

Sant Lal Institute of Management and Information Technology

Internal Assignment

MCA 4th Sem

Visual Basic 6.0

Q1. What do you understand by object oriented programming? Explain the different

Feature of the object oriented programming and how it is better than procedure oriented

Programming compare?

Q2. What do you understand by data base management system? Explain five approaches

For connecting database with example using appropriate code.

Q3. What is the goal of a report and how can you manage reporting in vb explain with

Example. Are you agreeing VB is an event base programming proves your answer?

Q4.

Roll: 106 (input), 106 (dropdown)

Name: sandip (input)

City: alid (input)

Total Records: 7

Buttons: Add, Delete, Update, Find

| roll | name | city |
|------|-------------|---------------|
| 104 | ram kumar | allhabad |
| 105 | mohan | alh |
| 106 | sandip | alid |
| 101 | sona kunari | sigra varanas |
| 106 | ramesh | vns |
| 107 | mukesh | vns |
| 106 | sandip | alid |
| * | | |

Write the separate code for each button

1. Drop down list saves the current roll number and update automatically when any
2. record adds or delete.
3. Total record should be show total no. of record.
4. Update gridview value when table get changed.

Q5. Write brief note on following

- a) Dynamic Link Library
- b) Active X control
- c) OLEDB
- d) Package and deployment
- e) COM –DECOM

Operation research

Q 1 : What is operation research? Write the application of operation research.

Q 2 : Solve using the Graphical method the following problem:

$$\text{Maximize } Z = f(x,y) = 3x + 2y$$

$$\text{subject to: } 2x + y \leq 18$$

$$2x + 3y \leq 42$$

$$3x + y \leq 24$$

$$x \geq 0, y \geq 0$$

Q 3 : solve the following problem using simplex method

$$\text{maximize } -x_1 + 3x_2 - 3x_3$$

$$\text{subject to } 3x_1 - x_2 - 2x_3 \leq 7$$

$$-2x_1 - 4x_2 + 4x_3 \leq 3$$

$$x_1 - 2x_3 \leq 4$$

$$-2x_1 + 2x_2 + x_3 \leq 8$$

$$3x_1 \leq 5$$

$$x_1, x_2, x_3$$

Q 4 : A typical transportation problem is shown in below. It deals with sources where a supply of some commodity is available and destinations where the commodity is demanded. The classic statement of the transportation problem uses a matrix with the rows representing sources and columns representing destinations. The algorithms for solving the problem are based on this matrix representation. The costs of shipping from sources to destinations are indicated by the entries in the matrix. If shipment is impossible between a given source and destination, a large cost of M is entered. This discourages the solution from using such cells. Supplies and

demands are shown along the margins of the matrix. As in the example, the classic transportation problem has total supply equal to total demand.

| | D1 | D2 | D3 | Supply |
|--------|----|----|----|--------|
| S1 | 3 | 1 | M | 5 |
| S2 | 4 | 2 | 4 | 7 |
| S3 | M | 3 | 3 | 3 |
| Demand | 7 | 3 | 5 | |

Q5 : write about assignment problem.

Artificial intelligence

Q. What is artificial intelligence?

Q. What about other comparisons between human and computer intelligence?

Q. What is the Turing test?

Q. What about parallel machines?

Q5. Write down brief notes on following

- Knowledge representation
- Expert System
- Inductive logic
- Bayesian Networks
- Natural Language Processing

Software Engineering

Q1. What do you understand by SDLC explain different phases of SDLC.

Q2. What is testing? How many type of testing used in software engineering?

Q3. Discuss various steps in requirement analysis?

Q4. What are design verification and its importance?

Q5. Write Brief notes on following...

- Software Metric
- Feasibility Study
- Requirement Analysis
- Top down/ Bottom up design E. Decomposition Techniques

Compiler Design

Q 1. what is compiler?explain the concept of lexical analyzer.

Q 2. Describe the phases of compiler.

Q 3. Draw the finite automata for $(0+1)^*(000+111)(0+1)^*$.

Q 4. Write short notes on following

- Tokens
- Lexemes
- Patterns
- Left recursive grammar
- Write about parser and its types.