

DR

Electrical Engineering

E-273

2K5-BS-3

Roll No.: _____

Time : 3 Hrs.

M.M. 100

Note :

1. Part 'A' may be attempted in first 5 pages of Answer Sheet.
भाग 'क' के सभी उत्तर, उत्तर-पुस्तिका के प्रथम पांच पृष्ठों में ही करने हैं।
2. Part 'B' in rest of the Sheets of Answer Sheet.
भाग 'ख' के उत्तर, उत्तर-पुस्तिका के अगले शेष पृष्ठों में लिखिये।
3. Answers may be given in English or Hindi.
प्रश्नों के उत्तर अंग्रेजी अथवा हिन्दी में दीजिये।

Part 'A'

1. Attempt any ten questions:

10x2= 20

- (i) Write unit of power and energy.
- (ii) Explain Dielectric strength.
- (iii) Define resistance and state factors on which it depends.
- (iv) Explain series and parallel circuit.
- (v) Explain Eddy current.
- (vi) Write unit of voltage and current.
- (vii) State Lenz's Law.
- (viii) Explain direct current (d.c.) and alternating current (a.c.).
- (ix) State peak value of sin wave.
- (x) State what is cycle in A.C.
- (xi) Define R.M.S value.
- (xii) Explain conductance.
- (xiii) What is average value?
- (xiv) Define form factor.
- (xv) What do you mean by capacitance?

2. Write short note on any 5 questions:

5 x 4= 20

- (i) Break down voltage
- (ii) Coulomb's law

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- (iii) Gauss theorem
- (iv) Krichhof's Law of voltage and current
- (v) Star and Delta connection
- (vi) Permittivity
- (vii) Frequency
- (viii) Establish relation between frequency and time period.

PART-B

Attempt any 3 questions:

3 X 20 = 60

- 3. (a) Compare the advantage and disadvantage of D.C. and A.C.
(b) State and explain super position theorem.
- 4. (a) State and explain Faraday's law of electromagnetic induction.
(b) Explain Norton's theorem with example.
- 5. (a) Explain working principle of moving coil instrument.
(b) Explain working principle of dynamometer type wattmeter.
- 6. (a) Explain about single phase induction type energy meter.
(b) Explain construction and working of single phase transformer.
- 7. Explain the following: -
 - (a) Heating effect of electric current
 - (b) Series combination of a capacitor.
 - (c) Ohm's law
 - (d) Flux and flux density.