

ANJUMAN-I-ISLAM'S

KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
Approved by: All India Council for Technical Education, Council of Architecture, Pharmocy 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	QUESTION PAPER CLASS TEST 02	EXM	-04 B	
CLA	ASS:- TE	SEM	:-V		
COI	URSE:-PS-II	DAT	E:-23/10/2	2018	
DUI	RATION:-	60 min. MAR	KS:- 20		
Q.0	1 Attempt a	ny two: (08 Marks)		Marks	СО
a)	Describe the	formation of transients on transmission line.		4	CO4
b)	Explain the pl	enomenon of Arcing ground.		4	CO4
c)	Explain the ph	enomenon of capacitance switching.		4	CO4
Q.02	2 Attempt ar	y two: (12 Marks) (ONE)			
a)	Explain the p	henomenon of traveling wave on case of termination of line as open circuit.		12	CO3
b)	Derive the e	quation of fault current and developing the sequence network for LLG fault on unbalance	synchronous	12	CO3
c)	Explain the t	erms protective characteristics, Dynamic voltage rise and rating in case of lightening arrester.		12	CO4
	FILE N	O:P25,P31			4

CRITERION:2.2.2,3.2.2.

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DEPARTMENT OF ELECTRICAL ENGINEERING

R	EV:00	QUESTION PAPER CLASS TEST 02	EXM-04 B		
CLAS	SS:-TE		SEM:-V	. 1	
COU	RSE:- Electri	ical Machines-III (EMC-III)	DATE:-23/10/18		
DUR	ATION:- 6	0 min.	MARKS:- 20		
Q.01	Compulsa	ry: (10 Marks)	Eta II	Marks	СО
a)	A 15kW, 440	N/ 1 notes 50Hz 3 phase induction motor is built with a stator dia	/, 6pole, 50 Hz motor. Assume full load efficiency of 84% and P.F of		
	length of 0.1 of this mach conductors f	6. The specific electric loading is 23000 ampere conductor per me ine, determine the core dimensions, number of stator slots and nu	ter. Using the data umber of stator	10	CO2
	length of 0.1 of this mach conductors f 0.82 for each	6. The specific electric loading is 23000 ampere conductor per me ine, determine the core dimensions, number of stator slots and nu- for a 11kW, 460V, 6pole, 50 Hz motor. Assume full load efficiency of	ter. Using the data umber of stator	10	CO2
Q.02	length of 0.1 of this machiconductors f 0.82 for each	6. The specific electric loading is 23000 ampere conductor per me ine, determine the core dimensions, number of stator slots and nufor a 11kW, 460V, 6pole, 50 Hz motor. Assume full load efficiency on machine. The winding factor is 0.955.	ter. Using the data umber of stator	05	CO3
Q.02 a)	length of 0.1 of this mach conductors f 0.82 for each Attempt a Explain resist	6. The specific electric loading is 23000 ampere conductor per me ine, determine the core dimensions, number of stator slots and number at 11kW, 460V, 6pole, 50 Hz motor. Assume full load efficiency on machine. The winding factor is 0.955. The machine is 0.955.	ter. Using the data umber of stator		



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1	REV:00	QUESTION PAPER CLASS TEST 02 EXM	VI-04 B	
CLA	ASS:-TE	SEM:-V	-	
CO	URSE:- Elect	rical Machines-III (EMC-III) DATE:- /	/	
DU	RATION:-	60 min. MARKS:- 20		
Q.0	1 Compuls	sary: (10 Marks)	Marks	СО
a) A 15kW, 440V, 4 poles, 50Hz, 3 phase induction motor is built with a stator diameter 0.25 and core length of 0.16. The specific electric loading is 23000 ampere conductor per meter. Using the data of this machine, determine the core dimensions, number of stator slots and number of stator conductors for a 11kW, 460V, 6pole, 50 Hz motor. Assume full load efficiency of 84% and P.F of 0.82 for each machine. The winding factor is 0.955.				CO2
			1.7	
Q.02	2 Attempt	any two: (10 Marks)	-	
Q.02		any two: (10 Marks) stance split phase starting of the single phase induction motor.	05	CO3
a) b)	Explain resi		05 05	CO3

CRITERION: 2.2.2, 3.2.2.

