CCE-III-RR/PF(A)/111/7152

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ಆಗಸ್ಟ್ 2024 ರ ಪರೀಕ್ಷೆ-3
AUGUST 2024 EXAMINATION-3

ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 8]

Total No. of Printed Pages : 8]

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 8]

Total No. of Questions : 8]

CCE RR/PF
FULL SYLLABUS

Question Paper Serial No.

ಸಂಕೇತ ಸಂಖ್ಯೆ : **51**

Code No. : 51

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್ - IV

Subject : ELEMENTS OF ELECTRICAL ENGINEERING-IV

(ಶಾಲಾ ಪುನರಾವರ್ತಿತ ಅಭ್ಯರ್ಥಿ / ಖಾಸಗಿ ಅಭ್ಯರ್ಥಿ)
(Regular Repeater / Private Fresh)

ದಿನಾಂಕ : 09. 08. 2024] [Date : 09. 08. 2024

ಸಮಯ : ಬೆಳಗ್ಗೆ 10-15 ರಿಂದ ಮಧ್ಯಾಹ್ನ 1-30 ರವರೆಗೆ] [Time : 10-15 A.M. to 1-30 P.M.

ಗರಿಷ್ಠ ಅಂಕಗಳು : 80] [Max. Marks : 80

09. 08. 2024

TEAR HERE TO OPEN THE QUESTION PAPER
ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ತೆರೆಯಲು ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

Cut here /ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

General Instructions to the Candidate :

1. This question paper consists of 8 questions in all.
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 ***(Follow the arrow)***. **Do not cut the left side to open the paper.** Check whether all the pages of the question paper are intact.
3. Follow the instructions given against the questions.
4. Figures in the right hand margin indicate maximum marks for the questions.
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.
6. Ensure that the Version of the question paper distributed to you and the Version printed on your admission ticket is the same.

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 × 1 = 10

i) R.M.S. value of an alternating current is

(A) 0·707 (B) 0·637

(C) 1·11 (D) 1·414

ii) The number of cycles completed by an alternating current per second is called

(A) Amplitude (B) Cycle

(C) Sine wave (D) Frequency

iii) The direction of induced e.m.f. in a generator is given by

(A) Fleming's left hand rule

(B) Lenz's law

(C) Fleming's right hand rule

(D) Ohm's law

iv) An A.C. generator works on the principle of

(A) Self-induced e.m.f.

(B) Dynamically induced e.m.f.

(C) Mutually induced e.m.f.

(D) Statically induced e.m.f.

v) An auto transformer has

(A) two windings (B) three windings

(C) four windings (D) one winding

vi) The purpose of oil in the transformer tank is to

(A) cool (B) reduce loss

(C) increase heat (D) reduce heat

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

(A) Thermal power (B) Diesel power

(C) Nuclear power (D) Wind power

viii) Which one of the following power plants uses coal as fuel ?

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

(C) Nuclear power plant (D) Solar power plant

ix) Arsenic is a

(A) Trivalent impurity (B) Tetravalent impurity

(C) Divalent impurity (D) Pentavalent impurity

x) A non-pure semiconductor is called

(A) Extrinsic semiconductor

(B) *P*-type semiconductor

(C) Intrinsic semiconductor

(D) Both intrinsic and *P*-type semiconductors

2. a) Explain crest factor. 2

b) Explain the following terms : 3

i) R.M.S. value

ii) Sine wave

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

i) Maximum value

ii) Time period

3. a) List the types of induced e.m.f. 2

b) Write a short note on A.C. Motor. 3

c) Explain Faraday's laws of Electromagnetic Induction. 5

4. a) Draw the symbolic representation of *P-N-P* transistor and label the terminals. 2

b) List any six applications of transformer. 3

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

5. a) List the sources of electrical energy. 2

b) Write the examples of non-renewable sources of electrical energy. 3

c) Draw a neat diagram of hydro-electric power plant and label the parts. 5

6. a) Explain semiconductor and give example. 2

b) Explain the following terms : 3

i) A.C.

ii) Amplitude

c) With the neat sketch explain reverse bias of diode. 5

7. a) Explain doping. 2

b) Explain Fleming's left hand rule. 3

c) Draw a neat sketch of A.C. generator and label the parts. 5

8. a) Explain I.C.  2

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

c) Draw a neat diagram of fluorescent lamp and label the parts.  5