LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.C.A. DEGREE EXAMINATION – **COMPUTER APPLICATIONS**

THIRD SEMESTER – **NOVEMBER 2022**

UPH 3403 – APPLIED ELECTRONICS

Date: 01-12-2022 Dept. No. Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION A				
Answer ALL the Questions				
1.	**Answer the following**			**(5 x 1 = 5)**
a)	Write down two examples of a semiconductor.		K1	CO1
b)	What is a photodiode?		K1	CO1
c)	Sketch the pin diagram of IC 741.		K1	CO1
d)	List the applications of IC 555.		K1	CO1
e)	What is RAM?		K1	CO1
2.	**Fill in the blanks**			**(5 x 1 = 5)**
a)	Intrinsic semiconductor is called _____.		K1	CO1
b)	Op - Amp is used to _____.		K1	CO1
c)	The Zener diode is _____diode.		K1	CO1
d)	IC 555 pin 2 is _____.		K1	CO1
e)	Magnetic tape is also known as _____.		K1	CO1
3.	**State True or False**			**(5 x 1 = 5)**
a)	Rubber is an insulator.		K2	CO1
b)	LEDs consumes more electricity.		K2	CO1
c)	There are two outputs in an Op- Amp.		K2	CO1
d)	IC 555 is used to generate pulse wave.		K2	CO1
e)	ROM is a permanent memory of a computer.		K2	CO1
4.	**Match the following**			**(5 x 1 = 5)**
a)	Compound semiconductor	invert the input	K2	CO1
b)	Photo Diode	Pulse generation	K2	CO1
c)	Inverting Op-Amp	GaAs	K2	CO1
d)	IC 555	memory storage	K2	CO1
e)	Compact disc	photoelectric effect.	K2	CO1
SECTION B				
Answer any TWO of the following in 100 words				**(2 x 10 = 20)**

5.	a) What is biasing? (2) b) Explain the response of a p-n junction diode to forward and reverse biases. (8)	K3	CO2
6.	With neat sketch explain the parts of a hard disk.	K3	CO2
7.	Describe the internal block diagram of IC 555 with neat diagram.	K3	CO2
8.	Derive the expression for the voltage gain of an inverting and a non-inverting Op-Amp.	K3	CO2
	SECTION C		
Answer any TWO of the following in 100 words		**(2 x 10 = 20)**	
9.	Differentiate between RAM and ROM.	K4	CO3
10.	With a neat circuit diagram, illustrate the working IC 555 as a Schmitt trigger.	K4	CO3
11.	Describe the working principle, advantages and uses of LED.	K4	CO3
12.	a) List the characteristic of an Ideal Op-Amp. (4) b) Describe the working IC741 and its applications. (6)	K4	CO3
	SECTION D		
Answer any ONE of the following in 250 words		**(1 x 20 = 20)**	
13.	With suitable circuit diagrams describe the working of IC741 as summing and difference amplifiers.	K5	CO4
14.	Explain the working principle, characteristics and applications of Photo diode.	K5	CO4
	SECTION E		
Answer any ONE of the following in 250 words		**(1 x 20 = 20)**	
15.	With neat diagram explain working principle of astable multivibratior using IC 555	K6	CO5
16.	Describe the semiconductor memory and its types & characteristics.	K6	CO5

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