For Candidates Admitted From 2018

2018 MCA 23C **ROLL NO.....**

MCA DEGREE EXAMINATIONS, APRIL 2019

SEMESTER – II COMPUTER APPLICATIONS

OBJECT ORIENTED PROGRAMMING AND C++

Time: 3 Hrs **Max. Marks: 75**

PART - A (10 X 2 =20)

ANSWER ALL QUESTIONS

1. What is Object Oriented Programming?
2. What is encapsulation?
3. What is call by reference?
4. Define virtual function.
5. What are the operators cannot be overloaded in C++?
6. Define constructor.
7. What is the use of Inheritance?
8. Define abstract class.
9. Define exceptions.
10. What is Command Line Argument?

PART - B (5 X 5 =25)

ANSWER ALL QUESTIONS

11. a) Explain the Object Oriented concepts with examples.

(or)

b) Write notes on Manipulators with example.

12. a) Discuss on function overloading with example program in C++

(or)

b) Write a program in C++, To illustrate Arrays of Objects with example.

13. a) Explain the Operator overloading with a program in C++.

(or)

b) Explain the use of destructors with a program in C++.

14. a) Explain single inheritance with a program in C++.

(or)

b) Discuss on Virtual base classes in C++ with a program.

15. a) Write brief note on Templates with examples.

(or)

b) Discuss on character I/O with examples in C++.

PART - C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Discuss on Control structures in C++ with example.
17. Explain about different types of Functions in C++ with programs.
18. To illustrate different types of Constructors with example program in C++.
19. Describe Multiple Inheritance with example program.
20. What is Exception Handling? Explain with an example program.

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For Candidates Admitted From 2018

2018 MCA 21C ROLL NO.....

MCA DEGREE EXAMINATIONS, APRIL 2019

SEMESTER – II COMPUTER APPLICATIONS

OPERATING SYSTEMS

Time: 3 Hrs **Max. Marks: 75**

PART - A (10 X 2 =20)

ANSWER ALL QUESTIONS

1. What is Mainframe Systems?
2. Define the term of System Calls.
3. List out various Process States.
4. Compare non preemptive and preemptive scheduling.
5. What is thrashing?
6. Define demand paging.
7. Write about file control block.
8. Define Swapping.
9. Write down four Kernal Modules.
10. What is meant by replay attack?

PART - B (5 X 5 =25)

ANSWER ALL THE QUESTIONS

11. (a) Explain Multiprocessor Systems.

(or)

(b) Discuss on Real Time Systems.

12. (a) Give a brief account on Inter process Communication.

(or)

(b) Write short notes on Deadlocks prevention and avoidance.

13. (a) Explain any two Contiguous memory allocation.

(or)

(b) Discuss Virtual Memory Management.

14. (a) Write about Disk scheduling mechanisms.

(or)

(b) Write any two Free space management.

15. (a) Discuss on The fork() and exec() Process Model.

(or)

(b) Write detail about Security in Linux.

PART - C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Explain any four Types of System Calls.
17. Explain the various process scheduling techniques with examples.
18. Elaborate Segmentation and Paging Hardware.
19. Write detail about File-System Structure.
20. Elaborate Components of a Linux System.

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15 MCA 43C REG.NO.....

MCA., DEGREE EXAMINATIONS, APRIL 2019

COMPUTER APPLICATION SEMESTER :IV

PRINCIPLES OF COMPILER DESIGN

Time : 3 HRS. **Max.Marks: 75**

PART –A (10 X 2 =20)

Answer ALL the questions not exceeding 25 words each

1. What is the use Compiler?
2. Define Token.
3. What is the role of the parser?
4. Define ambiguity.
5. What is LR parser?
6. What are the disadvantages LR parser?
7. What is a sematic action?
8. Write note on Boolean expression.
9. Define Symbol table.
10. What is DAG?

PART –B (5 X 5 =25)

Answer ALL the questions not exceeding 300 words each

11. a. Discuss on minimizing the number of states of a DFA.

(or)

b. Describe the role of the lexical analyser.

