

B. Tech. V - Sem. (Main / Back) Exam., Feb.-March - 2021
PCC/PEC Electronics & Communication Engineering
SEC 5-12 Embedded Systems

Time: 2 Hours

[To be converted as per scheme]

Max. Marks: 65

Min. Marks: 23

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Instructions to Candidates:

Attempt all five questions from Part A, four questions out of six questions from Part B and one questions out of three from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

*Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)*

1. NIL

2. NIL

PART - A

(Answer should be given up to 25 words only)

[5×2=10]

All questions are compulsory

- Q.1 Write the name of tools for designing embedded software.
- Q.2 What are the factors on which memory selection of embedded system depends?
- Q.3 What is Zigbee? Explain it.
- Q.4 What is small scale embedded system? Explain with example.
- Q.5 Differentiate between embedded systems and general purpose computing system.

PART – B

(Analytical/Problem solving questions)

[4×10=40]

Attempt any four questions

- Q.1 Explain the characteristics of embedded system.
- Q.2 Explain briefly embedded firmware development languages.
- Q.3 Discuss fundamental issues in Hardware- Software Co-Design.
- Q.4 Explain the concept of error handling in real time operating system.
- Q.5 Explain how the Product Level Communication Interface (External Communication Interface) is essential for communicating with various subsystems of embedded system.
- Q.6 Classify the embedded system based on generation with example.

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions)

[1×15=15]

Attempt any one questions

- Q.1 What are Embedded Systems? Explain embedded system design process and briefly discuss application areas for embedded systems.
- Q.2 Write a short note on real time programming languages and operating system for embedded systems?
- Q.3 In the operating system context for embedded system explain the following –
 - (a) Task scheduling
 - (b) Interrupt handling
 - (c) Memory management