ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 4]

Total No. of Printed Pages : 4]

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 9]

Total No. of Questions : 9]

ಸಂಕೇತ ಸಂಖ್ಯೆ : 73

Code No. : 73

B

CCE RR

REVISED & UNREVISED

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್

Subject : ELEMENTS OF ELECTRONICS ENGINEERING

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ/ **Regular Repeater**)

ದಿನಾಂಕ : 26. 09. 2020]   [Date : 26. 09. 2020

ಸಮಯ ˉಬೆಳಿಗ್ಗೆ 10-30 ರಿಂದ ಮಧ್ಯಾಹ−1-45 ರವರೆಗೆ]   [Time : 10-30 A.M. to 1-45 P.M.

ಪರಮಾವಧಿ ಅಂಕಗಳು : 90]   [Max. Marks : 90
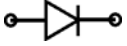
General Instructions to the Candidate :

1.   This Question Paper consists of 9 objective and 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.

TEAR HERE TO OPEN THE QUESTION PAPER

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)   ⊶▷⊸ This symbol represents
            (A)   Transistor   (B)   Diode
            (C)   SCR   (D)   FET.

    ii)   Small scale integration contains
            (A)   less than 30 gates   (B)   more than 100 gates
            (C)   more than 500 gates   (D)   more than 1000 gates.

    iii)   In an IC, components are fabricated on a/an
            (A)   Copper plate   (B)   Aluminium sheet
            (C)   Silicon chip   (D)   Brass plate.

    iv)   In Op-Amp the ratio of output voltage to the input voltage is called
            (A)   Current gain   (B)   Voltage gain
            (C)   Slew rate   (D)   Impedance.

    v)   In inverting amplifier R_f stands for
            (A)   feedback rheostat   (B)   forward resistor
            (C)   feedback resistor   (D)   frequency resistor.

    vi)   The decimal number $(11)_{10}$ represented in binary number is
            (A)   1 0 1 1   (B)   1 1 0 0
            (C)   0 1 0 0   (D)   0 0 1 1.

    vii)   The universal gate is
            (A)   NOT   (B)   NAND
            (C)   AND   (D)   OR.

    viii)   The only function of a NOT gate is to
            (A)   stop a signal   (B)   recompliment a signal
            (C)   invert an input signal   (D)   act as a universal gate.

    ix)   In SR flip-flop if $S = 1$ and $R = 1$, then output will be
            (A)   No change   (B)   1
            (C)   0   (D) Q_n.

    x)   Counter is set of
            (A)   flip-flops   (B)   transistors
            (C)   SCR   (D)   triodes.

2.	a)	What is rectifier ?	2
	b)	Explain hybrid integrated circuit.	3
	c)	Draw neat circuit diagrams of PNP and NPN transistors.	5
3.	a)	List any two types of ICs.	2
	b)	What are the advantages of integrated circuits ?	3
	c)	Distinguish between P-N junction and transistor.	5
4.	a)	List any two IC packages.	2
	b)	Distinguish between monolithic and hybrid ICs.	3
	c)	Draw a neat diagram of full wave rectifier and show input and output waveforms.	5
5.	a)	List different terminals of Op-Amp.	2
	b)	Compare voltage follower and integrator.	3
	c)	Draw a neat circuit diagram of non-inverting amplifier and explain.	5
6.	a)	Compare decimal system with binary number system.	2
	b)	List the digits which are used in hexadecimal number system and explain in brief.	3
	c)	Convert decimal numbers $(186)_{10}$ and $(0{\cdot}75)_{10}$ into binary.	5
7.	a)	List any two types of logic gates.	2
	b)	Explain the working of NAND gate IC.	3
	c)	Draw neat symbols of NOR and EX-NOR gate IC and explain with truth tables.	5
8.	a)	How do you classify flip-flops ?	2
	b)	List different types of shift registers and mention its uses.	3
	c)	Explain working of SISO shift register.	5
9.	a)	Define microprocessor.	2
	b)	Name the microprocessor which is commonly used in digital circuit and explain.	3
	c)	Explain 3-bit Asynchronous counter.	5