

Biyani Girls College
Model Test Paper-2015-16
Elementary Physics

Time- 3 Hours**Maximum Marks- 100**

1. Each question carries 1 mark-

- i. What is shift register?
- ii. What is digital counter?
- iii. Define combinational circuit.
- iv. What is NAND gate
- v. What is NOR gate
- vi. State De'Morgan's Law
- vii. What is the Dimension of magnetic field?
- viii. What is magnetic flux?
- ix. What is the quantum of charge?
- x. What is electric line of force?

2. Write the answer of quantum (each carrying 4 marks)-

- i. What is a D – Flip Flux
- ii. What is priority encoder?
- iii. What is meant by a magnitude comparator?
- iv. Define Boolean algebra.
- v. What is Curie temperature?

3. Write the answer of question (each carrying 12 marks)-

- i. What do you mean by edge triggering? How can achieve positive and negative edge triggering.
- ii. Construct the MOD-6 counter using J-K flip-flop.
- iii. Design 32 to 1 multi-laxer using 8 to 1 multiplexer IC.
- iv. State Lenz's law. Explain with the help of example how this law enables one to determine the direction of induced current in a coil.