

SARDAR PATEL UNIVERSITY
M. Sc. (IT) INTEGRATED EXAMINATION, VII SEM

Date : 17th OCT 2016, Monday
Session : ~~Evening~~
Course No : PS07CIIT01

Time : 2:00pm To 05:00pm
Sub: System Software
Total marks : 70

Q – 1 Select an appropriate option [08]

- i) _____ part of compilation creates an intermediate representation of the source program.
a) Analysis b) Synthesis c) Execution d) All of above
- ii) The gap between Application PL domain and Execution domain is called _____.
a) Execution gap b) Application Gap c) Specification Gap d) Semantic gap
- iii) _____ data structure is used in synthesis phase.
a) DFD b) Symbol table c) Name table d) All of above
- iv) Mnemonic has _____ primary fields.
a) Name and Address b) Mnemonic and opcode
c) Mnemonic and name d) Name and opcode
- v) Word processors are also called _____ editors.
a) Screen b) Structure c) Document d) Stream
- vi) A _____ performs relocating while loading a program for execution.
a) Relocating linker b) Relocating Translator c) Relocating loader d) None
- vii) _____ supports program coding by incorporating awareness of the program language syntax and semantics in the language editors.
a) Program Generator b) Language processor
c) Software tools d) Program Environment
- viii) _____ helps in obtaining information for localization of errors.
a) Translator b) Profile monitor c) Editors d) Debug Monitors

Q – 2 Answer the following Questions (Any SEVEN) [14]

- i) Define system software and write types of software
- ii) Define specification Gap and Execution Gap.
- iii) Differentiate between Assembler, Compiler and Interpreter
- iv) List the tasks performed by the passes of a two pass assembler
- v) What is Condition code? How it is tested?
- vi) Differentiate between linking and loading
- vii) Why origin of a program may have to be changed by the linker or loader?
- viii) List down components of program environment.
- ix) Explain the factor on which efficiency of programs depends.

Q – 3 a) What is Language processing? Explain Application, PL & Execution domain. [06]
b) List the phases of a compiler and explain synthesis part of it in detail. [06]

OR

Q – 3 b) Explain software tools that manipulate source programs [06]

Q – 4 (a) Describe Pass I assembler, Processing of Declaration and Assembler directives. [06]

(b) What is assembly language? Explain the three basic facilities of assembly language. [06]

OR

Q – 4 (b) What is an expression tree? How an expression is evaluated using an expression tree? Discuss its advantages over the other evaluation techniques. [06]

- Q – 5 a) Discuss various steps for execution of program written in a programming language. [06]
b) Explain Translated, Linked and Load time address. [06]
- OR**
- Q – 5 b) Explain different editors in detail. [06]
- Q – 6 a) Explain Program Testing, Debugging with how to produce debug information [06]
b) Which are the four basic categories in which programming environment can be classified? Explain each in brief. [06]
- OR**
- Q – 6 b) What is software tools? Discuss different software tools for programming development. [06]

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