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Roll No .....

MCSE-204

M.E./M.Tech. II Semester

Examination, December 2016

System Programming

Time : Three Hours

Maximum Marks : 70

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

1. a) Specify all the steps in producing a single pass assembler and give the detailed flow chart?
   b) Describe tasks and data structures considered for the design of a macro preprocessor.

2. a) Define forward references. How it can be solved using back-patching? Explain with example.
   b) What are the issues in code generation in relation to compilation of expression? Explain each issue in brief?

3. a) Explain design of linker by addressing issues of relocation and linking.
   b) Write goals of distributed operating system and discuss its design issues.

4. a) Discuss code generation for pipelined machines.
   b) Describe about Andrew operating system.

5. a) Discuss issues related to file system reliability?
   b) List the kernel actions necessary to support virtual memory operation. Explain why these can not be performed in the non kernel mode?

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6. a) What is dynamic compilation? List out the key advantages of dynamic compilation.
   b) Discuss Code Generator Generators (CGGs).

7. a) What are the advantages and disadvantages of distributed shared memory? Explain.
   b) Describe structure of multiprocessor operating system.

8. Write short notes on the following :
   a) Access matrix model
   b) Remote procedure call
   c) Process synchronization
   d) Distributed scheduling

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