Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: S.Y.B.Sc Bachelor of science	**School of Science**	**Department: Physics**
Course Code: PHS 209	**Course Title: Electrical circuits & network skills**	**Semester : III**
Day : Monday **Date : 21.12.2020**	**End Semester Examination**	**Time : 2 Hrs.** **Max Marks : 50**

Instructions: 1) All Questions are compulsory.
2) Use of non-programmable calculator is allowed
3) Figures to right indicates full marks

		Marks	Bloom's Level	CO
Q.1	**Answer the following (any Two)**–			
a)	What is series circuit? State advantages of series circuit.	08	L1	CO1
b)	Explain the variation of instantaneous voltage and current in pure capacitive circuit with neat diagram.	08	L1	CO1
c)	i) A 100W, 250V lamp is connected in series with 100W, 200V lamp across 250V supply. Calculate circuit current and voltage across each lamp.	04	L1	CO1
	ii) If the resistance of a circuit having 12V source is increased by 4Ω the current drops by 0.5A.What is the original resistance of the circuit?	04	L1	CO1
Q.2	**Answer the following (any two) –**			
a)	i) Describe rules for drawing an electrical circuit.	04	L2	CO2
	ii) Discuss the conventions while drawing a ladder diagram.	04	L2	CO2
b)	Explain DC generator with neat labeled diagram.	08	L2	CO2
c)	What is transformer? Show that according to construction there are two types of transformer.	08	L3	CO2
Q.3	**Answer the following (any two) –**			
a)	Explain any two protective equipment in detail.	09	L2	CO3
b)	What is diode? Explain how it is used to produce a DC signal.	9	L3	CO3
c)	Illustrate star and delta connection in detail.	9	L3	CO3

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