

PH-345:Electronics(2013 Pattern)

Item Text	Option Text 1	Option Text 2	Option Text 3	Option Text 4
A light emitting diode is	Heavily doped	Lightly doped	Intrinsic semiconductor	Zener diode
Which of the following materials can be used to produce infrared LED?	Lead sulphide	gallium arsenide	Cadmium sulphide	Silicon
What should be the band gap of the semiconductors to be used as LED?	0.5 eV	1 eV	1.8 eV	1.5 eV
Biasing used in the LED.....	Forward bias	Reverse bias	Forward bias than Reverse bias	No biasing required
Which process of the Electron-hole pair is responsible for emitting of light?	Generation	Movement	Recombinations	Diffusion
What is the bandwidth of the emitted light in an LED?	1 nm to 10 nm	10 nm to 50 nm	50 nm to 100 nm	100 nm to 500 nm
Which of the following is not a characteristic of LED?	Fast action	High Warm-up time	Low operational voltage	Long life
The colour of light emitted by a LED depends on	Its forward bias	Its reverse bias	The type of semiconductor material Used	The amount of forward current
Bulk type photoconductive cells have	Wide spectral response	Small response time	High cost	High dark-to-light resistance ratio
A P-N junction photodiode is	Operated in forward direction	Encased in an opaque package	A very fast photo detector	Dependent on thermally-generated minority carriers
Silicon is invariably used in the manufacture of junction photodiodes because	More electron-hole pairs are generated in it	Its thermally-generated minority current is extremely small	It is more rugged than Ge	It needs less reverse bias

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A PIN photodiode has ultrafast response primarily due to	A PIN photodiode has ultrafast response primarily due to	The presence of middle I-layer	Higher electrical conductivity of Silicon	Its wide spectral response
Photo diode is used for the detection of	Photo diode is used for the detection of	Visible light	No light	Both visible and invisible light
LEDs are commonly fabricated from gallium compound because they	Are cheap	Are easily available	Emit more light	Emit more heat
As Forward current of LED increase, light emission of LED	Will increase	Will decrease	Become zero	Become infinite
The LED	is usually made from silicon	Uses a reverse biased junction	Gives light output increases with the increase in temperature	Depends on the recombination of holes and electrons
The LED and photo transistor is equivalent to	Thermocouple	Optocoupler	FET	Regulator
Optocoupler is otherwise known as	Laser	Photodiode	Optoisolator	Photoconductive cell
Varactor diode conducts when it is	Forward bias	Reverse bias	Unbiased	Forward and reverse bias
Which is name for varactor diode ?	Voltage Variable capacitor	Varicap	Epicap	resistor
Varactor diode is a type of diode whose internal capacitance varies with respect	Reverse voltage	Forward voltage	Unbiased	Forward and reverse bias
In varactor diodes, as the reverse-bias potential increases, the width of the depletion region _____, which in turn _____ the transition capacitance	increases, increases	decreases, reduces	increases, reduces	decreases, increases