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**BO—09—2016**

**FACULTY OF COMPUTER STUDIES  
B.C.A. (Fifth Semester) EXAMINATION  
OCTOBER/NOVEMBER, 2016  
(Revised Course)  
COMPUTER APPLICATION**

Paper S5.2

(Principles of Compiler Designing)

**(Saturday, 19-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time— Three Hours*

*Maximum Marks—80*

*N.B. :— (i) Question No. 1 is compulsory.*

*(ii) Figures to the right indicate full marks.*

*(iii) Assume suitable data, if necessary.*

1. Attempt the following : 20
  - (a) Discuss the structure of compiler.
  - (b) What is symbolic table ?
  - (c) Explain data element.
  - (d) Discuss in brief token.
  
2.
  - (a) What is various types of intermediate code representation. 8
  - (b) Distinguish between compiler and interpreter. 7

*Or*

  - (c) Explain various data structure. 8
  - (d) Discuss in detail regular expression. 7
  
3.
  - (a) Explain the code optimization in detail. 8
  - (b) What is bottom up parsing ? Discuss it. 7

*Or*

  - (c) Discuss shift reduce parsing. 8
  - (d) Explain an automatic parser generation work in detail. 7

P.T.O.

4. (a) Discuss operator precedence parser. 8
- (b) List the properties of LR parser. 7
- Or*
- (c) What is derivation and parse tree ? 8
- (d) What are capabilities of context free grammars ? 7
5. Write short notes on (any *three*) : 15
- (a) Optimization
- (b) Assembler
- (c) Top-down parsing
- (d) Code generation
- (e) Assignment.