* A C - 1 7 2 0 *

AC-1720

B. Sc. (IT) (Sem. - II) Examination

April / May – 2015

Electronics & Digital Communication

Time : 3 Hours] [Total Marks : 70

Instruction :

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ B. Sc. (IT) (Sem. - II)

Name of the Subject :

☛ ELECTRONICS & DIGITAL COMMUNICATION

☛ Subject Code No. : 1 7 2 0 ☛ Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

Q.1 **(18)**

Q.1 A) Answer the following short questions in one or two sentences. (Any Six) **(06)**

1) How many valance electrons in intrinsic semiconductor?
2) What is break over voltage in SCR?
3) What is impedance?
4) Write difference between variable resistor and Light dependant resistor.
5) Explain radiation transmission lose.
6) Write color band for 38700 ohm +/- 5% resistance value.
7) Calculate resistance values from color code of the resistance
   a. green, blue, orange, silver

Q.1 B) Answer the following questions in detail. (Any Two) **(12)**

1) a) Write short note on half-wave rectifier.
   b) Write short note on Transmitter.
2) Write short note on extrinsic semiconductor.
3) Explain Bipolar Junction Transistor (BJT) amplifier application with the help of necessary circuit diagram and graphs.

Q.2 **(18)**

Q.2 A) Answer the following questions in detail. (Any Six) **(06)**

1) Write Ohms law
2) What is full form of FSK?
3) List out active and passive electronic components.
4) _____is measurement unit of resistor.
5) Write full form of IGFET.
6) _____diode use in voltage regulator applications.
7) What is resonance frequency?

Q.2 B) Answer the following questions in detail. (Any Two) **(12)**

1) Write short note on centre taped full wave rectifier.
2) Describe different type of resistors. Explain color coding for resistance value with the help of color code table.
3) Write short note on serial R-L and R-C circuit.

Q.3 **(18)**

Q.3 A) Answer the following questions in detail. **(06)**

1) Write full form of SCR
2) Explain Difference between conductor and insulator.
3) List out different applications of LED.
4) _____are minority charge carrier in P-type semiconductor.
5) List out different transmission losses.
6) List out different advantages of JFET

Q.3 B) Answer the following questions in detail. (Any Two) **(12)**

1) a) Write short note on Kirchhoff's Voltage low (KCL).
   b) Write short note on Theveniens theorem.
2) Write short note on Amplitude modulation.
3) Explain internal construction of DE-MOSFET and its operation with the help of characteristics.

Q.4 **(16)**

Q.4 find out true or false from given statements **(04)**

1) JFET is Unipolar device.
2) SCR three terminal names are Anode, Cathode and Gate.
3) Watt is the measurement unit of power.
4) TESLA is the unit of current.

Q.4 Answer the following questions in detail. (Any Two) **(12)**

1) Explain internal construction of P-N junction diode. Draw diode output characteristic graph and explain reverse biased operation.
2) Write short note on ASK and FSK.
3) Write short note on filter.