Nov-24-02-1634
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov-2024
Environmental Science - MS23AECBCA -304

Marks :25 **Time : 2 Hours**

Que. 1 Attempt the following (Any Two) 10
1. What are the characteristics features of wetlands and rivers?
2. Explain food chains and food webs in details
3. Explain about scope of environment studies

Que. 2 Attempt the following (Any Two) 10
1. What are the causes and effects of air pollution?
2. Explain solid waste managed in urban areas
3. Difference between renewable and non-renewable resources

Que. 3 Attempt the following 05
1. What are the causes of marine pollution?
2. Define : Environment
3. What are renewable resources?

Nov-24-02-1634
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov-2024
Environmental Science - MS23AECBCA -304

Marks :25 **Time : 2 Hours**

Que. 1 Attempt the following (Any Two) 10
4. What are the characteristics features of wetlands and rivers?
5. Explain food chains and food webs in details
6. Explain about scope of environment studies

Que. 2 Attempt the following (Any Two) 10
4. What are the causes and effects of air pollution?
5. Explain solid waste managed in urban areas
6. Difference between renewable and non-renewable resources

Que. 3 Attempt the following 05
4. What are the causes of marine pollution?
5. Define : Environment
6. What are renewable resources?

Nov-24-02-1654
B.C.A. Sem. -III(NEW) Examination
Course Implemented From June-2020
Nov-2024
BCA-304Computer Network

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Do as directed 06
1. Define Give the Full form : MAC & TDM
2. What is Topology
3. What is Full Duplex?
4. What is Local Loop?
5. What is Piggybacking?
6. What is Digital Signal?

1.(b) Attempt any two 12
1. What is Network? Give Advantages and disadvantages of Computer Network
2. Explain OSI Reference Model
3. What is Switching? Explain in Details

2.(a) Do as directed 05
1. What is Transmission Media
2. What is Magnetic Media?
3. What is Twisted pair?
4. What is Broad band
5. Define term Dual Cable

2.(b) Attempt any two 12
1. Explain the coaxial cable in details
2. Explain Radio Transmission in Detail
3. Explain Fibre optics

3.(a) Do as directed (Any Three) 06
1. Define the term : Spanning Tree Bridge and Active Hub
2. Define the term Active Hub and Remote Bridge
3. Difference between asynchronous and synchronous protocols

3.(b) Attempt any two 12
1. Compare X modem v/s Y modem
2. Explain HDLC frames
3. List out the types of Bridge and explain any two in details

4.(a) Attempt any two 05
1. Define the term : IP Address
2. Define the term : Sub netting
3. Define the term : Super netting
4. Give the full form : UDP and TCP
5. Give the full form : RARP and DHCP

4.(b) Attempt any two 12
1. Explain the IP Address Class in Details
2. Explain Deference between TCP and UDP Protocol
3. Explain ICMP in details

Nov-24-02-1644
B.C.A. Sem. -III(Old) Examination
Course Implemented before June-2020
Nov-2024
BCA-304Computer Network

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a)	Attempt the following	06
	1. What is Trunk?	
	2. Define Ring Topology	
	3. Define Star Topology	
1.(b)	Answer the followings (Any Two)	12
	1. What is Computer Network? Explain Advantages and Disadvantages of it	
	2. Explain OSI Reference Model	
	3. What is Multiplexing? Explain FDM and TDM in brief	
2.(a)	Attempt any two	05
	1. Define Crosstalk	
	2. Define Guided Media	
	3. List out type of Propagation	
2.(b)	Answer the followings (Any Two)	12
	1. Explain Fiber Optics with advantages and disadvantages	
	2. Explain Radio Wave and Micro Wave transmission in brief	
	3. Explain STP and UTP	
3.(a)	Attempt the following	06
	1. Define HUB	
	2. Define Subnet Mask	
	3. Define Super netting	
3.(b)	Answer the followings (Any Two)	12
	1. Explain Modem in detail	
	2. Explain Asynchronous protocol in brief	
	3. Explain Switches in detail	
4.(a)	Answer the followings	05
	1. What is mobile computing?	
	2. Write the use of EDA?	
	3. Define GPRS	
4.(b)	Answer the followings (Any Two)	12
	1. How GPRS Work? Explain with suitable diagram	
	2. Difference between CDMA and GSM?	
	3. Difference between 2G and 3G Technology	

Nov-24-02-1645

B.C.A. Sem. -III(Old) Examination

Course Implemented before June-2020

Nov-2024

BCA-304Enterprise Resource Planning (ERP)

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Attempt the following 06

1. Define : ERP
2. Define : ENTERPRISE
3. Define :SCM
4. Define : MIS
5. Define : DSS
6. Define : EIS

1.(b) Answer the followings (Any Two) 12

1. Explain Generation of ERP
2. Explain Advantages of ERP
3. Explain Different Technologies of ERP

2.(a) Attempt any two 05

1. What is Gap Analysis?
2. What is Reengineering?
3. What is Pre-evaluation Screening?
4. What is Team Training?
5. What is Testing?

