

Roll No.

23066

M. Tech. 1st Sem. (Computer Engg.)

Examination – January, 2016

COMPUTER SYSTEM SOFTWARE

Paper : MTCE-601-A

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) What is Object Oriented Programming ? How it is beneficial over other programming techniques ?
Explain. 10
- (b) Differentiate between class and object. Explain with example how they are created and used ? 10
2. (a) What is a virtual function ? What are the advantages of declaring a virtual function ?
Explain with the help of an example. 10

- (b) Differentiate between : 5 + 5 = 10
- (i) Multi-level and Multiple Inheritance.
 - (ii) Encapsulation and Abstraction.
3. (a) What do you mean by Nested State Diagrams and State Generalization ? Explain with example. 10
- (b) Differentiate between the terms association and aggregation with relevant examples.
4. (a) Write short note on : 5 + 5 = 10
- (i) Deployment Diagrams.
 - (ii) Collaboration Diagrams.
- (b) What do you understand by Interaction Diagrams ? Explain their purpose with suitable example. 10
5. (a) State and explain the Open-Close Principle. 10
- (b) Discuss the Liskov's Substitution Principle along with its advantages. 10
6. (a) Differentiate between : 5 + 5 = 10
- (i) Linker and Loader.
 - (ii) Absolute Loader and Relation Loader.
- (b) Explain the working of Macroprocessor with example. 10

7. (a) What are the different phases of a Compiler ?
Explain each phase. 10
- (b) Draw and explain the flow-chart of Pass - I of Assembler. 10
8. Write short note on the following :
- (a) Template, 7
 - (b) Function Over-riding, 7
 - (c) Dynamic Linking. 6