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ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 8]
Total No. of Printed Pages : 8]
ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 8]
Total No. of Questions : 8]

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NEW SYLLABUS

Question Paper Serial No. 210

ಸಂಕೇತ ಸಂಖ್ಯೆ : 51

Code No. : 51

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ - IV

Subject : ELEMENTS OF ELECTRICAL ENGINEERING-IV

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ/ Regular Repeater)

ದಿನಾಂಕ : 19. 06. 2023] [Date : 19. 06. 2023

ಸಮಯ : ಬೆಳಗ್ಗೆ 10-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ-1-45 ರವರೆಗೆ] [Time : 10-30 A.M. to 1-45 P.M.

ಪರಮಾವಧಿ ಅಂಕಗಳು : 80] [Max. Marks : 80

General Instructions to the Candidate :

1. This Question Paper consists of 8 subjective types of questions.
2. This question paper has been sealed by reverse jacket. You have to cut on the right side to open the paper at the time of commencement of the examination. Check whether all the pages of the question paper are intact.
3. Follow the instructions given against both the objective and subjective types of questions.
4. Figures in the right hand margin indicate maximum marks.
5. The maximum time to answer the paper is given at the top of the question paper. It includes 15 minutes for reading the question paper.

ಇಲ್ಲಿಂದ ಕತ್ತರಿಸಿ

TEAR HERE TO OPEN THE QUESTION PAPER
ಪ್ರಶ್ನೆ-ಪತ್ರಿಕೆಯನ್ನು ತೆರೆಯಲು ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

Tear here

Note : Answer *all* the questions.

1. Four alternatives are given for each of the following questions / incomplete statements. Select the most appropriate alternative and write it in the answer book along with its alphabet :

$10 \times 1 = 10$

i) The maximum value of an alternating quantity is called its

(A) RMS value (B) Amplitude

(C) Frequency (D) Cycle.

ii) The frequency of an A.C. voltage generated in India is

(A) 60 Hz (B) 40 Hz

(C) 30 Hz (D) 50 Hz.

iii) Why is the core of generator laminated ?

(A) To reduce eddy current loss

(B) To reduce hysteresis loss

(C) To reduce eddy current and hysteresis loss

(D) To reduce mechanical loss.

iv) Slip-rings are used in an A.C. motor to add

(A) External resistance (B) Internal resistance

(C) Specific resistance (D) External inductance.

v) Auto transformer has

(A) two windings (B) three windings

(C) one winding (D) four windings.

vi) The core of the transformer is made of

(A) Silicon steel (B) Mild steel

(C) Cast steel (D) Cast iron.

vii) Which one is the renewable source of electrical energy ?

(A) Thermal power (B) Nuclear power

(C) Diesel power (D) Wind power.

viii) The power plant which uses coal as a fuel is

(A) Diesel power plant (B) Thermal power plant

(C) Nuclear power plant (D) Bio-mass power plant.

ix) In a *p*-type semiconductor, majority charge carries are

(A) Electrons (B) Holes

(C) Protons (D) Electrons & protons.

x) The process of adding impurity to the semiconductor is called

(A) Donor (B) Accepter

(C) Electrons (D) Doping.

2. a) Define A.C. 2

b) Explain the following terms : 3

i) Form factor

ii) Cycle.

c) Draw the neat diagram of sine wave and mark the following : 5

i) Time period

ii) Frequency.

3. a) Mention the applications of A.C. Generator. 2

b) What is A.C. motor and what are its types ? 3

c) Explain the phenomenon of electromagnetic induction. 5

4. a) Define N-type semiconductor. 2

b) Explain self-induced *emf*. 3

c) Draw the neat diagram of squirrel cage rotor induction motor & label its parts. 5

5. a) List the applications of IC. 2

b) What do you mean by one to one transformer ? 3

c) With a neat sketch explain the working of transformer. 5

6. a) What are the non-renewable sources of electrical energy ? 2

b) Mention the types of renewable sources of energy. 3

c) Draw the neat diagram of electric iron and label the parts. 5

7. a) Draw the symbolic representation of diode and name the terminal. 2

b) Write a short note on thermal power plant. 3

c) Draw the neat diagram of hydroelectric power plant and label the parts. 5

8. a) List the applications of diode. 2

b) Explain the following terms : 3

i) Time period

ii) Amplitude.

c) With neat circuit diagram explain reverse bias of diode. 5