

Seat No. : _____

AM-128

April-2016

M.Sc., Sem.- VI (C.A. & I.T.)

System Software

Time : 3 Hours]

[Max. Marks : 100

1. Answer the following questions (any **four**) : **20**
 - (a) What is system software ? Write down examples of system software and its functions.
 - (b) Explain front end operation of compiler with example.
 - (c) What are the problems of language processor ? How to overcome that problem ?
 - (d) Write a short note on Editors.
 - (e) What is software tool ? Explain debug monitor.

2. Answer (any **four**) : **20**
 - (a) Explain read entry point of character device driver and strategy entry point of block device drivers with example.
 - (b) Differentiate Variant – I and Variant – II of assembler intermediate code.
 - (c) Explain listing and error reporting with example.
 - (d) Explain function of all advanced assembler directives.
 - (e) Explain device driver installation in detail.

3. Answer the following questions (any **five**) : **20**
 - (a) Define Macro. Explain lexical expansion and semantic expansion with example.
 - (b) Explain types of parameters with example.
 - (c) Summarized data structure / tables used in macro processor with example.
 - (d) Explain macro expansion algorithm.
 - (e) Define interpreter. And benefits of interpretation.
 - (f) Explain in detail pure and impure interpreters.

4. Answer the following questions (any **five**) : **20**
- (a) Explain recursive specification of grammar with example.
 - (b) Explain LL1 parsing without back tracking using parsing table.
 - (c) Explain LEX in detail.
 - (d) Explain extended stack data structure and its use with example.
 - (e) Explain with example different code optimization techniques.
 - (f) Write down the comparison between execution and expansion time loop with example.
5. (A) Answer the following questions : **12**
- (a) Define :
 - (i) Translation time address
 - (ii) Public Definition
 - (b) Define :
 - (i) External Reference
 - (ii) Non Re-locatable programs
 - (c) Explain linking for overlays with example.
 - (d) Define :
 - (i) Relocating loader
 - (ii) Absolute loader
- (B) Answer the following (any **two**) : **8**
- (a) Explain Compile and Go, Bootstrap, General, Direct linking loader in detail.
 - (b) Write down relocation algorithm and data structure used in linking.
 - (c) Write down Program linking algorithm with data structure.
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