

PHYSICS

BOOKS - JEEVITH PUBLICATIONS PHYSICS (KANNADA ENGLISH)

ELECTROMAGNETIC WAVES

One Mark Questions With Answers

1. What field is generated by a time - varying

electric field?



2. Say whether time varying magnetic field generates electric field or not.`



3. Who propounded the thery of electromagnetic waves ?



4. What led to the conclusion that light is an electromagnetic wave ?



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5. Give the mathematical form of Ampere's circuital law.



6. Whrite the expression for displacement current or Maxwell's displacement current.



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7. Write the corrected form of Ampere's circuital law.



8. What is the sourec of eletromagnetic waves

?



9. Who disproved the existence of luminiferous, all pervading, highly elastic and inertial ether?



10. Express velocity of electromagnetic wave in a material medium in terms of μ and ε .



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11. Give the expression for velocity of elctromagnetic waves in vacuum.



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12. Name a polarised electromagnetic wave.

13. Give the expression for the exnergy density of electric field.



14. Give the expression for the energy density of magnetic field.



15. Say whether electromagnectic waves transfer momentum and energy or not.



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16. What is meant by radiation pressure?



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17. If 'U' is the total energy transferred to the surface by an electromagnetic them relate

total momentum (p) of electriomagnetic delivered to the surface in terms 'U'.

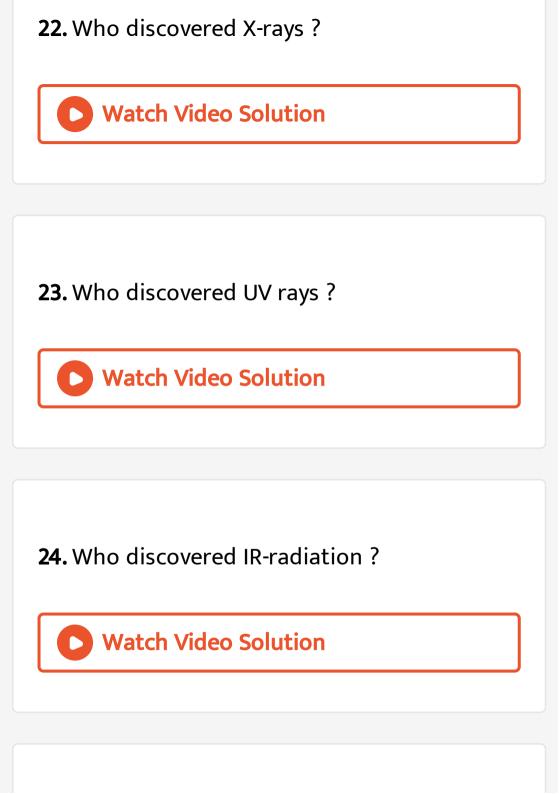


18. Why is that we do not feel the momeatum of light and radiaat heat from the sun?



19. Name the American scleatists who succeeded in measuring the radiation

pressure of visibli light (1903). **Watch Video Solution 20.** What is an electromagnetic wave? **Watch Video Solution 21.** Who discovered γ radiation ? **Watch Video Solution**



25. What are microwaves ?

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26. What is the wavelength range of γ rays ?



27. What is the wavelength range of X-rays?



28. What is the wavelength rnge of UV rays?

29. Give the frequency range of IR rays.

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30. What is the wavelengt5h range of visible light?



31. What is the frequency range of radiowavs?



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32. Given below are some famous numbers associated with electromagnetic radiations in different contexts in physics. State the parts of the eletromagnetic spectrum to which each belongs.

21 cm (Wavelength emitted by atomic bydrogen in interstellar space)



33. Given below are some famous numbers associated with electromagnetic radiations in different contexts in physics. State the parts of the electromagnetic spectrum to which each belongs.

1057 MHz (frequency of radiation arising from the two close energy levels in hydrogen known as Lamb shift).



34. A radio can tune into any station in the 7.5 MHz to 12 MHz band. What is the corresponding wavelenth band?



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35. About 5% of the power of a 100W bulb is converted to visible radiation. What is the average intensity of visible adiation.

At a distance 1 m from the bulb?



36. About 5% of the power of a 100W bulb is converted to visible radiation. What is the average intensity of visible adiation.

At a distance 10m?

