

B.TECH. SEM -VII ELECTRONICS 2014 COURSE (CBCS) :

SUMMER - 2018

SUBJECT : ELECTRONIC SYSTEM DESIGN

Day : **Wednesday**

Date : **23/05/2018**

S-2018-2501

Time **02.30 PM TO 05.30 PM**

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data if necessary.

Q.1 Discuss the important specifications of DAC. Which parameters play important role while selecting DAC and explain with suitable example (10)

OR

Discuss the main design consideration for,

1. Precision OPAMP.
2. High Speed OPAMP

Q.2 Explain in detail following protocols for interfacing peripherals with microcontroller, (10)

1. I2C
2. CAN
3. SPI

OR

What are the different types of relay? Discuss in detail the selection criteria for relay in case of microcontroller based systems.

Q.3 State & explain various phases of software design and explain each stage. (10)

OR

Explain following international standards,

1. IEC standard.
2. BS Standards
3. ISO Standards

Q4 Draw block diagram and state various features of logic analyzer in detail. (10)

OR

State & explain the main features of DSO & DPO with neat block diagram.

Q5 List the different layout design & tools available in market and write specification in detail. (10)

OR

What is Thermal Management? Explain following in detail,

1. Thermal time constants.
2. Cooling choices.
3. Heat sinks & its selection.

Q6 What is Grounding? Explain following, (10)

1. Safety ground.
2. Signal ground.
3. Power supply return configuration.

OR

State the important terms for PCB design. Give the types of PCB in detail.

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