Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SIXTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: EC308

Course Name: Embedded Systems

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks Marks

1 a) Enumerate essential functional blocks of an embedded system. (5)

b) With necessary diagrams, explain the bus architecture of ARM 9 processor. (10)

2 a) What is meant by DDLC model? Explain in detail (8)

b) Explain any two serial communication standards used in embedded systems. (7)

3 a) Compare serial communication with parallel communication (5)

b) Write short note on a) USB b) CAN (10)

PART B

Answer any two full questions, each carries 15 marks

4 a) Explain the function of device drivers for handling ISR (5)

b) With necessary diagrams,explain the events occur during an interrupt operation (10)

5 a) Explain the working of Memory device drivers. (8)

b) What are the features of Embedded C++ ? (7)

6 a) With a suitable example, differentiate between testing and validation (5)

b) What is meant by SoC? Explain with an example. (10)

PART C

Answer any two full questions, each carries 20 marks

7 a) How does an RTOS semaphore protect data? Explain by giving an example (10)

b) With suitable examples ,explain the terms i) Rate Monotonic Approach (10)

ii) EDF Approach

8 a) Explain remote procedure call with an example. (10)

b) With a diagram, explain process management in an embedded OS. (10)

9 a) Explain the memory allocation related functions of RTOS (10)

b) Explain Task Service functions in RTOS (10)

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