CCE-II-RR/PF(A)/888/4031

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ಜೂನ್ 2024 ರ ಪರೀಕ್ಷೆ - 2
JUNE 2024 EXAMINATION - 2

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 : **53**
Code No. : 53

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್-IV

Subject : ELEMENTS OF ELECTRONICS ENGINEERING-IV

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

ದಿನಾಂಕ : 19. 06. 2024] [Date : 19. 06. 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

19. 06. 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) The binary system uses base of

(A) 2 (B) 10

(C) 8 (D) 16

ii) After counting 0, 1, 10, 11, the next binary number is

(A) 12 (B) 101

(C) 100 (D) 110

iii) The number 1000_2 is equivalent to decimal number

(A) one thousand (B) eight

(C) four (D) sixteen

iv) First integrated chip was developed by

(A) C. V. Raman (B) W. H. Brattain

(C) J. S. Kilby (D) Robert Noyce

v) An integrated circuit is

(A) a complicated circuit

(B) an integrating device

(C) much costlier than a single transistor

(D) fabricated on a tiny chip of silicon

vi) An Op-Amp can be classified as

(A) linear amplifier

(B) low-r_{in} amplifier

(C) positive feedback amplifier

(D) R-C coupled amplifier

vii) The output of a 2-input OR gate is zero only when its

(A) both inputs are 0 (B) either input is 1

(C) both inputs are 1 (D) either input is 0

viii) An AND gate

(A) implements logic addition

(B) is equivalent to a series switching circuit

(C) is an any-or-all gate

(D) is equivalent to a parallel switching circuit

ix) A NOR gate is ON only when all inputs are

(A) ON (B) positive

(C) high (D) OFF

x) Radio receiver sensitivity is expressed in

(A) μV (B) mV

(C) volt (D) kV

2. a) Define analog signal. 2

b) State the reason for widespread use of digital system. 3

c) Draw a neat diagram of analog signal and digital signal. 5

3. a) List the active components of IC. 2

b) Explain the advantages of ICs. 3

c) Draw a neat diagram of IC. 5

4. a) Define the term Op-Amp. 2

b) Explain with block diagram of Op-Amp. 3

c) Draw a neat diagram of inverting amplifier using Op-Amp. 5

5. a) Mention any two types of logic gates. 2

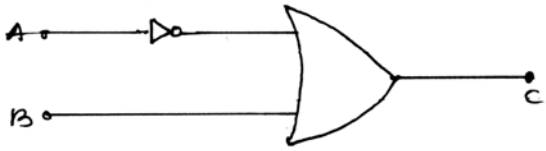
b) Write a short note on OR gate. 3

c) Find the boolean expression for the output 'C' in the following figure : 5

Compute its value when

i) $A = 0,\ B = 1$

ii) $A = 1,\ B = 0$



6. a) Write any two stages of communication system. 2

b) Explain the term 'transmitter'. 3

c) Draw a neat diagram of simplified mobile telephone system. 5

7. a) Convert $(11)_{10}$ to binary number. 2

b) Write the types of ICs based on the scale of integration. 3

c) Draw a neat circuit diagram of AND gate using diodes. 5

8. a) Convert decimal 246 to hexadecimal.  2

b) Explain Common Mode Rejection Ratio parameter of an Op-Amp.  3

c) Draw a neat diagram of Modulated wave.  5