Enroll. No. _____

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY
BE - SEMESTER–I • MID SEMESTER-II EXAMINATION – WINTER 2018
SUBJECT: BASIC ELECTRICAL ENGINEERING (3110005) (CE/EC)

DATE: 19-12-2018 **TIME:02:00 pm to 03:30 pm** **TOTAL MARKS:40**

Instructions: 1.Q. 1 is compulsory.
2. Figures to the right indicate full marks.
3. Assume suitable data if required.

Q.1	(a)	Explain 4 core cable with diagram?	[3]
	(b)	What is Synchronous speed? If poles are 2 and frequency is 50 Hz what is the value of synchronous speed?	[3]
	(c)	Explain charging & discharging process of Lead Acid Battery?	[4]
Q.2	(a)	What is power factor? Also state causes of low power factor. Disadvantages of low power factor. Explain methods power factor improvement.	[6]
	(b)	Explain How Rotating Magnetic Field is produce in 3-phase Induction Motor?	[5]
	(c)	Derive the E.M.F equation of 1-phase Transformer.	[4]

OR

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OR

Q.2	(a)	Describe the Auto Transformer and Derive the equation for copper saving in it.	[6]
	(b)	Explain construction & working of Synchronous Generator.	[4]
	(c)	Why MCB & ELCB are provided in Electrical installation? Explain ELCB in detail?.	[5]
Q.3	(a)	Explain construction & working of 3-phase Induction Motor.	[6]
	(b)	Explain Transformer on No load and Load with Resistive load, Inductive load and capacitive load with help of vector diagram.	[5]
	(c)	Calculate Residential Energy bill for 30 days with Flat rate tariff 5 Rs per unit.	[4]

OR

Q.3	(a)	Why Earthing is required in electrical installation? List the different types of earthing and explain plate earthing in detail?	[6]
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	(c)	Explain B-H curve with diagram & its relevance?	[4]

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