

B.TECH. SEM -VI ELECTRONICS 2014 COURSE (CBCS) :
WINTER - 2017
SUBJECT : EMBEDDED SYSTEMS

Day : **Tuesday**
Date : **21/11/2017**

W-2017-2212

Time : **10.00 AM TO 01.00 PM**
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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- Q.1** a) Compare Embedded System vs general computing system. **(04)**
- b) Define Embedded System and what are the different characteristics of Embedded System. **(06)**
- OR**
- a) Define Embedded System and give hardware components of Embedded System. **(06)**
- b) Mention different IDE's components used for programming of Embedded System. **(04)**
- Q.2** a) Differentiate between C and Embedded C. **(04)**
- b) What is priority inversion problem in RTO's and how it can be resolved? **(06)**
- OR**
- a) With reference to RTO's, explain following: **(04)**
i) Queues ii) Pipelines
- b) Explain the following: **(06)**
i) Semaphore ii) Mutex
- Q.3** a) Explain the detail 5-stage pipeline. **(06)**
- b) Explain term :CPSR register. **(04)**
- OR**
- Compare ARM7, ARM9, ARM11 series processors stating features. **(10)**
- Q.4** WAP to generate a square wave and show the interfacing of a DAC 0808 with LPC 2148. **(10)**
- OR**
- Write a program to send a SMS using GSM modem and show the interface for the same. **(10)**
- Q.5** Compare cortex A, cortex R, cortex M series processors. **(10)**
- OR**
- Draw and explain block diagram of LPC 1768. **(10)**
- Q.6** What is PWM? Write C program for PWM to drive DC motor with LPC 1768. **(10)**
- OR**
- Draw the interfacing diagram of RGB LED with LPC 1768 and also write a program to flow LED's. **(10)**

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