

## 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 )  $AB_{34.5C_{(16)}} = \dots\dots\dots (2) = \dots\dots\dots (10)$  10  
 ( b )  $4378.34_{(10)} = \dots\dots\dots (2) = \dots\dots\dots (16)$

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 Emitter circuit with its characteristics. Also discuss dc load line. 10

- 5 Attempt any 10 out of 12 : 10

- (1) Give colour code for  $4.7 \text{ k}\Omega \pm 5\%$  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)  $\overline{A+B} = \dots\dots\dots$
- (6)  $A.1 = \dots\dots\dots$
- (7) Define : Clamper.
- (8) Resistance of PN Junction diode in Reverse bias is low or high?
- (9) V/I characteristic 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?