

# **MODEL QUESTION PAPER**

**DSCO3**

## **III Semester DIPLOMA Examination, August 2011 BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING**

Time: 3 Hours

Max. Marks: 75

### **GROUP A : Answer any three questions.**

- Q.1 Write short note on Applications of Zener diode.
- Q.2 Discuss care and maintenance of lead acid battery.
- Q.3 What are the types of DC generators?
- Q.4 Explain with neat diagram of construction and working principle of Multiplexer.
- Q.5 Draw and Explain input output characteristics of CB & CE configuration.

### **GROUP B : Answer any three questions.**

- Q.6 Explain AC and DC Motors.
- Q.7 What is meant by stepper motor? Explain its working and give its advantages
- Q.8 What is the relationship between form factor and peak factor?
- Q.9 Explain with example logic simplification using counter.
- Q.10 What are the applications of single phase capacitor start induction run motor?

### **GROUP C: All Questions are Compulsory.**

#### **Q.11 Fill in the blanks**

- (i) A stepper motor is a \_\_\_\_\_ version of the electric motor.
- (ii) The maximum positive or negative value of an AC is called \_\_\_\_\_ value.
- (iii) \_\_\_\_\_ is barer potential.
- (iv) A pure semiconductor is called as \_\_\_\_\_ semiconductor.
- (v) PNP and \_\_\_\_\_ are the two types of transistors.

#### **Q.12 Multiple choice question.**

- (i) \_\_\_\_\_ rectifier is having less noise.
  - (a) Bridge
  - (b) Full Wave
  - (c) Both
  - (d) None of these
- (ii) If two resistors of 100 ohms are connected in series then the equivalent resistor is \_\_\_\_\_ ohms.
  - (a) 50
  - (b) 100
  - (c) 150
  - (d) 200

- (iii) The ratio of maximum value to the RMS value of AC is called  
(a) Peak factor (b) Form factor  
(c) Power factor (d) Phasor
- (iv) Multiplexer is \_\_\_\_\_.  
(a) Many to one (b) One to Many  
(c) Both (d) None of these
- (v) Full adder uses \_\_\_\_\_ inputs.  
(a) 1 (b) 2  
(c) 5 (d) 3

**Q.13 True or false**

- (i)  $V = IR$  is not ohms law.  
(ii) To protect equipments and buildings earthing is needed.  
(iii) The number of cycles made by an alternating quantity per second is called its frequency.  
(iv) Transistor is semiconductor device.  
(v) Base of binary number is 8.

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