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**AA—30—2019**

**FACULTY OF COMPUTER SCIENCE**

**B.Sc. (Third Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2019**

**(Revised Course)**

**COMPUTER SCIENCE**

**Paper I**

**(System Programming and Operating System)**

**(Wednesday, 16-10-2019)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—3 Hours*

*Maximum Marks—80*

*N.B. :— (i) All questions are compulsory.*

*(ii) Draw diagram wherever necessary.*

1. Attempt the following : 20

(a) Explain application software and system software.

(b) Explain advantages of assembler.

(c) What is interpreter ?

(d) Explain elements of assembly language programming.

2. (a) Explain pass structure of assembler. 8

(b) Explain design of editor. 7

*Or*

(c) Explain elements of programming language environment. 8

(d) Explain data structure of assembler. 7

3. (a) What is macro ? Explain macro expansion. 8

(b) Explain compilation of expression. 7

**P.T.O.**

Or

- (c) Explain expansion time variable with example. 8
- (d) Explain design of macro pre-processor. 7
4. (a) Explain code optimization with its advantages. 8
- (b) Explain data structure used for macro preprocessor. 7
- Or
- (c) Explain phases of compiler. 8
- (d) Explain design of editor. 7
5. Write notes on (any *three*) : 15
- (a) Nested macro calls
- (b) Advanced assembler directives
- (c) Constant and literals
- (d) Advance text editor
- (e) Preprocessor.