FILE NO: P25, P31

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RE	V:00 QUESTION PAPER CLASS TEST 02 EXM		
CLASS	SEM:-V		
		DATE:-24/10/2018	
DURA	TION:- 60 min. MARKS:- 20)	
0.01	Attempt any two (08 Marks)	Marks	СО
a)	Attempt any two: (08 Marks) Derive the expression to obtain transfer function from state space	4	CO3
aj	Delive the expression to commit transfer range of the state of the		
b)	Explain the advantages of state space over conventional approaches.	4	CO3
c)	For a system with characteristic equation as below examine stability.	4	CO3
	55+454+103455+24=0.		
Q.02	Attempt any one: (12 Marks)		
a)	Represent the following system is state space in phase variable form and draw its state	12	C04
	space model.		
	C(s) = 10(s+2)(s+3)		
	$\frac{C(s)}{R(s)} = \frac{10(s+2)(s+3)}{(s+1)(s+4)(s+5)}$		
b)	Sketch a root locus for the following transfer function as	12.	CO5
	V		
	G(S) = S(S+2) (S+4)		
	S (S+2) (S+4)	*	
c)	Determine whether the system is controllable or observable	12	C04
	$X = \begin{bmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ -4 & -3 & -2 \end{bmatrix} X + \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix} X$		
	y=[0 5 1]x		
			22

CRITERION: 2.2.2, 3.2.2.

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DI	EV:00	QUESTION PAPER CLASS TEST 2		EXM-04 A	
	SFM:-				
CLAS		TE PE	DATE:-9	24/10/201	8
	ECT: ATION:-		MARKS		
0.01	Attomn	t any 02		Marks	·co
a)	Explain wavefor	the working of full wave controlled circuit using Diac and Triac	with	04	CO3
la\					CO3
b) Draw and explain the operation of 3 phase Cycloconverter.c) Explain the need of neutralisation of Harmonics in inverters.			04	CO4	
0.0	2 Attam	pt any 01		Marks	СО
a)	Draw as	nd explain 3 phase bridge inverter with 120° conduction mode wit iate waveforms.	h	12	CO
b)	Draw as	nd explain 3 phase bridge inverter with 180° conduction mode wit iate waveforms.	h	12	CO



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RE\	V:00 QUESTION PAPER CLASS TEST	Γ2	EXM-04 A	
CLASS		SEM:	V	
	ECT:- PE	DATE:-	/ 10 / 201	.8
	TION:- 60 min.	MARKS:	:- 20	
0.01.4	Attempt any 02		Marks	СО
a)	Explain the working of full wave controlled circuit using Diac waveform.	and Triac with	04	CO3
	Draw and explain the operation of 3 phase Cycloconverter.		04	CO3
	Explain the need of neutralisation of Harmonics in inverters.		04	CO4
Q.02	2 Attempt any 01		Marks	СО
	Draw and explain 3 phase bridge inverter with 120° conduction appropriate waveforms.	n mode with	12	CO4
	Draw and explain 3 phase bridge inverter with 180° conduction appropriate waveforms.	n mode with	12	CO
			1	1



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	REV:00	QUESTION PAPER CLASS TEST 02	EXM	1-04 B	
CLA	SS:-TE		SEM:-V		
CO	URSE:-REE	S	DATE:- 25/10	/18	
DURATION:-60 min. MARKS:- 20					
Q.0	1 Attempt	any one: (08 Marks)		Marks	СО
a)	Draw the print in brief	Draw the power converter topology for DFIG in wind turbines and describe the working principle in brief		08	CO3
b)	Comparison of various fuel cells based on their applications, advantages and challenges			08	CO4
c) Draw and describe any one hybrid power system based on renewable energy sources and energy storage			08	CO6	
Q.0	2 Attempt a	any two: (12 Marks)			
a)	Explain ar turbine (V.	nd compare features of horizontal axis wind turbine (HAWT) and vertakWT)	tical axis wind	06	CO3
b)	Describe the	ne working principle of Fuel cell and its electrical characteristics	, 2 T	06	CO4
c)	Explain the application	e use of battery and ultra-capacitor as a hybrid energy storage system for	electric vehicle	06	CO6



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	REV:00	/:00 QUESTION PAPER CLASS TEST 02 EX		
CLA	ASS:-TE	SEM:-V		
CO	URSE: REE	S DATE:-		
DU	RATION:-	60 min. MARKS:- 20		
Q.0	1 Attemp	t any one: (08 Marks)	Marks	СО
a)	Draw the power converter topology for DFIG in wind turbines and describe the working principle in brief		08	CO3
b)		on of various fuel cells based on their applications, advantages and challenges	08	CO4
c) Draw and describe any one hybrid power system based on renewable energy sources and energy storage			08	CO6
Q.0	2 Attempt	any two: (12 Marks)		•
a)	Explain and compare features of horizontal axis wind turbine (HAWT) and vertical axis win turbine (VAWT)			CO3
b)	Describe the working principle of Fuel cell and its electrical characteristics			CO4
c)				CO6

CRITERION: 2.2.2,

FILE NO: P25.