Sl. No. : OP

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 9]
Total No. of Questions : 9]

CCE RR

[ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 4
[Total No. of Printed Pages : 4

ಸಂಕೇತ ಸಂಖ್ಯೆ : 73

Code No. : 73

ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಸಂಕೇತ ಸಂಖ್ಯೆಯನ್ನು ಮೇಲಿನ ಬಲ ಮೂಲೆಯಲ್ಲಿ ಬರೆಯಿರಿ

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್

Subject : ELEMENTS OF ELECTRONICS ENGINEERING

(ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus)

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ/ Regular Repeater)

ದಿನಾಂಕ : 17. 06. 2017]
[Date : 17. 06. 2017

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 9-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ–12-45 ರವರೆಗೆ]
[Time : 9-30 A.M. to 12-45 P.M.

ಗರಿಷ್ಠ ಅಂಕಗಳು : 90]
[Max. Marks : 90

TEAR HERE TO OPEN THE QUESTION PAPER
ಪ್ರಶ್ನೆ–ಪತ್ರಿಕೆಯನ್ನು ತೆರೆಯಲು ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

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

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) In thermionic emission the cathode used is ..... .
   (*oxide coated, tungsten, thoriated tungsten*)

   ii) When a pentavalent impurity is added to a pure semiconductor the resulting one is called ..... .
   (*N-type semiconductor, P-type semiconductor, intrinsic semiconductor*)

   iii) A transistor has ..... .
   (*one PN junction, two PN junctions, three PN junctions*)

   iv) Operational amplifier consumes ..... .
   (*more power, negligible power, less power*)

   v) LSI contains ..... .
   (*more than 100 gates, less than 100 gates, 100 gates*)

   vi) Input applied to a NOT is one, the output will be ..... .
   (*two, one, zero*)

   vii) The wiring of an IC is ..... .
   (*very simple, complicated, very complicated*)

   viii) A counter is a special type of ..... .
   (*inverter, register, microprocessor*)

   ix) The use of octal system has been replaced by ..... .
   (*decimal system, binary system, hexadecimal system*)

   x) Counting the number of clock pulses arriving at its input is known as ..... .
   (*counter, ripple counter, ring counter*)

2. a) Define intrinsic semiconductor. 2

   b) Explain donor impurity and acceptor impurity. 4

   c) Name the two types of extrinsic semiconductor and mention its uses. 4

3. a) What is a rectifier ? 2

   b) Draw a neat circuit diagram of half-wave rectifier. 4

   c) Give any four comparisons between half-wave and full wave rectifiers. 4

4. a) Draw the symbols of NPN and PNP transistors. 2
   b) What is a Zener diode ? Mention the applications of Zener diode. 4
   c) Name the different materials that are used for the construction of LED and mention its applications. 4
5. a) What are the types of I.C. packages ? 2
   b) List any four advantages of I.C. 4
   c) Draw a neat sketch to show the construction of monolithic I.C. 4
6. a) What do you mean by octal system ? 2
   b) Convert the decimal number 37 into octal number and convert octal number 73 into decimal number. 4
   c) Draw a symbol of OR gate and write its truth table. 4
7. a) Define flip-flop. 2
   b) Give any four uses of flip-flops. 4
   c) Explain register and shift register. 4
8. a) What is meant by microprocessor ? 2
   b) Specify the number of gates per unit of the following chips : 4
      i) SSI
      ii) MSI
      iii) VLSI
      iv) ULSI
   c) Mention the important features of Intel 8085. 4
9. a) Define Op-Amp. 2
   b) What are the Op-Amps available in the market ? 2
   c) Write short notes on any *two* of the following : 6
      i) Oscilloscope
      ii) Amplifier
      iii) Digital I.C.