

Total No. of Questions : 8]

SEAT No. :

PD4635

[6404]-141

[Total No. of Pages : 2

B.E. (Electronics & Telecommunication)

EMBEDDED SYSTEM DESIGN

(2019 Pattern) (Semester - VIII) (Elective - V) (404191(D))

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of Calculator is allowed.
- 5) Assume Suitable data if necessary.

Q1) a) Describe the classification of API? [9]

b) Summarize the use of HAL library for SPI, I2C and CAN module. [8]

OR

Q2) a) Elaborate USB Modules in the STM 32F4 Microcontroller. [8]

b) Describe Hardware Abstraction Layer (HAL) drivers. [9]

Q3) a) Describe cross development compilation in detail. [9]

b) What is FreeRTOS? How FreeRTOS is configured using STM32CubeMX? [9]

OR

Q4) a) Identify in detail the role of GNU debugger. [9]

b) Describe ChibiOS and Contiki OS. [9]

P.T.O.

- Q5) a)** Elaborate how to Install Touch GFX for Graphical User Interface (GUI).[9]
- b)** Design an embedded system for Image transfer between PC and STM32F4. [8]

OR

- Q6) a)** Illustrate procedure of GUI Formation with TouchGFX for any two applications. [8]
- b)** Summarize how to Interface of SPI based graphical LCD with STM32F4.[9]

- Q7) a)** Describe Loading and interfacing methods in Embedded Android. [9]
- b)** Describe Linux Kernel. [9]

OR

- Q8) a)** Classify different android platforms used in embedded system in detail.[9]
- b)** Articulate requirements of android. [9]

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