

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree Regular and Supplementary Examination July 2021

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

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|---|---|-----|
| 1 | a) What is an embedded system? | (3) |
| | b) Explain the frame format of HDLC protocol. | (5) |
| | c) Explain embedded system design process. | (7) |
| 2 | a) Explain about PCI and PCI-X bus. | (7) |
| | b) Explain CPU bus organization and protocol in detail. | (8) |
| 3 | a) Explain I2C serial bus protocol. | (7) |
| | b) Write short notes on a) CAN and b) ISA | (8) |

PART B*Answer any two full questions, each carries 15 marks*

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|---|---|-----|
| 4 | a) Explain in detail the device drivers for interrupt handling. | (7) |
| | b) Write short notes on white box testing. | (3) |
| | c) List the features of embedded JAVA. | (5) |
| 5 | a) Explain the working of DMA with necessary block diagram. | (7) |
| | b) Explain about SOC with example. | (5) |
| | c) What is meant by software validation? | (3) |
| 6 | a) What are the principles of software implementation? | (5) |
| | b) Explain the concept of ISR. | (7) |
| | c) Explain debugging in embedded software. | (3) |

PART C*Answer any two full questions, each carries 20 marks*

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| 7 | a) Explain about inter processor communication. | (7) |
| | b) Explain about RPC. | (6) |
| | c) Explain process management in embedded system. | (7) |

- 8 a) Explain device management in embedded system. (7)
b) What are the system level functions in embedded system? (6)
c) Discuss tasks and threads states in detail. (7)
- 9 a) Explain the different types of semaphores. (8)
b) Explain the memory allocation related function of RTOS. (7)
c) List popular RTOS with Example. (5)
