

R18

Code No: 156AV

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, February/March - 2022

EMBEDDED SYSTEM DESIGN

(Electronics and Communication Engineering)

Time: 3 Hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

1. Explain the different classification of embedded systems with an example. [15]
- 2.a) What are the operational attributes of an embedded system? Explain.
b) What are the different present technologies used in embedded systems. [10+5]
- 3.a) Differentiate Harvard and Von-Neumann architectures.
b) What are the advantages of PLDs over fixed logic devices? Explain. [8+7]
- 4.a) Classify the program storage memory and explain.
b) Explain the different external communication interfaces in brief. [8+7]
5. Explain the advantages and drawbacks of Assembly language based embedded firmware development. [15]
- 6.a) Explain the embedded firmware design.
b) Explain the following: (i) Brown-out protection circuit (ii) Real-time clock [8+7]
- 7.a) Differentiate process and thread. Write some examples.
b) What are the different types of multitasking? Explain. [8+7]
- 8.a) What are the different conditions favoring a deadlock situation? Explain.
b) Explain the role of device driver in embedded OS based products. [8+7]

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