Assignment 4th semester

Java Programming

1. What are JDK, JRE, and JVM?
2. What is a parameterized constructor? Explain with an example.
3. Explain Thread's life cycle with an example.
4. What are Applets? Explain Applets life cycle.
5. Explain Super keyword, Abstract keyword, and Final keyword in Java.
6. Write the structure of a typical Java Program.
7. What is interface? Why they are used in Java? Explain.
8. What is method overloading in Java?
9. Explain the concept of inheritance in Java with an example.
10. What is an array explain its type write a program to sum of 5 digit number using array.

Web Technology with PHP & MySQL

1. What do you understand by PHP? Explain it with its features.
2. What is file? How is it different from a dictionary?
3. What is a recursion? Justify with the syntax of PHP if recursion causes to add complexity.
4. What is debugging? Explain it's working with an example
5. What is cookies? Write the syntax for the following: -
   (i) Setting a Cookie
   (ii) Deleting a Cookie
   (iii) Creating a Session
6. What is the decision-making statement? Explain with example.
7. How can I access form data in PHP?
8. What is RDBMS with example?
9. Write a short note on the following DDL functions
   (i) Create
   (ii) Alter
   (iii) Drop
10. What is the difference between DDL and DML?

Artificial Intelligence

1. Explain the concept of AI and define its characteristics.
2. What is Natural Language Processing? It's needs, goals, and fundamental Problems.
3. What is speech recognition? Explain its Advantages and Approaches.
4. What is ambiguity and disambiguation?
5. Explain the following: -
   (i) communication
   (ii) Information Retrieval
   (iii) Information Extraction
6. Explain the applications of Artificial Intelligence (AI).
7. What is an expert system?
8. Elaborate the following in brief: -
   (i) Intelligence
   (ii) Knowledge
9. Explain search algorithm terminology/
10. Explain the features/characteristics of Expert System.

Computer Network

1. What are the advantages of computer networks? Explain its components also.
2. Explain network software and its functions.
3. What do you understand by protocol? Explain software protocol hierarchy.
4. What are the different network topologies? Explain any three of them.
5. What are different routing Algorithms? Discuss.
6. What are the different transmission modes? Explain.
7. What do you understand by data communication?
8. Explain the following: -
   (i) Coaxial Cable
   (ii) Optical Fiber
9. What do you understand by bandwidth?
10. What is multiplexing?

Optimization Techniques

1. Define O.R. and discuss its characteristics.
2. Explain the following terms: -
   (i) Optimum Solution
   (ii) Feasible Solution
   (iii) Canonical form of L.P.P.
3. Use the simple method to solve L.P.P.
   Max. $Z = 3x_1 + 2x_2$
   Subject to the constraints
   $x_1 + x_2 \leq 4$, $x_1 - x_2 \leq 2$
   and $x_1 \geq 0$, $x_2 \geq 0$
4. What is sequencing? Define it.
5. Discuss merits of L.P.P. and Limitations of L.P.P.
6. Explain Slack variable and surplus variable.
7. What are the similarities between transportation and assignment Technique?
8. Use the graphical method in solving the following game: -

	Player B		
Player A	3	−3	4
	−1	1	−3

9. What is game theory?
10. Explain algebraic method of solving 2 * 2 games.

	Player B		
		I	II
Player A	I	a	b
	II	c	d