



# GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

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Name of Examination : **Summer 2021** - (Preview)

Course Code & Course Name : **ET354UC - Embedded Systems**

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Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#) [Print](#) [View Answer Key](#) [Close](#) **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

- 1) Answer any two of the following.
  - a) What is Embedded system? Explain applications of embedded system in recent trends. [6]
  - b) Explain different characteristics of embedded system. [6]
  - c) Explain SPI and I<sup>2</sup>C Bus protocol? [6]
- 2) Answer the following
  - a) Explain three stage pipeline of ARM processor. [6]
  - b) Draw & Explain core Architecture of ARM processor. [6]
- 3) Answer any two of the following.
  - a) Draw & Explain Kernel Architecture. [6]
  - b) What is mean by Scheduling? Explain various scheduling algorithm. [6]
  - c) Explain Semaphores and its application in details? [6]
- 4) Answer the following
  - a) What is segmentation? Explain the concept of segmentation in memory management. [6]
  - b) Write short notes on:
    - 1.Space allocation [3]
    - 2.Demand paging [3]
- 5) Answer any two of the following.
  - a) Write short notes on:
    - 1.Program threats [3]
    - 2.System threats [3]
  - b) What is embedded Linux? Explain its various features. [6]
  - c) Explain resource management in Micro-C OS II. [6]

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