

Seat No.	
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F.E. (All Branches) (Part-I) (Semester- I & II) (Revised)
Examination, May - 2017
FUNDAMENTALS OF ELECTRONICS AND COMPUTERS
Sub. Code : 59184

Day and Date : Saturday, 06-05-2017
Time : 10.00 a.m. to 1.00 p.m.

Total Marks : 100

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figure to right indicates full marks.
 - 3) Assume suitable data if necessary.

SECTION-I

Q1) Solve any two. **[18]**

- a) Explain FW bridge rectifier with necessary waveforms.
- b) Explain basic gates and NAND as universal gate with its truth tables.
- c) Explain speed transducer with advantages and disadvantages.

Q2) Solve any two. **[16]**

- a) Explain self-bias circuit for biasing of transistor. Derive expression for stability factor.
- b) What is multiplexer? Explain 4:1 mux with truth table.
- c) Explain digital thermometer with its block diagram.

Q3) Solve any two. **[16]**

- a) Explain regulated power supply with suitable diagram.
- b) Explain full adder circuit with truth table.
- c) Write short note on washing machine.

P.T.O.

SECTION-II

Q4) Solve any two.

[18]

- a) What are different hardware component of a computer system. Explain any four of them.
- b) Convert the following.
 - i) HEX to Binary CF8E
 - ii) HEX to Octal B2F8
 - iii) Binary to Hex 1111111.11111
 - iv) Decimal to Hex $(99)_{10}$
- c) List and explain different topologies of computer networks.

Q5) Solve any two.

[16]

- a) Explain different computer system components.
- b) i) Convert Hexadecimal number into decimal.
 - 1) $(6AD2)_{16}$
 - 2) $(EFA1.12)_{16}$
- ii) Convert Binary number into decimal.
 - 1) $(1011110011)_2$
 - 2) $(111111.1111)_2$
- c) Explain low level language and high level language in detail.

Q6) Solve any two.

[16]

- a) What are different generations of computer, explain classification of computers.
- b) Write short note on applications of Computer.
- c) Write short note on computer network.

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