

B.E. DEGREE EXAMINATIONS: MAY/JUNE 2013

Fourth Semester

AUTOMOBILE ENGINEERING

EEE251: Basics of Electrical and Electronics Engineering

Time: Three Hours

Maximum Marks: 100

Answer all the Questions

PART A (10 x 1 = 10 Marks)

1. The unit of electrical energy is
 - a) Kilowatt
 - b) Watt
 - c) Ampere -hour
 - d) Kilowatt-hour
2. Power factor of AC circuit is the cosine of angle between
 - a) V and I
 - b) X_L and X_C
 - c) V and R
 - d) R and X_C
3. DC motor developing high starting torque is
 - a) Shunt motor
 - b) Series motor
 - c) Compound motor
 - d) Any DC motor
4. Capacitor in single phase induction motor is used for
 - a) Starting
 - b) Braking
 - c) Reversing
 - d) Improving efficiency
5. Device having highest switching speed is
 - a) PN junction diode
 - b) Zener diode
 - c) MOSFET
 - d) BJT
6. The device used for light detection is
 - a) LED
 - b) LCD
 - c) Phototransistor
 - d) Zener diode
7. Capacitor in the rectifier output is used for maintaining _____ level constant
 - a) Current
 - b) Voltage
 - c) Power
 - d) Impedance
8. CMRR is related to
 - a) Rectifiers
 - b) Voltage regulators
 - c) Differential amplifiers
 - d) Oscillators
9. _____ gate is the universal gate
 - a) AND
 - b) OR

(OR)

b) Draw and explain RC coupled amplifier

25. a) Explain the half adder and full adder circuits with truth tables

(OR)

b) Explain the RS flip-flop and JK flip-flop with truth tables
