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COLLEGE OF ENGINEERING & TECHNOLOGY,
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING **SET-A**
Cycle Test – II

Academic Year: 2021-2022 (EVEN SEM)
 Program offered: B.Tech
 Year / Sem : I/II
 Course Code and Title: 18EES101J/ BASIC ELECTRICAL
 AND ELECTRONICS ENGINEERING
 Maximum Marks: 50
 Part A Duration: 20 mins [8.00-8.20 AM]

Learning Assessment (CLA 1)			
Levels	Level of Thinking	Weightage Required (%)	Weightage Provided (%)
1	Remember	40%	36%
	Understand		
2	Apply	60%	64%
	Analyze		
	Create		

PART A (Answer all the questions)

10x1 MARK=10 MARKS

Q. No.	Questions [BUBBLE (ROUND) THE CORRECT ANSWER, DO ROUGH WORK IN MAIN ANSWER SHEET]	Refer ence to CO	Refere nce to PO	Bloom's Taxonom y	Mark s Allott ed	Marks Scored
1.	In series RC circuit, 18 V is measured across resistor and 15 V is measured across capacitor. The supply voltage to RC circuit is <input type="radio"/> 33 V <input type="radio"/> 43.46 V <input type="radio"/> 23.43 V <input type="radio"/> 12.22 V	CO2	1	Understand	1	
2.	In stationary magnetic field, what is the voltage induced across stationary conductor <input type="radio"/> High <input type="radio"/> Low <input type="radio"/> Zero <input type="radio"/> Depends on conductor position	CO2	1,2	Understand	1	
3.	For a pure capacitor, current <input type="radio"/> Leads voltage by an angle 90° <input type="radio"/> Lags voltage by an angle 90° <input type="radio"/> Leads voltage by an angle 45° <input type="radio"/> Lags voltage by an angle 45°	CO2	1,2	Remember	1	
4.	What is the value of form factor for pure sinusoidal waveform? <input type="radio"/> 2.22 <input type="radio"/> 3.33 <input type="radio"/> 1.11 <input type="radio"/> 4.44	CO2	1,2	Remember	1	
5.	The main purpose of starter in DC motor is <input type="radio"/> To limit high current at starting <input type="radio"/> To limit high current in running <input type="radio"/> To improve efficiency <input type="radio"/> To improve voltage regulation	CO2	1,2	Remember	1	

6.	Permanent Magnet Moving Coil instruments can be used for <input type="radio"/> DC measurement only <input type="radio"/> Sinusoidal AC measurement only <input type="radio"/> Any type of AC waveform measurement <input type="radio"/> Both AC and DC measurement	CO3	1,2	Remember	1	
7.	For the application of voltage regulation, Zener diode should be connected in <input type="radio"/> Forward bias <input type="radio"/> Reverse bias <input type="radio"/> Either forward or reverse bias <input type="radio"/> Fixed base bias	CO3	1,2	Understand	1	
8.	The maximum efficiency of half-wave rectifier is <input type="radio"/> 36 % <input type="radio"/> 40.6 % <input type="radio"/> 45.8 % <input type="radio"/> 81.2 %	CO3	1,2	Remember	1	
9.	Transistor can be used as closed switch when it is operated in <input type="radio"/> Active region <input type="radio"/> Saturation region <input type="radio"/> Cut-off region <input type="radio"/> Both active and cut-off region	CO3	1,2	Understand	1	
10.	Which of the following terminal does not belong to BJT? <input type="radio"/> Collector <input type="radio"/> Emitter <input type="radio"/> Base <input type="radio"/> Drain	CO3	1	Understand	1	

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Date: 03-06-2022

Academic Year: 2021-2022 (EVEN SEM)

SET-A

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Maximum Marks: 50

Duration: 1 hr 40 mins [8.00-9.40 AM]

PART B (Answer all the questions)

4x4 MARKS=16 MARKS

Q. No.	Questions	Refer ence to CO	Refer ence to PO	Blooms Taxonomy	Marks Allotte d	Marks Scored
11.	Draw a simple electric circuit and magnetic circuit. State differences between them.	CO2	1,2	Understan d	4	
12.	Derive EMF equation of transformer.	CO2	1	Apply	4	
13.	Explain the operation of fluorescent lamp with the help of neat circuit diagram.	CO3	1	Understan d	4	
14.	Analyze input and output characteristics for Common Emitter configuration of N-P-N transistor with neat plots.	CO3	1	Analyze	4	

PART C (Answer all the questions)

2x12 MARKS=24 MARKS

Q. No.	Questions	Refer ence to CO	Refer ence to PO	Blooms Taxonomy	Mark s Allott ed	Marks Scored
15. a	Explain working principle of DC motor. Provide necessary mathematical equations and circuit for the specified motors below. Draw its electrical and mechanical characteristics. (i) DC shunt motor (ii) DC series motor	CO2	1,2	Apply	12	
	(Or)					
15. b	An inductive coil takes 5 A and dissipates 800 W when connected to a supply of 230 V, 50 Hz. Calculate resistance, inductance, power factor, active and reactive power.	CO2	1,2	Apply	12	
16. a	Discuss the operation of half wave rectifier with necessary waveforms. Derive average, RMS values for output voltage waveform. Find ripple factor and efficiency.	CO3	1,2	Apply	12	
	(Or)					
16. b	What is clipper and clamper. Explain positive and negative clamper with a neat circuit diagram and necessary waveforms.	CO3	1,2	Apply	12	

Total Marks Scored:

Signature of the Faculty