R	A	2	1											

COLLEGE OF ENGINEERING & TECHNOLOGY,
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING SET-C
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 [12.30-12.50 PM]

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

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]	Reference to CO	Reference to PO	Bloom's Taxonomy	Marks Allotted	Marks Scored
1.	According to Faraday's law of Induction --------- o Emf is induced in a conductor when it cuts the magnetic flux o Emf is induced in a conductor when it moves parallel to the magnetic field o Emf is induced in a conductor when it moves perpendicular to the magnetic field o Emf is induced in a conductor when it is just entering a magnetic field	CO 2	1	Remember	1	
2.	Which is the following is true for a transformer? o Transformer is used to step down or up the AC voltages and currents o Transformer is used to step down or up the DC voltages and currents o Transformer converts DC to AC voltages o Transformer converts AC to DC voltages	CO 2	1,	Remember	1	
3.	A single phase induction Motor is -------- o Self-starting with high torque o Self-starting with zero torque o Self-starting with low torque o Not self-starting	CO 2	1	Understand	1	
4.	Starters are used in a DC motor because o Back emf of these motors is zero initially o These motors are not self-starting o These motors have high starting torque o It restricts the armature current as there is no back emf at starting	CO 2	1,2	Understand	1	

5.	The emf equation of DC generator is E=_____ ○ $\frac{\emptyset P}{ZNA}$ ○ $\frac{\emptyset P*60}{ZNA}$ ○ $\frac{\emptyset PA}{60NA}$ ○ $\frac{\emptyset PNZ}{60A}$	CO 2	1,2	Understand	1	
6.	Which among the following is the function of a PN-junction diode? ○ Condenser ○ Regulator ○ Amplifier ○ Rectifier	CO 3	1,2	Understand	1	
7.	The efficiency of a full wave rectifier is _____ ○ 50% ○ 46% ○ 70% ○ 81.2%	CO 3	1,2	Understand	1	
8.	Mixture preferred for filling around the earth electrode for effective earthing is ------- ○ paper-salt mixture ○ saw dust mixture ○ coal-salt mixture ○ lime –sand mixture.	CO 3	1,2	Understand	1	
9.	Which of the following is true for a common emitter biased BJT configuration? ○ High voltage and current gain ○ High voltage and low current gain ○ Low voltage and high current gain ○ Low voltage and high current gain	CO 3	1,2	Understand	1	
10.	--------of the following terminals does not belong to the MOSFET? ○ Drain ○ Gate ○ Base ○ Source	CO 3	1	Understand	1	

R	A	2	1											

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Cycle Test – II

Date : 03-06-2022
Academic Year: 2021-2022 (EVEN SEM) **SET-C**
Program offered: B.Tech
Year / Sem : I/II
Course Code and Title: 18EES101J/ BASIC ELECTRICAL AND ELECTRONICS ENGINEERING
Maximum Marks: 50
Duration: 1 hr 40 mins [12.30-2.10 PM]

PART B(Answer all the questions) **4x4 MARKS=16 MARKS**

Q. No.	Questions	Reference to CO	Reference to PO	Blooms Taxonomy	Marks Allotted	Marks Scored
11.	Derive the power and current equation for a pure capacitor circuit and also draw the phasor diagram for the same.	CO2	1,2	Apply	4	
12.	With neat diagram, explain the operation of unbiased positive clipper.	CO3	1	Apply	4	
13.	Discuss the working principle of transformer and application of core type transformer.	CO2	1	Understand	4	
14.	Design the wiring diagram for lighting 4 bulbs for a long corridor.	CO3	1,2,3	Understand	4	

PART C(Answer all the questions) **2x12 MARKS=24 MARKS**

Q. No.	Questions	Reference to CO	Reference to PO	Blooms Taxonomy	Marks Allotted	Marks Scored
15. a	Elucidate with a neat diagram the working and operating principle of three phase induction motor and also brief on the rotor types in three phase induction motor.	CO2	1	Apply	12	
	(OR)					
15. b	Derive the RMS value, Average value peak and form factor for the wave form for sinusoidal shown.	CO2	1,2,3	Analyse	12	
16. a	Explain the working of NPN bipolar junction transistor on CE configuration and also. Describe the input and output characteristics.	CO3	1,2	Apply	12	
16. b	Describe the working principle of attraction and repulsion type moving iron type instruments. Also explain the drawback of MC over MI instruments	CO3	1,2	Apply	12	

Total Marks Scored: **Signature of the Faculty**