

(6 pages)

Reg. No. :

Code No. : 7919

Sub. Code : H CAM 15

M.C.A. DEGREE EXAMINATION, NOVEMBER 2015.

First Semester

Computer Applications

SYSTEM SOFTWARE

(For those who joined in July 2012 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A system program that combines the separately complied modules of a program into a form suitable for execution?
 - (a) Assembler
 - (b) Linking loader
 - (c) Cross compiler
 - (d) Load and Go

2. Daisy chain is a device for?

- (a) Interconnecting a number of devices to number of controllers
- (b) Connecting a number of devices to a controller
- (c) Connecting a number of controller to devices
- (d) All the above

3. Software is to developed for a system which has a small memory. The software should?

- (a) Use recursion whenever possible
- (b) Avoid using recursion
- (c) Use macros instead of functions
- (d) B and D

4. What is bootstrapping?

- (a) A language interpreting other language program
- (b) A language compiling other language program
- (c) A language compile itself
- (d) All of above

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5. Pass 1
- (a) Assign address to all statements in the program
 - (b) Save the values assigned to all labels for use in pass 2
 - (c) Perform some processing of assembler directives
 - (d) All of these
6. Loader is a program that
- (a) Places program into memory and prepares them for execution
 - (b) Automates the translation of assembly language into machine language
 - (c) Accepts a program written in a high level language and produces an object program
 - (d) Appears to execute a source program as if it were machine language
7. Which of the following is not a type of assembler?
- (a) One pass
 - (b) Two pass
 - (c) Three pass
 - (d) Load and Go
8. Loading process can be divided into two separate programs, to solve some problems. The first is binder the other is?
- (a) Linkage editor
 - (b) Module Loader
 - (c) Relocator
 - (d) None of these

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9. The Linker?
- (a) Is same as the loader
 - (b) Is required to create a load module
 - (c) Is always used before program are executed
 - (d) None of above
10. Which of the following system software resides in main memory always?
- (a) Text editor
 - (b) Assembler
 - (c) Linker
 - (d) Loader

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the SIC machine architecture.
- Or
- (b) Discuss some of the instruction sets with examples.
12. (a) Explain some of the functions of assembler.
- Or
- (b) Discuss about any one machine independent assembler features.

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13. (a) Explain the design of an absolute loader.

Or

- (b) Discuss the concepts of dynamic linking.

14. (a) Enumerate keyword macro parameters.

Or

- (b) Write a note on language translator in macro processing.

15. (a) Give the various functions of text editor.

Or

- (b) Discuss about debugging functions and capabilities.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain SIC instruction and its addressing modes in detail.

Or

- (b) Write SIC programming for looping and indexing operations.

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17. (a) Explain the various machine independent assembler features.

Or

- (b) With suitable examples, explain about one pass assembler.

18. (a) Explain the basic functions of loader.

Or

- (b) Discuss about program linking features of machine dependent loader.

19. (a) Describe the conditional macro expansion in macro processor.

Or

- (b) Discuss about ANSI C macro language.

20. (a) Explain the overview of editing process.

Or

- (b) Describe about interactive debugging systems.

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