



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examination 2022

(Under CBCS Pattern)

Semester - VI

Subject: COMPUTER SCIENCE

Paper: DSE 4 - T

Full Marks : 40

Time : 2 Hours

Candidates are required to give their answer in their own words as far as practicable.

The figures in the margin indicate full marks.

SYSTEM PROGRAMMING

Group - A

Answer any *four* of the following :

5×4=20

1. (a) What is cross compiler ?

(b) What is LR parser ?

(c) Write down the advantages of LR parsing.

1+2+2

2. (a) Write down the role of a lexical analyzer.

(b) Define tokens, patterns and lexemes.

2+3

3. Explain absolute loader and list its limitations. 5
4. Explain databases used in pass1 and pass2 assemblers. 5
5. (a) What is binding ?
- (b) Write the difference between static binding and dynamic binding. 2+3
6. Compute FIRST and FOLLOW set of the following grammar.

$S \rightarrow ACB/CbB/Ba$

$A \rightarrow da/BC$

$B \rightarrow g/\varepsilon$

$C \rightarrow h/\varepsilon$

5

Group - B

Answer any *two* of the following : 10×2=20

7. (a) What is three address code ?
- (b) Translate the expression
- $x=y* - z+y* - c$ into,
- (i) Quadruples
- (ii) Triples
- (iii) Indirect Triples
- (c) What is DAG ? 2+6+2
8. (a) What is a compiler ?
- (b) Write down the phase of compiler. Discuss each phase with suitable example. 2+8
9. (a) State two advantages and disadvantage at load time over binding at assembly time.
- (b) Describe the difference between static linking and dynamic linking. 4+6
10. Write short notes on (any *four*) : 2½×4=10
- (a) Parse Tree
- (b) Symbol Table

- (c) Left-factoring
 - (d) Ambiguous grammar
 - (e) Dynamic linking
 - (f) Text editor
 - (g) Top-down parsing
 - (h) Left recursion
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OR

DATA MINING

Answer any *four* questions from Group - A and *two* questions from Group - B.

Group - A

1. Discuss the unsupervised learning technique. 5
2. What is predictive data mining technique ? Write down its advantages. 5
3. What are differences between classification and clustering ? 5
4. Explain the concept of regression in data mining. 5
5. What is outlier in data mining ? 5
6. Describe the hierarchical clustering technique in data mining. 5

Group - B

7. Describe Association Rule Mining technique. 10
 8. Explain any classification algorithm. 10
 9. Discuss K-Means Clustering algorithm. 10
 10. Briefly describe the regression technique in data mining. 10
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