

**AIMSTUTORIAL.IN**  
**GUESS PAPER - 1**  
**INTERMEDIATE II YEAR**  
**PHYSICS - II**

**Time: 3hours**

**Max.Marks:60**

**INSTRUCTIONS:**

- 1. Q.Nos: 1 - 10 are Very Short Answer Type. Answer them in about 30 words each. Each question carries 2 marks.**
- 2. Q. Nos: 11 - 18 are Short Answer Type. Answer them in 75 - 100 words each. Each question carries 4 marks.**
- 3. Q.Nos: 19 - 21 are Long Answer Type. Answer them in about 300 words each. Each question carries 8 marks.**

I. Answer All Questions: (Very Short Answer Type) [10 × 2 = 20]

1. What is myopia? How can it be corrected?
2. Distinguish between ammeter and voltmeter.
3. What are the units of magnetic moment, magnetic induction and magnetic field?
4. Define magnetic inclination or angle of dip.
5. Why is manganin, used for making standard resistors?
6. What type of transformer is used in a 6V bed lamp?
7. Give any one use of infrared rays.
8. What is "work function"?
9. What is an n-type semiconductor? What are the majority and minority charge carriers in it?
10. What are the basic blocks of a communication system.

II. Answer any Six : (Short Answer Type) [6 × 4 = 24]

11. Explain the formation of mirage?
12. Explain Doppler effects in light. Distinguish between red shift and blue shift.
13. State and explain Coulomb's inverse law in electricity.
14. Derive an expression for the electric potential due to a point charge.
15. State and explain Biot - Savart law.
16. Compare the properties of para, Dia and Ferromagnetic substances.
17. What are the limitations of Bohr's theory of hydrogen atom?
18. Describe how a semiconductor diode is used as a half wave rectifier?

III. Answer any Two : (Long Answer Type) [2 × 8 = 16]

19. Explain the formation of stationary waves in a stretched strings and hence deduce the laws of transverse waves in stretched strings.
20. State Kirchhoff's law for an electrical net work. using these laws deduce the condition for balance in a wheatstone's bridge.
21. What is radioactivity? State the law of radioactive decay. Show that radioactive decay is exponential in nature.

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