

Roll. No.....

1211026/1212026

Diploma 2nd Semester Examination

Jan.2014

Subject – Basics of Electrical and Electronics Engineering

Subject Code: EEL-002

Time Allowed: 03 hours.

Maximum Marks: 100

Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

Note: Question No. 1 is Compulsory and attempt two questions from each section. All questions carry equal marks.

1. Explain any four from the Followings:
 - a. Ohm's Law and its application.
 - b. Primary & Secondary Cells.
 - c. Applications of Electronics.
 - d. Elementary block diagram of Steam Power Station

SECTION-A

- 2 (a) Define Resistance. What is Law of Resistance? Explain the effect of temperature on resistance on the followings
 - i) Pure Metals
 - ii) Alloys
 - iii) Semiconductors, insulators and electrolytes (14)
- (b) Define Electric Potential and Potential Difference (6)
- 3 (a) Explain Kirchoff's Current Law and Kirchoff's Voltage law with suitable examples. (10)
- (b) Explain Mesh Analysis by considering suitable examples. (10)
4. (a) Explain the Construction and Working of Nickel-Cadmium Cell. (14)

- (b) Explain the following terms: (6)
 - i. RMS Value.
 - ii. Average Value.

SECTION-B

- 5(a) Explain the basic Logic Gates with their truth tables. (8)
- (b) Explain about the Colour Coding of Resistances with example. (8)
- (c) Write down the applications of logic gates. (4)
- 6(a) Explain briefly about Metals, Insulator and Semiconductor Materials through Energy Band diagram. (8)
- (b) Explain the working of forward biased P-N Junction Diode with VI Characteristic. (12)
7. (a) Explain Pictorial diagram of a three-phase transmission and distribution system showing transformers, supports, conductors, insulators and earth wire. (10)
- (b) Draw neat & clean block diagram thermal power plant and explain in brief. (10)