0501E965 Candidate's Seat No :_____

B.Sc. Sem-1 Examination

DSC-C-ELE-111 T

Electronics

Time : 2-00 Hours] **January-2024** **[Max. Marks : 50**

Instructions : (1) All questions carry equal marks.
(2) All questions are compulsory.
(3) Symbol used have their usual meaning.

1 What is Resistor? Mention its types & discuss wire-wound Resistor in detail. Also discuss about the colour code for carbon resistor with proper example. 10

OR

1 What is capacitance? Mention its types & discuss about variable capacitor. Also derive the equation for energy stored in capacitor. 10

2 (a) AB $34.5C_{(16)}$ = ... $_{(2)}$ = ... $_{(10)}$ 10
(b) $4378.34_{(10)}$ = ... $_{(2)}$ = ... $_{(16)}$

OR

2 Explain about binary to Gray code & Gray to binary code with proper circuit diagram. 10

3 Draw the symbol of P-N Junction diode. Also discuss its construction, working, V/I characteristics, parameters & application in detail. 10

OR

3 What is clippers? Discuss about different clipper circuits in detail. 10

4 Draw the symbol of PNP & NPN transistor. Explain how transistor works as an amplifier? Also discuss its CB configuration. 10

OR

4 Discuss common Emittor circuit with its characteristics. Also discuss dc load line. 10

5 Attempt any 10 out of 12 : 10
(1) Give colour code for 4.7 kΩ ± 5% carbon resistor.
(2) What is the unit for inductor?
(3) Two capacitors C_1 & C_2 are connected in series. What is its equivalent capacitance?
(4) Base of Binary number system is .....
(5) $\overline{A+B}$ = ...
(6) A.1 = ...
(7) Define : Clamper.
(8) Resistance of PN Junction diode in Reverse bias is low or high?
(9) V/I characterstic of PN Junction diode is a straight line? Yes or No.
(10) Give the full form of B.J.T.
(11) In NPN transistor what is the meaning of P.
(12) In which configuration transistor works as an amplifier?

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