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Total No. of Pages : 02

Total No. of Questions : 08

M.Tech. (Emb. Sys.) (2018 Batch) (Sem.-1)
PROGRAMMING LANGUAGES FOR EMBEDDED SOFTWARE

Subject Code : MTES-101-18

M.Code : 75808

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.

2. Each question carries TWELVE marks.

- Q1 (a) What are the challenges and various issues in embedded software development? Explain code optimization issues for writing LCD drivers. 6
- (b) What are the different methods and cycles involved in embedded software development? Explain various phases of the agile model. 6
- Q2 (a) Explain the basic concepts of object-oriented programming. Define inheritance and polymorphism with suitable examples. 6
- (b) Make a program for addition, multiplication, subtraction and division operations as per choice in C using switch statement. 6
- Q3 (a) Describe the role of keywords try, catch and throw in exception handling. What do you mean by re-throwing of an exception in context of C++? Explain your answer with suitable code. 6
- (b) What are the advantages of multilevel inheritance? Explain using an example. 6
- Q4 (a) What do you mean by operator overloading? Explain overloading of 'new' and 'delete' operators. 6
- (b) Write a program in C++ to overload the binary operator "+". What are pointers, void pointer and this pointer in C++? 6
- Q5 (a) What is difference between programming and scripting languages? How many types of primary data structures in PERL? Explain each with example. 6

- (b) What is difference between malloc and calloc? How can you determine the size of an allocated portion of memory? 6
- Q6 (a) What is inter process communication and how does it work? Explain the difference between thread communication and process communication with suitable example. 6
- (b) What is Java Script? Enumerate the differences between Java and Java script. 6
- Q7 (a) Explain abstraction and encapsulation with an example. Write a C program which deletes the duplicate element of an array. 6
- (b) What are function template and class template? Explain member function template and template arguments. 6
- Q8 Write short notes on **Any Two** of the following :
- (a) Static versus dynamic memory allocation 6
- (b) Code optimization issues in embedded software 6
- (c) Data abstraction and information hiding 6

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.