ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 8]
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ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 9]
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Question Paper Serial No. **600**

ಈ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಕ್ರಮ ಸಂಖ್ಯೆ

ಸಂಕೇತ ಸಂಖ್ಯೆ : 73

Code No. : 73

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್

Subject : ELEMENTS OF ELECTRONICS ENGINEERING

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ/ Regular Repeater)

ದಿನಾಂಕ : 02. 07. 2022] [Date : 02. 07. 2022

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

ಪರಮಾವಧಿ ಅಂಕಗಳು : 90] [Max. Marks : 90

General Instructions to the Candidate :

1. This Question Paper consists of objective and subjective types of 9 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
ಪ್ರಶ್ನೆ–ಪತ್ರಿಕೆಯನ್ನು–ತೆರೆಯಲು ಇಲ್ಲಿ ಕತ್ತರಿಸಿ

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) Normally ICs are made of

(A) Brass (B) Aluminium

(C) Copper (D) Silicon.

ii) IC 741 is an example of

(A) Op-Amp (B) FET

(C) MOSFET (D) Diode.

iii) Number of terminals in Op-Amp is

(A) 2 (B) 8

(C) 5 (D) 7.

iv) DIL package means

(A) dropped-in-line (B) dual-in-line

(C) dipped-in-line (D) diffused-in-line.

v) A pure semiconductor is called

(A) an intrinsic semiconductor

(B) an extrinsic semiconductor

(C) P-type semiconductor

(D) N-type semiconductor.

vi) The major component of a MOS IC is a/an

(A) FET (B) bipolar

(C) SCR (D) MOSFET.

vii) V_o means

(A) input voltage (B) output voltage

(C) positive voltage (D) negative voltage.

viii) The output voltage of IC 7805 is

(A) + 6·0 V (B) + 2·0 V

(C) + 5·0 V (D) + 4·0 V.

ix) LED means

(A) Line Emitting Diode (B) Low Light Emitting Diode

(C) Laser Emitting Diode (D) Light Emitting Diode.

x) Number of diodes used in full-wave rectifier is

(A) 2 (B) 3

(C) 1 (D) 5.

2. a) Name the two types of extrinsic semiconductors. 2

b) List the active and passive components of IC. 3

c) Draw a neat diagram of full-wave rectifier and also draw its input and output wave forms. 5

3. a) Write the full form of SSI and MSI. 2

b) List the advantages of ICs. 3

c) Give reasons why IC is extremely reliable. 5

4. a) Write the full form of MOSFET. 2

b) Write the level of integration of ICs. 3

c) Write a short note on Monolithic IC. 5

5. a) Who first invented an IC ? 2

b) Explain thin film IC. 3

c) List the uses of Linear ICs. 5

OR

a) How the ICs are classified ? 2

b) What are the drawbacks of ICs ? 3

c) Write the disadvantages of monolithic ICs. 5

6. a) Define Epitaxy. 2

b) Explain Isolation Diffusion in IC. 3

c) With a neat diagram, explain the process of 'Photolithographic' in IC. 5

7. a) What do you mean by 'Diffusion' ? 2

b) Explain the circuit bonding of IC. 3

c) Explain how resistors are fabricated in IC with a neat diagram. 5

8. a) Define 'Wafer' IC terminology. 2

b) List the applications of Op-Amp. 3

c) Explain with a neat diagram, how capacitors are fabricated in IC. 5

9. a) What is unity follower ? 2

b) Write the formula to calculate the voltage gain of Op-Amp. 3

c) Explain 'Integrator' and also draw symbol, input and output waveforms. 5

OR

a) What is an operational amplifier ? 2

b) Write the features of IC 741. 3

c) Explain 'Comparator'. 5