23124368

QP CODE: 23124368

Reg No : .....

Name : .....

B.Sc/BCA DEGREE (CBCS) REGULAR EXAMINATIONS, MAY 2023

Fourth Semester

CORE COURSE - CS4CRT10 - LINUX ADMINISTRATION

(Common for B.Sc Computer Applications Model III Triple Main, B.Sc Computer Science Model III, B.Sc Information Technology Model III, Bachelor of Computer Applications)

2021 Admission Only

362653DB

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is Data block?
2. What is the difference between home directory and working directory?
3. Which are the commands used to create files in Linux?
4. Define tee command.
5. Define who and whoami commands in Linux.
6. What is the use of file and touch command in Linux?
7. What is shell environment?
8. Give syntax of case statement.
9. Distinguish between groupmod -g and groupmod -n command in Linux.
10. Define the term file system.
11. What is the use of sed command?
12. What is samba?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Which are the hardware requirements for Linux installation?

14. Explain Linux file system in detail.

15. What is Linux Redirection? Explain the different types of redirection with suitable examples.

16. What are editors? Explain vi editors.

17. What is command line arguments. How will you use command line arguments in a shell script

18. Explain different types of variables in shell script.

19. Discuss how a system administrator can manage its user account.

20. What is DNS Server?

21. What are the advantages and disadvantages of using Telnet?

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain any five file processing commands in Linux with its syntax and suitable examples.

23. Explain decision making and branching statements with examples.

24. a) Explain file access permission in detail.
    b) What is the use of uname and hostname commands in Linux.

25. With example explain different filters available in linux.

(2×15=30)

23124425

QP CODE: 23124425

Reg No : .....

Name : .....

B.Sc/BCA DEGREE (CBCS) REGULAR EXAMINATIONS , MAY 2023

Fourth Semester

COMPLEMENTARY COURSE- MM4CMT03 - OPERATIONS RESEARCH

(Common for B.Sc Cyber Forensic and Bachelor of Computer Applications)

2021 Admission Only

BA103842

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is operation research?
2. State the features of operation research
3. Explain the use of OR in Agriculture field.
4. State three operation research models which have wide commercial applications.
5. What are the characteristics of linear programming problems?
6. When is the solution to a LPP infeasible?
7. What are artifical varables and Why are they introduced?
8. List any two methods to find intial BFS of a transportation problem.
9. How do you find the penalty in Vogel's approximation method?
10. What you mena by unbalaced assignment problem?
11. State whether the following game matrix has a saddle point.

Player B

$$Player A \begin{bmatrix} 1 & 0 \\ -4 & 3 \end{bmatrix}$$

12. What is two person zero sum game.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Explain at least four functions of operation research.

14. Explain the nature of operation research and its limitation.

15. Solve the following problem graphically

Max Z= $60x_1 + 40x_2$

Subject to $2x_1 + x_2 \leq 60$

$x_1 \leq 25$

$x_2 \leq 35$

$x_1 \geq 0, x_2 \geq 0$

16. Explain the standard form of a mathematical model of linear programming problem.

17. Solve the following transportation problem to maximise profit

	A	B	C	D	Available
1	40	25	22	33	100
2	44	35	30	30	30
3	38	38	28	30	70
Required	40	20	60	30	

18. Solve the following Assignment problem

Job/Man	1	2	3	4	5
I	12	8	7	15	4
II	7	9	17	14	10
III	9	6	12	6	7
IV	7	6	14	6	10
V	9	6	12	10	6

19. Compare transportation problem and assignment problem.

20. What are the features of a competitive game?

21. Solve the following by game whose pay off matrix is given by

Player B

$$Player A \begin{bmatrix} 1 & 7 & 2 \\ 6 & 2 & 7 \\ 5 & 1 & 7 \end{bmatrix}$$

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Define LPP. Expalin advantages and limitations of LPP. Briefly describe the basci assumption of LPP.

23. a)What you mean by transportation problem. Give an example of transportaion problem.
b) Explain the steps for solving a transportaion problem with an example.

24. a) Define Assignment problem. What you mean by effective matrix of an assignment problem? Write the mathematical representation of an assignment problem.
b)

Job				
Workers		x	y	z
	A	18	17	16
	B	15	13	14
	C	19	20	21

Formulate this assignment problem as an LPP.

25. (a) Explain the difference between mixed strategy and pure strategy.
(b) Solve the game by probability method.

Player B

$$Player A \begin{bmatrix} 8 & 5 \\ 2 & 6 \end{bmatrix}$$

(2×15=30)

23124375

QP CODE: 23124375

Reg No : .....

Name : .....

