	CO4
b)	If the magnetic field $\bar{H} = (3 x \cos\beta + 6 y \sin\alpha)\bar{az}$ Find current density J if fields are invariant with time.	05	CO4
c)	Derive poissons and laplace equations and Determine whether following potential field satisfied laplace equation or not? $V = r\sin\varphi + z$	05	CO5
	Q.02 Attempt any ONE: (10 Marks)		
a)	Derive magnetic field intensity due to finite and infinite wire carrying a current I.	10	CO4
b)	In spherical coordinate V = -25 volt on a conductor at r= 2 cm and V = 150 V at r = 35 cm. The space between conductors is a dielectric for which $\varepsilon r = 3.12$ find the surface charge densities on the conductors.	10	CO5
c)	In the region $0 \le r \le 0.5$ m in cylindrical coordinates system, the current density is $\bar{J} = 4.5 e^{-2r} \bar{az}$ A/m^2 and J=0 elsewhere Use Amperes circuital law to find H in all regions.	10	CO4

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.

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REV:00	DEPARTMENT OF ELECTRICAL ENGINEERING	EXM-04(a)
CLASS:- TE		SEM:- V
SUBJECT:- PSE		DATE:- 23/10/2017
DURATION:- 1Hr		MARKS:- 20

CLASS TEST 02

	Q.01 Attempt any ONE: (10 Marks)	**Marks**	**CO**
a.	Explain working of Buchholz relay showing its location and justify why it can't be used in dry transformer. Also mention advantages and Limitations.	10	CO4
b.	What are the different types of protection provided for the transformer, Explain one in detail	10	CO4
	Q.02 Attempt any ONE: (10 Marks)		
a.	What are the protections provided for the rotor of an alternator?	10	CO4
b.	Explain differential protection provided for different types of bus zones.	10	CO4

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DEPARTMENT OF ELECTRICAL ENGINEERING

REV:00	DEPARTMENT OF ELECTRICAL ENGINEERING	EXM-04(a)
CLASS:- THIRD YEAR		SEM:- V
SUBJECT:- POWER ELECTRONICS		DATE:-
DURATION:- 1 HOUR		MARKS:- 20

CLASS TEST 02

	Q.01 Attempt any TWO: (10 Marks)	**Marks**	**CO**
1	Explain full phase bridge inverter with R-L load.	05	CO4
2	Explain BUCK (Step down) Regulator.	05	CO5
3	Explain 1 Phase bridge cycloconverter.	05	CO4
	Q.02 Attempt any ONE: (10 Marks)		
1	Explain 3 phase FWCR with Continuous and Discontinuous mode.	10	CO3
2	Explain 3 phase 180 conduction mode Inverter.	10	CO3

REV:00	DEPARTMENT OF ELECTRICAL ENGINEERING	EXM-04(a)
CLASS:- T.E ELECTRICAL		SEM:- 5
SUBJECT:- COMMUNICATION ENGINEERING		DATE:- /10/17
DURATION:- 1HR		MARKS:- 20

CLASS TEST 02

		Marks	CO
Q.01 Attempt any TWO: (10 Marks)			
a	Draw and explain PCM system.	5	4
b	The Generator Polynomial of a (7,4) cyclic code is g(x) = 1+x+x^2+x^3. Draw feedback shift encoder. Use this encoder to find code word for the message (10101) in systematic form.	5	3
c	write a short note on FM Noise Triangle.	5	2
Q.02 Attempt any ONE: (10 Marks)			
a	For a systematic linear block code, the three parity check digits C_4,C_5 and C_6 are given by: $C_4=d_1 \oplus d_2 \oplus d_3$ $C_5=d_1 \oplus d_2$ $C_6=d_1 \oplus d_3$ i) Construct generator matrix. ii) Construct code generated by this matrix. iii) Determine the error correcting capability. iv) Prepare a suitable decoding table Decode the received words 101100 and 000110.	10	3
b	Explain Delta modulation and distortions associated with Delta modulation.Also explain ADM.	10	4
c	Explain Armstrong method of FM generation.	10	2

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REV:00	DEPARTMENT OF ELECTRICAL ENGINEERING	EXM-04(a)
CLASS:- TE		SEM:-V
SUBJECT:- EM-II		DATE:-
DURATION:-1		MARKS:- 20

CLASS TEST 02

Q.01 Complusory : (10 Marks) **Make suitable assumptions if necessary**

		Mark	CO
1	A 15kW, 400 V, 4 pole, 50Hz, three phase star connected induction motor, has following test result	10	CO2

	Line current (A)	Power input (W)	Line voltage (V)
No Load Test	9	1310	400
Blocked Rotor test	50	7100	200

Calculate maximum torque, maximum output, line current pf, efficiency at full load.

Q.02 Attempt any ONE out of THREE : (10 Marks)			
1	Explain with neat diagram cogging and crawling phenomenon of three phase induction motor.	10	CO2
2	Explain working Principle of three phase induction motor.	10	CO2
3	Expain stator volatge control method with neat diagram.	10	CO1