Reg. No.									

MANIPAL ACADEMY OF HIGHER EDUCATION, MANIPAL

SCHOOL OF INFORMATION SCIENCES

STUDY ABROAD PROGRAM (ESIGELEC, FRANCE) – **FALL 2018**
DEGREE EXAMINATION – NOVEMBER 2018

SUBJECT: ESI 609 - EMBEDDED SYSTEMS

Saturday, November 24, 2018

Time: 10.00 – 13.00 Hrs. Max. Marks: 100

Answer All the questions

1) Briefly explain the Features of Cortex m3

(10 Marks)

2) Briefly explain Architecture of Cortex m3 with suitable diagram?

(10 Marks)

3) Briefly explain Processor modes and Privilege levels of Cortex m3?

(6+4=10 Marks)

4) Briefly explain about Memory map of cortex m3 and Bus infrastructure to accesses memory Regions.

(6+4=10 Marks)

5) Write short note on following registers of ARM Cortex m3 processor?

a. xPSR
b. Control Register
c. Interrupt Mask Registers

(4+3+3=10 Marks)

6) List and explain Data Transfer OR Control Transfer OR Arithmetic, Logical instructions supported by ARM Cortex m3 processor?

(10 Marks)

7) Briefly explain I2C Data frames and also comment on advantages and disadvantages of I2C over SPI

(6 + 4=10 Marks)

8) Briefly Explain Architecture of LPC 1769 with suitable diagram and also mention steps and registers to be program and configure GPIO peripheral of LPC 1769 Microcontroller?

(10 Marks)

9) Briefly explain registers to program and Configure UART or ADC or Timer peripheral of LPC 1769

(10 Marks)

10) Write short note on Task and Queue Management using FREERTOS using suitable examples?

(10 Marks)

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