Roll No.												Serial No. of Q. C. A. B.

ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ : 9] [ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 16
Total No. of Questions : 9] [Total No. of Printed Pages : 16

ಸಂಕೇತ ಸಂಖ್ಯೆ : 73 ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್

Code No. : 73 Subject : ELEMENTS OF ELECTRONICS ENGINEERING

ದಿನಾಂಕ : 03. 04. 2012] [Date : 03. 04. 2012

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 10-30 ರಿಂದ ಮಧ್ಯಾಹ್ನ–1-45 ರವರೆಗೆ] [Time : 10-30 A.M. to 1-45 P.M.

ಪರಮಾವಧಿ ಅಂಕಗಳು : 90] [Max. Marks : 90

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Q. No.	Marks		Q. No.	Marks		Q. No.	Marks		Q. No.	Marks		Q. No.	Marks
1.			×			×			×			×	
2.			×			×			×			×	
3.			×			×			×			×	
4.			×			×			×			×	
5.			×			×			×			×	
6.			×			×			×			×	
7.			×			×			×			×	
8.			×			×			×			×	
9.			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
×			×			×			×			×	
												Total Marks	

Total Marks in words			Grand Total	
1. ✓				
2. ✓		✓	✓	
Signature of Evaluators	*Registration No.*	*Signature of the Deputy Chief*	*Signature of the Room Invigilator*	

[Turn over

General Instructions :

i) The Question-cum-Answer Booklet consists of objective and subjective types of questions having 9 questions.

ii) Space has been provided against each objective type question. You have to choose the correct choice and write the complete answer in the space provided.

iii) For subjective type questions enough space for each question has been provided. You have to answer the questions in the space.

iv) Follow the instructions given against both the objective and subjective types of questions.

v) Candidate should not write the answer with pencil. Answers written in pencil will not be evaluated. (Except Graphs, Diagrams & Maps)

vi) In case of Multiple Choice, Fill in the blanks and Matching questions, scratching / rewriting / marking is not permitted, thereby rendering to disqualification for evaluation.

vii) For reading the questions 15 minutes of extra time has been provided.

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 : $10 \times 1 = 10$

i) A metal is heated up to a certain temperature. It starts emission of electrons which is called ..... .

(*photoelectric emission, thermionic emission, secondary emission*)

Ans : _____

_____

ii) The elements essentially required for the manufacture of transistors are..... .

(*germanium & silicon, germanium & indium, germanium & sulphur*)

Ans : _____

_____

iii) The safe inverse voltage is kept lower than that of an ordinary diode which is known as ..... .

(*tunnel diode, light emitting diode, Zener diode*)

Ans : _____

_____

iv) LSI circuit has ..... .

(*100 gates, less than 100 gates, more than 100 gates*)

Ans : _____

_____

v) The wiring of integrated circuit becomes ..... .

(*very simple, complicated, very complicated*)

Ans : _____

_____

vi) Alphanumeric number system is also known as ..... .

(*octal system, hexadecimal system, binary system*)

Ans : _____

_____

vii) Op-Amp consumes ..... .

(*less power, medium power, more power*)

Ans : _____

_____

viii) A flip-flop is a bistable electronic circuit which has ..... .

(*four stable states, three stable states, two stable states*)

Ans : _____

_____

ix) The first useful microprocessor was developed by Intel and it was named as ..... .

(8085, 8080, 8058)

Ans : _____

_____

x) A simple register used to store a binary word temporarily is called ..... . (*buffer register, shift register, register*)

Ans : _____

_____

2. a) What is a semiconductor ? Give two examples. 4

_____

_____

_____

_____

_____

_____

b) List any four differences between intrinsic semiconductor and extrinsic semiconductor. 4

c) What is meant by doping ? 2

3. a) Draw the neat circuit diagrams of forward and reverse biased P.N. junction diodes. 4

b) What are the materials used in construction of LED ? Name the colours of light they emit. 4

c) Write the symbols of Zener diode and P-N diode. 2

4. a) What is rectifier ? 2

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

c) Why is the filter circuit necessary in rectifiers ? Name any two types of filter circuits according to input component. 4

5. a) Define an integrated circuit. 2

b) List any four differences between integrated circuit and discrete component circuit. 4

c) How are the ICs classified ? 4

6. a) Draw a neat diagram to show the construction of monolithic IC and name the parts. 4

b) What do you mean by hybrid ? List the two types of hybrid ICs. 4

c) Define SSI and VLSI. 2

7. a) What is an operational amplifier ? 2

b) Draw a neat block diagram of Op-Amp. 4

c) List any four advantages of Op-Amp. 4

8. a) Define binary system. 2

b) Convert 1510 into binary number. 5

c) Convert 110100 into decimal number. 3

9. a) What is a flip-flop ? Draw a neat symbol of flip-flop. 4

b) Name any four types of flip-flops. 4

c) Define a counter. 2