Camlin Page 1 Cr. H Raisoni College of Engineering and Hanagement, Pune F.Y B. Tech (Engineering) FIRST TERM 2020-21 CAE-II (2020 Pattern) Department - Information Technology (IT) Term Certion - Term I Date of Emanmation - 06/04/2021 Culject Name/Code - Engineering Phylice Poll NO - C70 Name-Swayam Pramod Torode Poll No- C70 a) Elaborate the different charactoristics of LASER. LASER means light Amplification by the Stimulated Ernission of Radiation. <u>Answor:</u> The different characteristies of LASER: (i) The law light is monochromatic, directional, and coherent.

The light emitted from law is monochromatic, that is, its of one wavelingth (color). In contrast, ordinary white light is a combination of many different wavelengths (colors). (ii) leasur cuit light that is highly directional (ii) Tu light from the leaver is-coherent, which means the wavelengths of the laser light are in phase in space and time. Working:

When the PN junction is forward biard with large applied voltage, the electrone and holes are injected into junction region in considerable concentration.

The region around the junction contains a large amount of e-in the conduction band and a large amount of holes in the valence land.

When the forward - bialed voltage is increased, more and more light photons are emitted and the light production instantly becomes stronger.

After gaining enough strength, it give out the leasur beam of wavelength 8400 A. The wavelength of leasur is given by

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Eq in J.

d.) i) temporal columna: 4e the measure of the average corondation between the value of a waves and itself delayed by T, at any pairs of times.

In otherwords, it characterizes how well a wave can interforme with itself at a different time.

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	ii) Spatial coherence: 41 describes the coordation between wows at different points in space, either lateral or lengitudinal. At also describes the correlation between wows observed at different moments in time.						
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	iii) Ernsten	Conflicio	ent:				
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<del>1</del> a)	Draw eurgy lurl diagram for PN junction diode in forward bialed modelabel it properly.						
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1)	
b)	Brief about OLED and its applications.
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	organic semiconductor between two eletrodes light is generated
	OLEDS - Organic-light-Emitting diodes. OLEDS arettui-flin Organic Semiconductor between two electrodes. Light is generated when holes and electrone injected at electrodes recombine.
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	Applications of OLED:
1.	High-end television Rustem.
2.	High-end television Rystem. Computer monitor.
1	Audroid Phones.
4.	Digital Cameras
. b ·	Media Playou
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