SC - 805

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Seat No.	

F.Y. B.Tech. (All Branches) (Part-I) (Semester-I&II) (Revised) Examination, December - 2019

FUNDAMENTALS OF ELECTRONICS AND COMPUTERS

Sub. Code :71818

Day and Date : Wednesday, 4 - 12 - 2019 **Total Marks : 70**

Time : 2.30 p.m. to 5.00 p.m.

Instructions : 1) **Solve any three questions from Section I and Section II**
2) **Figures to the right indicate full marks.**

SECTION-I

Q1) Solve the following: **[12]**

a) Explain semiconductor diode with its characteristics and any one application.

b) What is multiplexer? Explain 4:1 mux with truth table.

Q2) Solve the following: **[11]**

a) What is leakage current? Explain with CB and CE configuration

b) Explain NOR as universal gate in detail.

Q3) Solve the following: **[11]**

a) For a transistor $I_B = 20\,\mu A$, Ic= 2mA and $\beta = 40$ calculate I_{CBO}

b) With range, specification and limitations explain stain gauge transducer?

Q4) Solve the following: **[12]**

a) Explain operation of weighing machine with suitable application

b) Explain full adder circuit with truth table.

P.T.O.

SECTION-II

Q5) a) Discuss the different generations of computers [6]

b) With neat schematic diagram, explain computer architecture. [6]

Q6) a) Explain following Linux commands. [6]

i) Ls

ii) Chdir

iii) Cat

b) Explain different coding schemes. [5]

Q7) a) Define algorithm? Write an algorithm, to read marks of five subjects out of 50 marks. Calculate average an percentage. [6]

b) Explain different types of networks. [5]

Q8) a) Convert number system. [6]

i) 11101.0110 binary to Decimal

ii) 432 Hexadecimal to octal

iii) 174 Decimal to Octal

b) Explain different types of system software. [6]