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AA—47—2019

FACULTY OF SCIENCE

B.Sc. (CS) (Second Year) (Fourth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CBCS Pattern)

COMPUTER SCIENCE

(S4.4)

(Compiler Design)

(Friday, 22-11-2019)

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

Time—3 Hours

Maximum Marks—75

- N.B. :—*
- (i) All questions are compulsory.
 - (ii) Figures to the right indicate full marks.
 - (iii) Assume suitable data, if necessary.

1. Attempt any *five* of the following : 15

- (a) Explain need of translators.
- (b) Explain high level programming languages.
- (c) What is input buffering ?
- (d) Explain context free grammar.
- (e) What is intermediate code ?
- (f) Explain lexical-phase errors.
- (g) Explain code generation in compiling.

2. Attempt any *two* of the following : 10

- (a) Describe phases of a compiler.
- (b) Explain a simple one pass compiler.
- (c) Write any *three* differences between compilers and translators.

P.T.O.

3. Attempt any *two* of the following : 10
- (a) Explain the lexical and syntactic structure of a language.
 - (b) Explain operators in detail.
 - (c) Explain statements in detail.
4. Attempt any *two* of the following : 10
- (a) Explain finite automata concept.
 - (b) Explain role of a Lexical Analyzer.
 - (c) Describe simple approach to the design of Lexical Analysis.
5. Attempt any *two* of the following : 10
- (a) Explain predictive parsers in detail.
 - (b) Explain top-down parsing concept.
 - (c) Describe the role of parser in detail.
6. Attempt any *two* of the following : 10
- (a) Explain syntax directed definitions.
 - (b) Explain evaluation of postfix notation.
 - (c) Describe parse trees with one example.
7. Attempt any *two* of the following : 10
- (a) Describe semantic errors.
 - (b) Explain loop optimization concept.
 - (c) Explain syntactic phase errors.