Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: Jan.2023
Faculty: Science and Technology

Program:BSc **Semester: I** **SET: B**
Program (Specific): BSc General **Course Type: CC**
Class: FYBSc **Max.Marks: 35**
Name of the Course:Electronics Devices and Circuits
Course Code: 22_ EL-112 **Time: 2Hr**
Paper: II

Instructions to the candidate:

1) *There are 4 sections in the question paper. Write each section on separate page.*
2) *All Sections are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Draw a well labelled diagram wherever necessary.*

SECTION: A

Q1) Answer the following **5**

1)Give circuit symbol of Zener diode, P-N diode

2)Give circuit symbol of LED ,LDR

3)Give circuit symbol of photodiode ,Photo transistor

4)Give circuit symbol of P-N-P and N-P-N transistor

5)Give circuit symbol of FET

Q2) Answer the following (Attempt any 4) **4**

1)Explain the circuit diagram of CE configuration of BJT

2)Define Switching transistor

3)Draw the circuit diagram of Transistor as a switch

4)Draw practicle circuit of transistor as amplifier

5)Compare Half wave and and Full wave rectifier any two points

6) State and explain operating principle of P-N junction diode in forward bias mode

SECTION: B

Q3) Answer the following(Attempt any 4) 8

1) State any two applications of LDR
2)Define Breakdown voltage of a P-N diode
3) Define barrier potential in P-N diode
4)Draw I-V characteristic of P-N junction rectifier diode in reverse bias mode
5)Draw circuit diagram to study CB characteristic of transistor
6) Give two applications of optocoupler

SECTION: C

Q4) Answer the following(Attempt any 2) 8

1)Draw circuit diagram of Bridge rectifier

2)Draw circuit of FET as voltage variable resistance

3)Explain use of diode in mobile charger

4)State any two Regulator IC in 78xx and 79xx series

SECTION: D

Q5) Answer the following (Attempt any 2) 10

1)Explain Construction and working of a photodiode

2)Explain with neat circuit diagram working principle of optocoupler.

3)Compare BJT,MOSFET

4)Explain with diagram the effect of forward and reverse bias on barrier potential of rectifying diode