B.Sc/BCA DEGREE (CBCS) REGULAR EXAMINATIONS, MAY 2023

Fourth Semester

CORE COURSE- CS4CRT11 - WEB PROGRAMMING USING PHP

(Common for B.Sc Computer Applications Model III Triple Main, B.Sc Computer Science Model III, B.Sc Information Technology Model III, Bachelor of Computer Applications)

2021 Admission Only

C5FA07D2

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is a Domain Name?
2. What are the different values of type atribute in unorderd HTML list?
3. Write short note on rows atribute of tag.
4. What is the main advantage of using external CSS ?
5. Using Switch-Case write Javascript code to display the name of day for a numeric input(eg. 1- Sunday, 2-Monday, ….)
6. How functions and methods differ in JavaScript?
7. What is web server?
8. What are indexed or numbered arrays in PHP?
9. Differentiate warnings and Notices.
10. What is the use of extends keyword?
11. Which are the primary categories of datatypes in MySql?
12. Which are the values returned by mysql_list_fields()?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Write short note on text formating tags in html.
14. How to create an HTML form?Explain with example.
15. Discuss CSS Text properties in detail.
16. Explain the difference between Confirm box and Prompt box in JavaScript.
17. How comments are used in PHP? Give example.
18. Write a PHP program to check whether the number is prime or not.
19. Explain any five commonly used array functions in PHP.
20. Explain how PHP manage Sessions.
21. Expain the select statement and basic querying techniques.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain various operators supported by JavaScript. Give examples.
23. Explain a) dataypes in PHP. b) operators in PHP.
24. Explain in detail about string and array functions used in PHP with suitable examples.
25. With the help of and example explain each step for accessing the data from a MySql database table.

(2×15=30)

23123491

QP CODE: 23123491

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Name : .....

BCA DEGREE (CBCS) REGULAR EXAMINATIONS, MAY 2023

Fourth Semester

Bachelor of Computer Application

Core Course - CA4CRT03 - SYSTEM ANALYSIS AND SOFTWARE ENGINEERING

2021 Admission Only

72980670

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Who participates in the review of the lifecycle activities?
2. What is called System Analysis?
3. Explain the term; software doesnot wear out?
4. Distinguish the terms deliverables and milestones.
5. What is the need for a lifecycle model?
6. What do you mean by Brain storming sessions?
7. What is reference in SRS?
8. What is a metric?
9. What do you mean by data dictionaries?
10. What is an atrribute ?
11. What is robustness testing?
12. What is unit testing?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Define Information System Concepts.
14. Distinguish between feedback and control. How do they relate to the concept of exception reporting?
15. Explain the 4 sectors in spiral model.
16. Differentiate functional and non-functional requirements.
17. What do you mean by process in DFD?
18. How do we transform an informal design ioto a detailed design?
19. Explain the different maturity levels.
20. Explain the terms error, mistake, bug, fault and failure.
21. Explain cyclomatic complexity.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Compare Iterative model with RAD model.
23. Explain the various Size estimation Techniques.
24. Explain about the module coupling and module cohesion.
25. Explain: (a) Acceptance testing (b) Functional testing

(2×15=30)

23123488

QP CODE: 23123488

Reg No : .....

Name : .....

B.Sc/BCA DEGREE (CBCS) REGULAR EXAMINATIONS, MAY 2023

Fourth Semester

CORE COURSE- CS4CRT09 - DESIGN AND ANALYSIS OF ALGORITHMS

(Common for B.Sc Information Technology Model III, Bachelor of Computer Applications)

2021 Admission Only

F0F4E6D0

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. How do you analyze an algorithm?
2. What is worst-case complexity?
3. Define control abstraction.
4. Describe the divide and conquer maximin problem.
5. Explain the method of strassen's matrix multiplication.
6. Explain the method of greedy algorithm.
7. Write the control abstraction of th greedy strategy.
8. Write any four examples of Dynamic Programming.
9. Explain single source shortest path.
10. What is 0/1 knapsack problem?
11. Explain biconnected graph.
12. Draw a graph that contain hamiltonian circuit.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What are the conditions to be satisfied by an algorithm?
14. Differentiate between time complexity and space complexity.
15. Consider the numbers given below. Show how partitioning algorithm of Quick Sort will place 106 in its correct position. Show all steps clearly. 106,117,128,134,141,91,84,63,42
16. Compare and contract the complexities of Prim's and Kruskal's algorithm.
17. With an example, explain the concept behind Prim's algorithm.
18. Explain All pairs Shortest path problem with example.
19. Describe Travelling Sales Persons problem.
20. Explain DFS algorith.
21. Explain sum of subset problem with algorithm. And solve the data using sum of subset, S= {3,5,6,7}, d = 15.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. What are different algorithm design techniques? Explain any two techniques wih example.
23. Explain mergesort algorithm with an example.
24. Write a note on greedy technique. Explain about Knapsack algorithm and solve the data using knapsack problem. M=40, N=4, weights(20,25,10,15), profit(20,40,35,45).
25. How does backtracking works on 8-Queen's problem? Explain with suitable example.

(2×15=30)