

Seat  
No.

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DFI1354

**ELECTIVE - II**  
**Embedded System**  
**(New) (1311)**

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Answer to the right indicate full marks.
5. Attempt **any two** question from each unit.

**UNIT - I**

1. a) Explain the three main processor technologies that can be used with embedded system. Also highlight benefit of each. **10**
- b) Write short note on Recent Trends on Embedded system. **10**
- c) Write short note on : **10**
  - i) CAN BUS
  - ii) I2C BUS.

**UNIT - II**

2. a) Explain any three addressing modes of ARM7. **10**
- b) Explain : **10**
  - i) Stack operation in ARM - 7.
  - ii) Draw the format of CPSR and explain C & V flags.
- c) Draw & explain 3 - stage pipeline of ARM-7. **10**

**UNIT - III**

3. a) Write a program to interface stepper motor with ARM - 7 and rotate stepper motor in clock wise direction. **10**
- b) Draw & explain Thermal printer interface and List printer operation commands. **10**
- c) Explain :
  - i) Purpose of interfacing. **5**
  - ii) Various AT commands for GSM modem. **5**

**UNIT - IV**

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|----|----|---|----|
| 4. | a) | Explain intertask communication in microc - II.   | 10 |
|    | b) | List any four feature of microc - II, Define task, which are the different states of task, Explain. | 10 |
|    | c) | Explain about context switching & priority inversion.   | 10 |

**UNIT - V**

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|----|----|--|----|
| 5. | a) | Explain virtual file system provide a switching fabric between user & file system. | 10 |
|    | b) | Write short note on thread Vs process and patches.                                 | 10 |
|    | c) | Discuss Linux Kernal problem.  | 10 |

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