

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 97083

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Second Semester

Civil Engineering

GE 6252 — BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

(Common to all Branches except Electronics and Communication Engineering, Medical Electronics Engineering, Biomedical Engineering, Computer Science and Engineering, Information Technology, Computer and Communication Engineering, Electrical and Electronics Engineering, Electronics and Instrumentation Engineering, Instrumentation and Control Engineering and Pharmaceutical Technology)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State Kirchhoff's law.
2. Define power and power factor for single phase.
3. List the applications of D.C. generator.
4. What are the types of single phase induction motor?
5. What is zener effect?
6. Draw the input and output characteristics of CB Bipolar junction transistor.
7. Draw circuit for full adder.
8. What is octal number system?
9. Define digital signal.
10. What is the use of satellite?

PART B — (5 × 16 = 80 marks)

11. (a) Obtain expression of power and power factor for three phase A.C. star connected balanced load circuit. (16)

Or

- (b) With diagram explain principle of operation of permanent magnet moving coil ammeter. (16)

12. (a) With diagram explain construction and operation of D.C. Motor. (16)

Or

- (b) With diagram describe construction and operation of single phase transformer. (16)

13. (a) Draw and explain characteristics of PN Junction diode. (16)

Or

- (b) Draw and explain input and output characteristics of CE – Bipolar Junction transistor. (16)

14. (a) With circuit and truth table explain working of JK Flip-Flop. (16)

Or

- (b) With circuit and timing diagram working of 4-bit asynchronous down counter. (16)

15. (a) With block diagram explain TV transmission and reception system. (16)

Or

- (b) Describe principle of operation of fax system. (16)