12. a. Discuss on Shift – Reduce Parsing.

(or)

b. Write notes on Predictive parsing.

13. a. Discuss on construction of SLR parsing tables.

(or)

b. Check if the given input id*id + id is accepted by the LR parser:

14. a. Explain the Control – flow translation of Boolean expression.

(or)

b. Discuss on Quadruples with example.

15. a. Discuss on code generation.

(or)

b. Explain the data structures for Symbol table.

PART –C (3 X 10 =30)

Answer any THREE questions not exceeding 1500 words each

16. Explain the Phases of a compiler with diagram.
17. Discuss on operator precedence parsing with example.
18. Explain the construction of canonical LR parsing tables.
19. Briefly explain the implementation of syntax directed translators.
20. Discuss on DAG representation in detail.

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For Candidates Admitted From 2018

2018 MCA 22C ROLL NO.....

MCA DEGREE EXAMINATIONS, APRIL 2019

SEMESTER – II COMPUTER APPLICATIONS

RELATIONAL DATA BASE MANAGEMENT SYSTEM

Time: 3 Hrs **Max. Marks: 75**

PART - A (10 X 2 =20)

ANSWER ALL QUESTIONS

1. Compare Physical, Logical and View level.
2. Write usage of Transaction Management.
3. Define the term of Database Schema.
4. What is Nested Subqueries?
5. Compare entity set and relationship set.
6. Define super key and candidate key.
7. What is role of functional dependency?
8. Define Boyce-Codd Normal Form.
9. Write usage of Distributed Systems.
10. Define Client/Server Systems .

PART -B (5 X 5 =25)

ANSWER ALL QUESTIONS

11. (a) Describe about Database Languages.

(or)

(b) Distinguish between Two-tier and three-tier architectures.

12. (a) Write any two Relational Algebra Operations with suitable example.

(or)

(b) Discuss on Aggregate Functions.

13. (a) Give brief account on Entity Relationship Diagrams.

(or)

(b) Write detail about Mapping Cardinalities.

14. (a) Explain Multivalued Dependencies.

(or)

(b) Write detail about Features of Good Relational Designs.

15. (a) Write about Parallel Database Architectures.

(or)

(b) Discuss on Network Systems.

PART -C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Elaborate purpose of database system.
17. Describe about various Set Operations with suitable example.
18. Explain any three E-R features.
19. What is Normal Form? Explain any three Normal Form with an example.
20. Draw a neat diagram and explain Server System Architectures.

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For Candidates Admitted From 2018

2018 MCA 24C ROLL NO.....

MCA DEGREE EXAMINATIONS, APRIL 2019

SEMESTER – II COMPUTER APPLICATIONS

SOFTWARE QUALITY MANAGEMENT

Time: 3 Hrs Max. Marks: 75

PART - A (10 X 2 =20)

ANSWER ALL QUESTIONS

1. What are the phases in Assessment?
2. List out the goals of SQA.
3. Define Baseline.
4. What is software configuration audit?
5. What is the role of moderator?
6. Define standard.
7. What is verification?
8. Define availability.
9. What is the fundamental objective of software defect prevention?
10. Why should we have an SEPG?

PART - B (5 X 5 =25)

ANSWER ALL QUESTIONS

11. a) Write notes on Software Quality Assurance Plan.

(or)

b) Discuss on Assessment Conduct.

12. a) Discuss on the Requirement phase of SCM.

(or)

b) Write notes on Configuration Management Responsibilities.

13. a) Explain the Inspection Objectives.

(or)

b) Short notes on the Conduct of Inspections.

14. a) Brief note on estimating Software Quality.

(or)

b) To illustrate Test Case Design guidelines.

15. a) Write notes on Management's Role.

(or)

b) Explain a Framework for Software Process Change.

PART - C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Explain the five Assessment principles of software process.
17. Discuss on Configuration Management functions
18. Explain the establishing Software Standards in detail.
19. Discuss on Types of Software Tests.
20. Describe the principles of Software Defect Prevention.

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