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No.

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

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

[ ಒಟ್ಟು ಮುದ್ರಿತ ಪುಟಗಳ ಸಂಖ್ಯೆ : 16  
[ Total No. of Printed Pages : 16

ಸಂಕೇತ ಸಂಖ್ಯೆ : 73

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಇಂಜಿನಿಯರಿಂಗ್

Code No. : 73  
ENGINEERING

Subject : ELEMENTS OF ELECTRONICS

ದಿನಾಂಕ : 02. 04. 2011]

[ Date : 02. 04. 2011

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

**FOR OFFICE USE ONLY**

Q. No.	Marks	Q. No.	Marks	Q. No.	Marks	Q. No.	Marks	Q. No.	Marks
1.		×		×		×		×	
2.		×		×		×		×	
3.		×		×		×		×	
4.		×		×		×		×	
5.		×		×		×		×	
6.		×		×		×		×	
7.		×		×		×		×	
8.		×		×		×		×	
9.		×		×		×		×	
×		×		×		×		×	
×		×		×		×		×	
×		×		×		×		×	
×		×		×		×		×	
<b>Total Marks</b>									
<b>Total Marks in words</b>							<b>Grand Total</b>		
1. ✓							✓		
2. ✓							✓		
<i>Signature of Evaluators</i>			<i>Registration No.</i>			<i>Signature of the Deputy Chief</i>		<i>Signature of the Room Invigilator</i>	

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*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 have 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 × 1 = 10

- i) The components that do not obey Ohm's Law is called ..... components.

( *positive, active, negative* )

*Ans :* \_\_\_\_\_

\_\_\_\_\_

- ii) Silicon diodes carry current up to .....

( 100 A, 50 A , 25 A )

*Ans :* \_\_\_\_\_

\_\_\_\_\_

- iii) When pentavalent impurity is added to a pure semiconductor, the resulting one is called .....

( *P-type semiconductor, N-type semiconductor, intrinsic semiconductor* )

Ans : \_\_\_\_\_  
\_\_\_\_\_

- iv) A flip-flop has ..... stable states.

( *three , two, four* )

Ans : \_\_\_\_\_  
\_\_\_\_\_

- v) NOT gate has ..... ( *one input, two inputs, no input* )

Ans : \_\_\_\_\_  
\_\_\_\_\_

- vi) Very large scale integrated circuit consists ..... gates.

( *400, more than 400, less than 400* )

Ans : \_\_\_\_\_  
\_\_\_\_\_

- vii) Two diodes are connected in a circuit to convert AC to DC is known as ..... rectifier.

( *half-wave, full-wave, bridge* )

Ans : \_\_\_\_\_  
\_\_\_\_\_

- viii) An I.C. chip which can act as CPU of a digital computer is called .....

( *transducer, shift register, microprocessor* )

Ans : \_\_\_\_\_  
\_\_\_\_\_

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ix) A high gain I.C. based direct coupled amplifier is termed as .....

( *operational amplifier, direct coupled amplifier, differential amplifier* )

*Ans :* \_\_\_\_\_

\_\_\_\_\_

x) An octal system is a base of ..... ( *6-system, 16-system, 8-system* )

*Ans :* \_\_\_\_\_

\_\_\_\_\_

2. a) Differentiate between bipolar and unipolar transistors. 4

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- b) Draw a neat diagram of the construction of a PNP transistor by junction method and label the parts. 4

- c) Write the symbols of PNP and NPN transistors. 2

3. a) What is linear I.C. ? 2

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b) Differentiate between thin film I.C. and thick film I.C. 4

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c) List the four types of digital I.C. 4

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4. a) Define a half-wave rectifier.

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b) What is the necessity of filter circuits in rectifiers ?

3

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

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5. a) Explain the PISO shift register. 3

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b) Draw a neat symbol of flip-flop. 2

c) Convert 4652 into hexadecimal number.

5

6. a) Name the three basic gates and write their symbols.

6

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- b) What is a counter ? 2

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- c) Write the truth table of NAND gate. 2

7. a) Define SSI and MSI. 2

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8. a) Define an operational amplifier. 3

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b) Draw a neat symbol of Op-Amp. 2







