

QP Code: D 122565		Total Pages: 1	Name:
			Register No.
SECOND SEMESTER (CUFYUGP) DEGREE EXAMINATION, APRIL 2025			
PHYSICS			
PHY2CJ101/APH2CJ101 : ELECTRONICS I			
2024 Admission onwards			
Maximum Time:2 Hours		Maximum Marks:70	
Section A			
All Questions can be answered. Each Question carries 3 marks (Ceiling: 24 Marks)			
1	What do you mean by break down voltage?		
2	What are the benefits of extrinsic semiconductors?		
3	What is a LED?		
4	Define ripple factor and what is its value in case of full wave rectifier without filter?		
5	What is a photodiode?		
6	Convert the decimal number 17 to the hexa decimal system.		
7	Which do you mean by knee voltage?		
8	What do you mean by leakage current in a transistor?		
9	What do you mean by hexa decimal number system?		
10	Write a short note on Analog and Digital Signals.		
Section B			
All Questions can be answered. Each Question carries 6 marks (Ceiling: 36 Marks)			
11	Explain the working of a full-wave rectifier circuit using two diodes ?		
12	Briefly explain the working of a Zener diode ?		
13	What do you mean by BCD Briefly explain its significance.		
14	Explain the Common Emitter Characteristics of a NPN transistor?		
15	A half-wave rectifier uses a transformer of a turn ratio 4:1. The load resistance is 700 Ω . If the primary voltage in rms is 240 V, find the DC output voltage and peak inverse voltage ?		
16	Calculate the peak voltage across each half of a center-tapped transformer used in a full wave rectifier that has an average output voltage of 100 V ?		
17	The collector leakage current in a transistor is 200 μA in CE arrangement. If the same transistor is in CB arrangement, what will be the leakage current? ($\beta=100$)		
18	What is DC load line? How will you draw the DC load line in the output characteristics of a transistor?		
Section C			
Answer any ONE. Each Question carries 10 marks (1x10=10 Marks)			
19	Explain the energy band description of semiconductor & effect of temperature on semiconductor.		
20	Explain the working of transistor as an amplifier?		