

Roll No .....

**MEVD-205****M.E/M.Tech., II Semester**

Examination, December 2017

**Embedded Computing System Design***Time : Three Hours**Maximum Marks : 70*

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. a) What are the various problems that must be taken into account in embedded system?  
b) List the hardware units that must be present in the embedded systems. Explain each in detail.
2. a) What are the challenges in embedded computing system?  
b) Discuss the data operations of ARM processor.
3. a) Explain the meaning of these ARM condition codes.  
i) EQ                      ii) NE  
iii) MI                    iv) VS  
v) GE                     vi) LT  
b) Explain the memory organisation in embedded system.
4. a) Explain the data compression technique in embedded system.  
b) What are the sources of power consumption in CMOS based CPU? Explain briefly.

5. a) How the CPU performance can be improved by execution and caching.  
b) How the size of program can be optimized? Describe any one technique for code compression.
6. a) How the program size and execution time affects CPU performance?  
b) Write a technical note on models of program.
7. a) Discuss the quality assurance and various techniques of quality assurance in brief.  
b) Explain the case study of an embedded system for a networking and internet enabled system.
8. Write short notes on any two:  
a) CPU BUS protocols  
b) Automobile application of embedded system  
c) Debugging

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