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FOR KARNATAKA CLASS 10 PREPARATION

Karnataka SSLC Model Question Paper 2027 for Elements Of Electrical Engineering IV (Paper 2)

EXAM	YEAR	TYPE
Karnataka Class 10	2027	Sample Paper

51

ಕರ್ನಾಟಕ ಶಾಲಾ ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯನಿರ್ಣಯ ಮಂಡಲಿ.

6 ನೇ ಅಡ್ಡ ರಸ್ತೆ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು – 560003

KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD.

6 th Cross, Malleshwaram Bengaluru-560003

2026-27 ರ ಎಸ್, ಎಸ್, ಎಲ್, ಸಿ. ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆ –2

S S L C MODEL QUESTION PAPER-2:2026-27

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಿಕಲ್ ಇಂಜಿನಿಯರಿಂಗ್-IV

Subject : ELEMENTS OF ELECTRICAL ENGINEERING –IV

ಸಂಕೇತ ಸಂಖ್ಯೆ: 51 **Subject Code No: 51**

ಸಮಯ : 3 ಗಂಟೆ 15 ನಿಮಿಷಗಳು] [TIME :3 Hours 15 Minutes

ಗರಿಷ್ಠ ಅಂಕ : 80] [Max.Marks:80

General instruction to the candidate:

1. This question paper consists of 17 questions.

2. Follow the instructions given against the questions.

3. Figures in the right-hand margin indicate maximum marks for the questions.

4. 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.

[Turn over

Note: Answer all the questions

I. 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.

10X1=10

1. The S I unit of frequency is

   (A) Seconds (B) volt
   (C) Volt (D) Hertz

2. For a sine wave form factor is

   (A) 0.637 (B) 1.11
   (C) 0.707 (D) 1.41

3. The slip ring is made of

   (A) Brass (B) Cast iron
   (D) Aluminium (D) Copper

4. An A C generator works on the principal of

   (A) Len'z law

   (B) Ohm's law

   (C) Faraday's laws of electromagnetic induction

   (D) Right hand thumb rule

5. The core of the transformer is made of

   (A) Silicon steel (B) Cast iron
   (C) Copper (D) Aluminium

6. Electrical motors is an example for

   (A) Magnetic effect (B) Heating effect

   (C) Lighting effect (D) Chemical effect

7. Which among the following is a renewable source?

(A) Diesel energy (B) Solar energy

(C) Nuclear energy (D) Tidal energy

8. Which of the power plant uses coal?

(A) Hydroelectric power plant (B) Thermal power plant

(C) Solar power plant (D) Diesel power plant

9. An impurity that accepts electron is called

(A) Acceptor impurity (B) Pentavalent impurity

(C) Trivalent impurity (D) Donor impurity

10. A diode has

(A) Three terminal (B) One terminal

(C) Two terminal (D) Four terminal

II. **Answer all the questions**

11. a) Define the term amplitude. **----2**

b) Explain the following terms. **----3**

i) A C

ii) Frequency

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

i) Cycle **----5**

ii) Amplitude

12. a) Define A C Generator. **----2**

b) List any six applications of A C generator. **----3**

c) Explain faraday's law of electromagnetic induction. **----5**

13 .a) Define is transistor. **----2**

b) Explain with neat diagram self induced emf. **----3**

c) Draw the neat diagram of squirrel rotor induction motor and Label the parts. **----5**

14. a) What are the types semiconductor. **----2**

b) List any six parts of transformer. **----3**

c) Draw the neat diagram of electric fan and label the parts. **----5**

15. a) Give two examples for renewable sources of energy. **----2**

b) Write short notes on hydroelectric power plant. **----3**

c) Draw the neat diagram of solar power plant and label the parts. **----5**

16. a) Define NPN-transistor. **----2**

b) Write the comparison between renewable and Non- renewable sources of energy. **----3**

c) With neat diagram explain the working principle of transformer. **----5**

17. a) Define diode. **----2**

b) Explain the following terms. **----3**

i) RMS Value

ii) Power factor

c) What is IC and list any three advantages of IC? **----5**