

Exam. Code : 206703

Subject Code : 5196

M.Sc. Computer Science 3rd Semester

MCS-302 : SYSTEM SOFTWARE

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt any *five* questions in all. All questions carry equal marks.

1. (a) Define system software. How it has evolved over the time period ? Also explain various components of system software. 2+4+4
(b) Write briefly about interpreters and assemblers. 5+5
2. (a) How assembly process is carried-out ? Explain the design of one pass with example. 3+7
(b) What are microprocessors ? Explain their usage along with example. 3+7
3. (a) How macro parameters are defined and implemented ? Explain with example for any operation of your choice. 5+5
(b) What do you mean by macro expansion ? Explain its various types along with suitable illustration. 3+7
4. (a) Why compilers are required ? Explain its various phases. 3+7
(b) Draw comparison of Cross and P-code Compilers. 5+5

5. (a) Why program linking is required before execution ? How it is carried out through linkage editors ? Explain. 4+6
- (b) Explain few basic loader functions along with their importance. 10
6. (a) Define operating system. Explain its salient features. 10
- (b) Why DBMS are required ? Explain various functions and parts in detail. 10
7. (a) Why "Text Editors" are called system software ? Explain in detail. 10
- (b) Define debugging. How it can be carried out through debugging systems ? Explain. 10
8. Write short notes on :
- (a) Storage Management for Compilers
- (b) Bootstrap Loaders. 10×2=20