



**Tamil Nadu Open University**  
**School of Computer Science**  
**Chennai – 15**  
**HOME / SPOT ASSIGNMENT**

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| Programme Code No  | : 171                                      |
| Programme Name     | : Bachelor of Computer Applications        |
| Course Code & Name | : BCA-13 & TCP / IP Programming            |
| Batch              | : CY 2019 (3 <sup>rd</sup> Year)           |
| No. of Assignments | : One Assignment for Each 3 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. Illustrate the features of TCP in detail.
2. Explain in detail about TCP/IP layering.
3. Explain in detail about Subnet Addressing.

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



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Programme Code No : 171  
Programme Name : Bachelor of Computer Applications  
Course Code & Name : BCA-14 & C++ and Object Oriented Programming  
Batch : CY 2019 (3<sup>rd</sup> Year)  
No.of Assignments : One Assignment for Each 3 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.Describe the various file stream classes.
3. Explain the different types of Arrays in detail

**ASSIGNMENT - 2**

**Max: 15 marks**

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

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

**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 : 171  
Programme Name : Bachelor of Computer Applications  
Course Code & Name : BCA-15 & Theory of Computer Science  
Batch : CY 2019 (3<sup>rd</sup> Year)  
No. of Assignments : One Assignment for Each 3 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. Explain digraph with example.
2. Discuss about the different Statement in detail.
3. Discuss about Grammar and its types in detail.

**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 : 171  
Programme Name : Bachelor of Computer Applications  
Course Code & Name : BCA-16 & Introduction to Internet Programming  
Batch : CY 2019 (3<sup>rd</sup> Year)  
No.of Assignments : 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: 25 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 : 171  
Programme Name : Bachelor of Computer Applications  
Course Code & Name : BCA-17 & Intranet Administration  
Batch : CY 2019 (3<sup>rd</sup> Year)  
No. of Assignments : 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 in detail about firewalls.
- 2.Write in detail about intranet administration.
- 3.Explain briefly hardware and software requirements for intranet and list out its application areas.

**ASSIGNMENT - 2**

Max: 15 marks

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

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



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Programme Code No : 171  
Programme Name : Bachelor of Computer Applications  
Course Code & Name: BCA-18 & Management Principles and Techniques  
Batch : CY 2019 (3<sup>rd</sup> Year)  
No.of Assignments : One Assignment for Each 3 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

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.