

Exam. Code : 206703

Subject Code : 4670

M.Sc. Computer Science 3<sup>rd</sup> Semester

SYSTEM SOFTWARE

Paper—MCS-302

[Time Allowed—3 Hours] [Maximum Marks—100]

**Note** :— Attempt any **FIVE** questions. All questions carry equal marks.

1. (a) What is System Software ? Explain its various components. 3+7
- (b) Draw difference between "Translators" and "Assemblers". 10
2. (a) Why assemblers are used ? Explain the working of "One-pass" assemblers in detail. 3+7
- (b) What is macroprocessor ? How the "generation of unique labels" is carried-out ? Explain. 3+7
3. (a) Define "Macro Expansion". Explain recursive macro expansion in detail. 3+7
- (b) Draw difference between "Interpreters" and "Compilers". 10
4. (a) Explain the various phases of Compilation Process. 10
- (b) Explain "Incremental" and "P-code" compilers in detail. 5+5

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5. (a) Explain the salient features of "Loaders" in detail. 10
- (b) Explain "Relocation" and "Program Linking" in detail. 10
6. (a) Write a brief note on linkage editors. 10
- (b) Explain important characteristics of operating system in detail. 10
7. (a) Explain what is DBMS. Also explain its various components. 3+7
- (b) Write elaborated note on "Interactive Debugging Systems". 10
8. Write short notes on any **TWO** :
- (a) Text-editors
- (b) Evolution of System Software
- (c) "Storage Management" for Compilers.  $10 \times 2 = 20$