

**TAMIL NADU OPEN UNIVERSITY**

**School of Computer Science**

**SPOT ASSIGNMENT- CY 2019**

**NOTE :** Part A Contains 3 Questions and will carry 5 Marks each, Part B Contain 1 Question and will carry 10 Marks. Students are requested to write 150 words and should not exceed 2 pages each in Part A, 300 words and should not exceed 4 pages in Part B. Referring Materials.

**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-01**

**Course Title: Computer Fundamentals**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. Explain different types of Addressing modes?
2. Discuss about D-Flip-Flop.
3. Discuss about RAM with block diagram.

**Part- B- Long Answer Question**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. Explain SIMD array processor organization with diagram.

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**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-02**

**Course Title : Data Structures through 'C'**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. State and explain the Linear Search Algorithm.
2. Write short notes on circular linked list.
3. Distinguish between structure and union

**Part- B- Long Answer Question**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. Explain and give procedures for inserting and deleting elements from a Binary Search tree.

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**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-03**

**Course Title :Elements of System Analysis and Design**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. With an example, discuss sequential file organization.
2. Describe the 'System development life cycle'.
3. What are the advantages of multimedia? Explain.

**Part- B- Long Answer Question**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. Explain the organizational impact of MIS.

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**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-04**

**Course Title: Introduction to Data Base Management Systems**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. Discuss the features of OODBMS.
2. Explain knowledge base management system.
3. Discuss about distributed database in detail.

**Part- B- Long Answer Question**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. Discuss how query processing is done in a distributed database environment.

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**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-05**

**Course Title :Introduction to Computer Organisation**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. With an example discuss floating point representation.
2. Explain Associative memory.
3. List out different types of instruction. Explain data transfer instructions.

**Part- B- Long Answer Question**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. Explain hardware implementation of shift operation.

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**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-06**

**Course Title :Introduction to Software Engineering**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. What is Specification modeling? Discuss.
2. What is Software reliability? Discuss.
3. What is Software Configuration management? Discuss.

**Part- B- Long Answer Question**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. What is Quality Assurance? List out the attributes of a quality assured software product.

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**NOTE :** Part A Contains 3 Questions and will carry 5 Marks each, Part B Contain 1 Question and will carry 10 Marks. Students are requested to write 150 words and should not exceed 2 pages each in Part A, 300 words and should not exceed 4 pages in Part B. Referring Materials.

**Post Graduate Diploma in Computer Applications**

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**Course Code : PGDCA-07**

**Course Title :C++ and Object Oriented Programming**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. Describe the importance of destructor.
2. With an example discuss the purpose of break, and continue statements in C++.
3. Discuss how exception handling is done in C++.

**Part- B- Long Answer Questions**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1. Explain inline function with example.

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**Course Code : PGDCA-08**

**Course Title : Theory of Computer Science**

**(Total Marks=25)**

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**Part- A- Short Answer Questions**

**Answer all questions**

**(3 X 5 = 15 Marks)**

1. Show that  $P \iff PV (P \ Q)$

2. Prove that

$$(FX) (P(X) \wedge Q(X) ) \longrightarrow (FX) P(X) \wedge (FX) Q (X)$$

3. Define formal definition and languages.

**Part- B- Long Answer Questions**

**Answer the following question**

**(1 X 10 = 10 Marks)**

1.
  - a. Explain the Method of Converting NFA to DFA
  - b. Construct a NFA for the regular expression  $01^* + 1$ .