PHYSICS

BOOKS - PUNJAB BOARD PREVIOUS YEAR PAPERS

Gauss. Theorem

Exercise

1. What is the unit of solid angle ?

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2. Define Gauss's theorem in electrostatics.

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3. Write down a relation between electric flux and electric field intensity.

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4. State Gauss's theorem.How Coulomb's law can be derived from it ?

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5. Using Gauss's law, determine the electric field intensity due to a long thin wire of uniform charge density.

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6. What is electriG flux ? Explain how the electric flux through a surface is related to electric field intensity, when the surface is heldinside the electric field.

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7. What is the use of Gaussian surface in electrostatics ?

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8. What is the importance of Gauss'theorem in electrostatics ?

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9. What do you mean by electric flux ? Write its Sl-unit.

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10. State Gauss's theorem with the help of diagram, derive an expression for the electric field intensity due to uniformly charged thin spherical shell at a point inside

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11. State Gauss's theorem with the help of diagram, derive an expression for the electric field intensity due to uniformly charged thin spherical shell at a point outside

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14. Using Gauss's law, determine the electric field intensity due to a long thin wire of uniform charge density.

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16. State Gauss's theorem with the help of diagram, derive an expression for the electric field intensity due to uniformly charged thin spherical shell at a point outside

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17. Define electric field intensity and find an expression for it at a point due to a thin infinite long sheet of charge.

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18. Using Gauss's law, determine the electric field intensity due to a long thin wire of uniform charge density.

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19. Using Gauss's law, determine the electric field intensity due to a long thin wire of uniform charge density.

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20. Using Gauss's law, determine the electric field intensity due to a long thin wire of uniform charge density.

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21. State Gauss.,s theorem. Derive an expression for eletric field intensity at a point to an infinite plane sheet of charges.

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38. State Gauss.s theorem in electrostatics. Using it, derive an experssion for electric field intensity at a point due to infinite sheet of charge. How does the electric field change for a thick sheet of charge?

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39. An electric dipole Consisting of charge $5\mu c1$ and $-5\mu C$ and length 10 cm. What is the total electric flux through the box?

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43. Give the statement of Gauss theorem.

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44. State Gauss.,s theorem. Derive an expression for eletric field intensity at a point to an infinite plane sheet of charges.

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45. Using Gauss's law, determine the electric field intensity due to a long thin wire of uniform charge density.

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