

Faculty of Science**B.Sc (Electronics) I-Year, CBCS-II Semester Backlog Examinations –January, 2021****PAPER: ELECTRONIC DEVICES**

Time: 2 Hours

Max Marks: 80

I. Answer any **Four** of the following questions (4x20=80 Marks)

1. Draw a circuit to study the zener diode characteristics. Mention its applications.
2. Explain working and uses of a tunnel diode.
3. With neat circuit diagram explain input and output characteristics of a PNP transistor. Explain cutoff, active and saturation regions.
4. Using the low frequency small signal model for a CE transistor, explain the physical meaning of the terms used. Draw the hybrid π – equivalent of a transistor.
5. Sketch and explain the cross-section of an N-channel enhancement and depletion MOSFET. Draw the static drain characteristic and transfer characteristic curves for N-channel MOSFET.
6. Explain the operation of a UJT as a switch. Describe UJT relaxation oscillator and deduce expression for time period of oscillation.
7. Describe the construction and working of SCR. What do you infer from the characteristics?
8. Explain the characteristic of photo transistor. Mention its applications.

Faculty of Science**B. Sc (Electronics) I-Year, CBCS –II Semester Regular Examinations –January, 2021****PAPER: Electronic Devices**

Time: 2 Hours

Max Marks: 80

I. Answer any Four of the following questions (4x20=80 Marks)

1. Explain V-I characteristics of Zener diode. How it acts as voltage regulator?
2. Explain the construction and working of varactor diode. Mention its applications.
3. Explain the CB configuration of transistor. Describe its output characteristics.
4. Draw the Common Emitter (CE) and Common Collector (CC) hybrid equivalent circuits and write the equations.
5. Explain the construction and working of enhancement and depletion modes of MOSFET.
6. Describe the construction of UJT. Explain its function as relaxation oscillator.
7. Describe the construction and working of Silicon Controlled Rectifier (SCR).
8. Explain the construction and working of Light Dependent Resistor (LDR) along with its characteristics.
