

SAMPLE PAPER ENTRY TEST
PHYSICS – CLASS 1st YEAR

Time – 1 Hour

Total Marks - 50

Instructions

- All questions are compulsory.
 - No marks will be awarded in case of cutting, over writing or use of lead pencil.
 - Use of Calculator is allowed.
 - Failing to abide by the following instructions will result in disqualification of the candidates:
 - Roll No will be written on first page of the answer sheet.
 - No identification marks e.g. drawings, signatures etc. will be marked on answer sheet.
 - Examination center will not be written on the answer sheet.
 - All questions will be attempted on the answer sheet only.
 - Paper will be attempted with blue ink. Black marker may be used for heading only.
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Q1. Encircle the correct option only. Each part carries one mark. (5)

- i. The particle which is not affected by electric and magnetic field is called:
a. α -particle b. β -particle c. γ -particle d. Electron
- ii. The magnetic field pattern of a solenoid resembles with the field pattern of a:
a. Long wire b. U-shaped magnet c. Point magnet d. Bar magnet
- iii. If we increase the temperature of a conductor, its resistance will:
a. Increase b. Decrease c. Remain constant d. None of them
- iv. If an image is three times of its object, then the magnification is:
a. 2 b. 4 c. 3 d. 6
- v. AND gate can be formed by using two:
a. NOT gates b. OR gates c. NOR gates d. NAND gates

Q2. Fill in the blanks. Each part carries one mark. (5)

- i. The restoring force is numerically equal to _____ but opposite in direction.
- ii. Sound cannot travel through _____
- iii. We see because the eye forms image on the _____ at the back of the eyeball.
- iv. _____ is a big unit of capacitance of a capacitor.

v. 1GB = _____ megabytes.

Q3. Answer the following conceptual questions. All questions carry equal marks. (10)

i. Diamond cannot conduct electricity but conduct heat. Why?

ii. Why the voice of women is shrill than that of men?

Q4. Solve the following Numerical problems. All questions carry equal marks. (15)

i. The charge of how many electrons would be equal to $10 \mu\text{C}$?

ii. Length of a copper wire is 1 m and its diameter is 2 mm. Find its resistance?

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- iii. In 15 days, the activity of a sample of radioactive bismuth decrease to one-eighth of its original activity. Calculate its half - life?

Q5. Answer the following questions. All questions carry equal marks. (10)

- i. How stationary waves are generated?

- ii. What is meant by critical angle?

- iii. State Faraday's law of electromagnetic Induction?

iv. What do you understand by half life of radioactive elements?

v. Define electromotive force?

Q6. Define electronics? What is difference between analogue and digital quantities? Give their examples. (5)
