



**Tamil Nadu Open University**  
**School of Computer Science**  
**Chennai – 15**

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Programme Code No : 172  
Programme Name : Bachelor of Computer Applications-LE  
Course Code & Name : BCA-13 & TCP / IP Programming  
Batch : AY 2020-21 (2<sup>rd</sup> Year)  
No. of Assignment : One Assignment for Each 2 Credits  
Maximum CIA marks : 15 (Average of Total No. of Assignments)

**ASSIGNMENT – 1**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Explain in detail about TCP/IP layering.
2. Explain in detail about Subnet Addressing.
3. Illustrate the features of TCP in detail.

**ASSIGNMENT – 2**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Explain in detail Client Server Model.
2. Discuss the different classes of IP address with examples.
3. Explain in detail UDP Port Numbers.

**ASSIGNMENT – 3**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. How is connection established in TCP? Discuss the same briefly.
2. What is RARP? Discuss.
3. Write short notes on the following :
  - i. Features of UDP.
  - ii. Internet Multi Casting.



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Programme Code No	: 172
Programme Name	: Bachelor of Computer Applications-LE
Course Code & Name	: BCA-14 & C++ and Object Oriented Programming
Batch	: AY 2020-21 (2 <sup>rd</sup> Year)
No. of Assignment	: One Assignment for Each 2 Credits
Maximum CIA marks	: 15 (Average of Total No. of Assignments)

**ASSIGNMENT – 1**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. What is a manipulator? Explain the use of I/O manipulators with example.
2. Explain the different types of Arrays in detail.
3. Describe the various file stream classes.

**ASSIGNMENT - 2**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. List out the various control structures available in C++. Give an example
2. What is a constructor? Explain the different types of constructors.
3. Explain Unified Modeling Language in detail.

**ASSIGNMENT – 3**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. What is inheritance? Explain with an example
2. Discuss about command-line arguments with an example.
3. How is polymorphism achieved at
  - (a) Compile time
  - (b) Run time – Discuss.



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Programme Code No	: 172
Programme Name	: Bachelor of Computer Applications-LE
Course Code & Name	: BCA-15 & Theory of Computer Science
Batch	: AY 2020-21 (2 <sup>rd</sup> Year)
No. of Assignment	: One Assignment for Each 2 Credits
Maximum CIA marks	: 15 (Average of Total No. of Assignments)

**ASSIGNMENT – 1**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Explain the Various Functions in detail.
2. Explain the various Forms in detail.
3. Explain Turing Machines with examples.

**ASSIGNMENT - 2**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Discuss about the different Statement in detail.
2. Discuss about Grammar and its types in detail.
3. Explain digraph with example.

**ASSIGNMENT - 3**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Explain the WARSHALL Algorithm in detail.
2. What is an equivalence class? Explain.
3. Construct an FA for  $a^*/ba^*b$



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Programme Code No	: 172
Programme Name	: Bachelor of Computer Applications-LE
Course Code & Name	: BCA-16 & Introduction to Internet Programming
Batch	: AY 2020-21 (2 <sup>rd</sup> Year)
No. of Assignment	: One Assignment for Each 2 Credits
Maximum CIA marks	: 15 (Average of Total No. of Assignments)

Max : 15 marks

**ASSIGNMENT - 1**

**Answer any one of the question not exceeding 1000 words**

1. Discuss the various operators available in java.
2. What is a constructor? Explain the different types of constructors with examples.
3. What is meant by Multithreading? Explain with an example.

**ASSIGNMENT - 2**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Explain the various control structures implemented in Java with illustrations.
2. Explain Wrapper classes and Inner classes in detail.
3. What are the two ways of creating threads? Give example.



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Programme Code No	: 172
Programme Name	: Bachelor of Computer Applications-LE
Course Code & Name	: BCA-17 & Intranet Administration
Batch	: AY 2020-21 (2 <sup>rd</sup> Year)
No. of Assignment	: One Assignment for Each 2 Credits
Maximum CIA marks	: 15 (Average of Total No. of Assignments)

Max : 15 marks

**ASSIGNMENT - 1**

**Answer any one of the question not exceeding 1000 words**

1. Explain briefly hardware and software requirements for intranet and list out its application areas.
2. Explain in detail about firewalls.
3. Write in detail about intranet administration.

**ASSIGNMENT - 2**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Explain in detail web servers.
2. Briefly describe the working of service protocols.
3. Discuss how the technology works in mobile phones.



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Programme Code No : 172  
Programme Name : Bachelor of Computer Applications-LE  
Course Code & Name : BCA-18 & Management Principles and Techniques  
Batch : AY 2020-21 (2<sup>rd</sup> Year)  
No. of Assignment : One Assignment for Each 2 Credits  
Maximum CIA marks : 15 (Average of Total No. of Assignments)

**ASSIGNMENT – 1**

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Solve the following LPP Graphical method

Maximize  $Z = 40x_1 + 100x_2$

subject to

$$12x_1 + 6x_2 \leq 3000$$

$$4x_1 + 10x_2 \leq 2000$$

$$2x_1 + 3x_2 \leq 900$$

$$x_1, x_2 \geq 0.$$

2. Solve the Transportation problem by Vogels method and Modi method

		Destination				
		1	2	3	4	Availability
Sources	1	21	16	25	13	11
	2	17	18	14	23	13
	3	32	27	14	41	19
Requirement		6	10	12	15	43

3. Explain the Dual Simplex algorithm in detail.

## ASSIGNMENT - 2

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. The cost of a machine is Rs. 6,100 and its scrap value is Rs. 100. The maintenance costs bound from experience are as follows

Year	1	2	3	4	5	6	7	8
Maintenance cost (Rs.)	100	250	400	600	900	1200	1600	2000

When should the machine be replaced?

2. Solve the following LPP by Simplex method

$$\text{Maximize } Z = x_2 - 3x_3 + 2x_5$$

subject to

$$3x_2 - x_3 + 2x_5 \leq 7$$

$$-2x_2 + 4x_3 \leq 12$$

$$-4x_2 + 3x_3 + 8x_5 \leq 10$$

$$x_2, x_3, x_5 \geq 0.$$

3. Explain about Group Replacement policy.

## ASSIGNMENT - 3

Max : 15 marks

**Answer any one of the question not exceeding 1000 words**

1. Discuss about Replacement situations.
2. Explain the procedures in PERT/CPM.
3. Explain the formulation of Linear Programming Model.