PHYSICS

BOOKS - VGS PUBLICATION-BRILLIANT

MODEL PAPER 5

Section A

1. What is Hypermetropia ? How can it be corrected ?

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2. Define magnetic declination.

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3. What are the units of magnetic moment and magnetic induction?

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4. Distinguish between ammeter and voltmeter,

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5. What is the phenomenon involved in the working of a transformer?

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6. What is the de Broglie wavelength associated with an electron, accelerated through a potential difference of 100 volts ?

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7. Give any one use of infrared rays.

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8. Write Einstein's photoelectric equation.

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9. Draw the circuit symbols for p-n-p and n-p-n transistors..

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10. Define modulation. Why is it necessary?

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Section B

1. Explain the formation of a rainbow.

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2. Does the principle of conservation of energy hold for interference and diffraction phenomena ? Explain briefly.

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3. State and explain Coulomb's inverse square law in electricity.

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4. Derive an expression for the capacitance of a parallel plate capacitor.

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5. State and explain Biot-Savart law.

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6. Describe the ways in which Eddy currents are used to advantage.

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7. What are the limitations of Bohr's theory of hydrogen atom?

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8. What is rectification ? Explain the working of a fullwave rectifiers.

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Section C

1. How are stationary waves formed in closed pipes ? Explain the various modes of vibrations and obtain the relations for the frequencies.'

A closed organ pipe 70 cm long is sounded. If

the velocity of sound is 331.m/s, what is the fundamental frequency of vibration of the air column ?

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2. State the working principle of Potentiometer. Explain with the help of a circuit diagram. How the emf of two primary cells are compared by using the Potentiometer?

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3. Explain the principle and working of a nuclear reactor with the help of a labelled diagram.

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