B Sl. No. : H

[ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 4

[Total No. of Printed Pages : 4

CCE RR

Code No. : 73

REVISED & UNREVISED

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್

Subject : ELEMENTS OF ELECTRONICS ENGINEERING

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater)

ದಿನಾಂಕ : 22. 06. 2019]

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 9-30 ರಿಂದ ಮಧ್ಯಾಹ–12-45 ರವರೆಗೆ]

ಪರಮಾವಧಿ ಅಂಕಗಳು : 90]

[Date : 22. 06. 2019

[Time : 9-30 A.M. to 12-45 P.M.

[Max. Marks : 90

TEAR HERE TO OPEN THE QUESTION PAPER

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.

Note : Answer *all* the questions.

1. Fill in the blanks with the appropriate figure/word(s) by selecting from the choices given in the brackets :   10 × 1 = 10

     i)   Normally size of IC is ....
         (a)   big   (b)   micro   (c)   small.

     ii)   Medium scale integration contains .... number of gates.
         (a)   12 to 100   (b)   12 to 1000   (c)   exactly 12.

     iii)   IC means ....
         (a)   Invalid Circuit
         (b)   Integrated Circuit
         (c)   Inverting Circuit.

     iv)   7th pin of Op-Amp 741 is ....
         (a) $+ V_{CC}$ (b) $- V_{EE}$ (c)   output.

     v)   Op-Amp has .... pins.
         (a)   6   (b)   8   (c)   10.

     vi)   If input of NOT gate IC is '0' then its output is ....
         (a)   2   (b)   0   (c)   1.

     vii)   Binary number system consists only two digits *i.e.* ....
         (a)   0 & 1   (b)   1 & 2   (c)   2 & 3.

     viii)   Truth Table can only be used for .... circuits.
         (a)   Synchronous   (b)   Digital   (c)   Asynchronous.

     ix)   Intel 8085 is a ....
         (a)   microproton   (b)   micropreset   (c)   microprocessor.

     x)   .... counter counts 0 to 9 on the arrival of every 10th clock pulse.
         (a)   Decade   (b)   Ring   (c)   Ripple.

2.   a)   Give reason why IC is more reliable.   2
    b)   Describe thick film IC.   3
    c)   How ICs are differ from discrete components ?   5

3.   a)   Name any two IC packages.   2
    b)   How is diode fabricated in IC ?   3
    c)   Draw a neat sketch of CRO.   5

4.   a)   Define the term IC.   2
    b)   What happens when the diode is connected under forward bias & reverse bias ?   3
    c)   List the applications of monolithic, thick and thin film IC.   5

5.	a)	Define the term CMRR.	2
	b)	Explain various characteristics of an Op-Amp.	3
	c)	Draw the circuit diagram to show how an Op-Amp can be used as summer and write the equation for its output.	5
6.	a)	Distinguish between NAND & AND gate IC.	2
	b)	Convert decimal number 1512 into binary system.	3
	c)	Show how NAND gate IC can be used as an AND gate & explain.	5
7.	a)	Write the digits which are used in decimal number system.	2
	b)	Convert binary number 10111 into decimal number system.	3
	c)	Write the truth tables for NAND & AND gate IC.	5
8.	a)	Describe register.	2
	b)	Explain RS flip-flop.	3
	c)	Draw the logical diagram of JK flip-flop using AND & NOT gates & explain.	5
9.	a)	Define Binary number system.	2
	b)	Distinguish between Up & Down counter.	3
	c)	Explain Ring and Ripple counter.	5