

Important Questions for University Exam

- Q1 Define the following terms:
- a) What is Ohm's Law? (10)
 - b) What is Earthing (5)
 - c) What is switchgear and why it is used in electrical system? (2)
 - d) Define MCB and fuses. (5)
 - e) What is step up and step down transformer
 - f) What is the emf equation of transformer?
 - g) What are the losses of D.C. motor?
 - h) Define KVL and KCL
 - i) Explain types of wire.
 - j) Define frequency, time period and alternation
- Q 2 Explain different methods of power factor improvement? (5)
- Q 3 Explain different types of wires also explain difference between wire & cable.
- Q 4 State Kirchhoff's Voltage law (KVL), Explain its equation with circuit diagram.
- Q 5 What is energy source? Explain different types of energy sources with block diagrams.
- Q 6 Define ELCB & MCCB. Also explain their working principle with diagram (5)
- Q.7 Explain principle, construction and working of D.C. motor (10)
- Q.8 Explain Thevenin's and Norton's theorem with circuit diagram.
- Q.9 Explain superposition theorem with example (1.5)
- Q.10 Define average and R.M.S value of sinusoidal wave form
- Q.11 Define real power, apparent power, reactive power and power factor.
- Q.12 Explain the series and parallel resonance.
- Q.13 Advantage of 3-phase system over single phase system
- Q.14 Derive the relation between line voltage and phase voltage, line current and phase current for delta and star connection in 3-phase system. (1.5)
- Q.15 Measurement of power and power factor by using 2-watt meter method (10)
- Q.16 Explain construction, working and principle of single phase transformer 5+3=(8)
- Q.17 Explain principle, construction, working of 3-phase induction motor with application
- Q.18 Explain principle, construction, working of 3-phase synchronous motor with application (5)
- Q.19 Comparison of ideal and practical transformer
- Q.20 Write a short note on the following
- a) Losses in transformer and motors
 - b) Regulation and efficiency of transformer.
 - c) Auto transformer
 - d) Maximum Power Transfer Theorem (5)

Q.N.-5 (b) Numerical — (10)

Total — 78 Marks

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| Total | 105 |
| M.M. | 75 |
| P.M. | 30 |