

Question Paper

Exam Date & Time: 20-Apr-2018 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SCHOOL OF INFORMATION SCIENCES (SOIS)

SECOND SEMESTER Master of Engineering - ME (Embedded & Wireless Technology)

DEGREE EXAMINATION - APRIL 2018

Friday, 20 April 2018

Time : 10:00 am to 1:00 pm

Wireless Embedded Systems [EWT 620]

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Briefly explain registers of 8051 required to program on chip UART to transfer and receive data serially (10 marks) (10)
- 2) Briefly explain I2c data transfer frames with suitable timing diagram (10 marks) (10)
- 3) Assuming MCP 2308 SPI compatible ADC is connected to SPI of microcontroller explain data transfer with suitable timing diagram (10 marks) (10)
- 4) Briefly explain PCI Initiator write transfer to target device with suitable diagram (10 marks) (10)
- 5) Briefly explain the signals of PCI communication protocols between initiator and target and also comment on objective of each signals (7 + 3 marks) (10)
- 6) Explain the features of USB which makes it unique communication standard and also comment on modes and speed of USB communication standards (6 + 4 marks) (10)
- 7) Briefly explain USB device descriptors (10 marks) (10)
- 8) Briefly explain error detection techniques used in CAN communication protocol (10 marks) (10)
- 9) Briefly explain AHB bus signals with suitable block diagram (10 marks) (10)
- 10) Briefly explain OSI layers of Zigbee protocols and also comment on roles of Coordinator ,routers and endpoint (10)

10 marks)

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