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**1st Year / Computer Engg.**  
**Subject : Fundamentals of Electrical and**  
**Electronics Engg.**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  
(6x1=6)

Q.1 Unit of Flux is (CO6)

- a) Ampere
- b) Volt
- c) Tesla
- d) Weber

Q.2 In lead Acid battery, positive plate is made of (CO7)

- a) Pb
- b)  $\text{PbSO}_4$
- c)  $\text{PbO}_2$
- d) Cd

Q.3 Unit of frequency is (CO8)

- a) Second
- b) Hertz
- c) Henry
- d) Ohm

Q.4 Maximum value of Power factors is (CO9)

- a) 1
- b) 2
- c) (a) & (b)
- d) None of the above

Q.5 Number of junctions in BJT are (CO10)

- a) 1
- b) 3
- c) 2
- d) 4

Q.6 Transformer works on (CO13)

- a) A.C
- b) D.C
- c) A.C & D.C
- d) None

**SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory.  
(6x1=6)

Q.7 What is full form of M.M.F. (CO6)

Q.8 Define Amplitude. (CO8)

Q.9 Draw symbol of battery. (CO7)

Q.10 Write full form of MOSFET. (CO12)

Q.11 Define Motor. (CO13)

Q.12 Draw the symbol of NPN transistor. (CO10)

(1)

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(2)

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## **SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Give similarities between magnetic circuit and electric circuit. (CO6)
- Q.14 Give differences between A.C & D.C (CO8)
- Q.15 Define and write formula for R.M.S value of A.C. (CO8)
- Q.16 What is power factor and it's Significance. (CO9)
- Q.17 Draw Impedance Triangle of R-L series circuit. (CO9)
- Q.18 Explain principle of D.C. motor. (CO13)
- Q.19 Explain Input characteristics of common base configuration of transistor. (CO10)
- Q.20 What is biasing and why it is done (CO11)
- Q.21 Explain different types of D.C motor (CO13)
- Q.22 Explain R.L.C. series resonance.

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Name various part of D.C motor. (CO14)
- Q.24 Summarize the care and maintenance of lead acid batteries (CO10)
- Q.25 Explain principle, construction and working of single phase transformer. (CO13)