2.(b) Answer the followings (Any Two) 12

1. Explain ERP Implementation Life Cycle
2. Discuss Role of Vendors
3. Discuss the reason for the failure of ERP Implementation

3.(a) Attempt the following 06

1. What is Plant Maintenance?
2. What is JD Edwards?
3. What is manufacturing?
4. What is Material Management
5. What is SAP?
6. List out Human Resource Modules

3.(b) Answer the followings (Any Two) 12

1. Explain Quality Management module functions
2. Explain Business Module
3. Explain Financial Module

4.(a) Answer the followings 05

1. E-Commerce
2. OLAP
3. Data Warehousing
4. Data Mining
5. Full form of GIS

4.(b) Answer the followings (Any Two) 12

1. What are the limitations of ERP?
2. Different Explain types of OLAP
3. Discuss advantages and use of Data Warehouse.

Nov-24-02-1633
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov-2024
Computer Network - MS23MDCBCA-303

Total Marks :50 **Time : $2^{1}/_{2}$ Hours**

Que. 1 Attempt the following (Any Two) 10
1. Explain TCP/IP Reference Model
2. Explain OSI Reference Model
3. Explain the Telephone Structure in detail

Que. 2 Attempt the following (Any Two) 10
1. Compare Copper cable and Fiber optic cable
2. Explain Microwave Transmission
3. Explain Radio wave Transmission

Que. 3 Attempt the following (Any Two) 10
1. Explain Modem and Its types in detail
2. Explain IP Address Class
3. What is Router? Tis types

Que. 4 Attempt the following (Any Two) 10
1. Compare 3G and 4G
2. Explain the Wi-Fi Data communication in detail
3. Compare CDMA and GSM

Que. 5 Define the following terms 10
1. What is Computer Network
2. Full form PDA_____
3. What is Topology? List out topology
4. Define Half Duplex
5. What is Unguided Media? List out Unguided Media
6. Advantages of Twisted Pair Cable
7. Difference between Hub and Switch
8. Define: character-oriented protocol
9. Define :Subnet, Subnetting
10. Define Host-address and Net-Address
10. Define : Infrared and Millimeter Waves.

Nov-24-02-1653
B.C.A. Sem. -III(NEW) Examination
Course Implemented From June-2020
Nov-2024
BCA-303Operating System

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Attempt any two 06
1. Define : Goals of OS
2. Define : Multitasking
3. Define : Hard real time system

1.(b) Attempt any two 12
1. Explain functions of Operating System
2. Explain Time Sharing OS with Example
3. Explain Spooling and Buffering in brief

2.(a) Attempt any two 05
1. Define Scheduler
2. Define Context switch
3. Define Deadlock

2.(b) Attempt any two 12
1. Explain various states of process in brief
2. Explain round robin Scheduling with example
3. Explain PCB in brief

3.(a) Attempt any two 06
1. Define Paging
2. Define Swapping
3. Define Page replacement

3.(b) Attempt any two 12
1. Explain Demand Paging
2. Explain Fixed Partitioning in brief
3. Explain Internal and External fragmentation with example

4.(a) Attempt any two 05
1. Define mkdir command
2. Define File Permissions
3. Define Cat command

4.(b) Attempt any two 12
1. Explain Process related commands with example
2. Explain Directory structure of UNIX
3. Explain features of UNIX in brief

Nov-24-02-1643

B.C.A. Sem. -III(Old) Examination

Course Implemented before June-2020

Nov-2024

BCA-303Statistical and OptimizationTechniques

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Do as Directed 06

1. Difference between S.D and M.D
2. State the empirical relationship between mean, Median and mode
3. Advantage and Disadvantages of A.M

1.(b) Answer the followings (Any Two) 12

1. Find the A.M form the following data
   15,5,7,8,6,9,5,5,9,6
2. Find the SD of the Following Distribution

Age	20-25	25-30	30-35	35-40	40-45	45-50
No of person	170	110	80	45	40	35

3. If A.M of Data is 35 and No of observation is 10,75 is misread is 57 and 45 is misread 54. Find Correct A.M

2.(a) Do as Directed 05

1. Define : regression
2. If bxy=0.4 and byx=0.16 then Find value of R

2.(b) Answer the followings (Any Two) 12

1. Find R

X/Y	5-15	15-25	25-35	35-45	Total
0-10	1	1	-		2
10-20	3	6	5	1	15
20-30	1	8	9	2	20
30-40	-	3	9	3	15
40-50	-	-	4	4	8
Total	5	18	27	10	60

2. The Co-efficient of rank correlation between price and dale is 0.143 if the sum of the Square of the different of rank is 48. Find the value of N
3. Define : Correlation Types of correlation

3.(a) Define the following terms 06

1. Feasible solution
2. LPP
3. Unbounded solution

3.(b) Answer the followings (Any Two) 12

1. Simplex Method

   Max z=3x+2y

   Subject to constrains

   $x + y \leq 4$

   $x - y \leq 2$

   $x, y \geq 0$

2. Find the dual of the following primal problem

   Min $Z=2x_1+3x_2+4x_3$

   Subject to constrains

   $2x_1 + 3x_2 + 5x_3 \geq 2$

   $3x^1 + x_2 + 7x_3 = 3$

   $x_1 + 4x_2 + 6x_3 \leq 5$

$And\ x1, x2 \geq 0\ and\ x3\ is\ unrestricted$

3. Write the algorithm for simplex method

4.(a) Do as directed 03

1. Write down algorithms for MODI method
2. Explain degeneracy in T.P

4.(b) Answer the followings (Any Two) 12

1. Solve the following Assignment problem

	P	Q	R	S	T
A	3	9	2	3	7
B	6	1	5	6	6
C	9	4	7	10	3
D	2	5	4	2	1
E	9	6	2	4	5

2. What is unbalanced T.P? How it convert balance T.P with Example
3. Solve the following transportation problem

	D1	D2	D3	D4	Supply
P1	19	30	50	12	7
P2	70	30	40	60	10
P3	40	10	60	20	18
	5	8	7	15	

Nov-24-02-1636
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov-2024
Computer Security - I – MS23SECBCA-306

Total Marks :25 **Time : 2 Hours**

Que. 1 Attempt the following (Any Two) 10
1. What is Computer Criminal? List out its types
2. What is Attack? Explain its types
3. Explain different types of security tools

Que. 2 Attempt the following (Any Two) 10
1. Explain Viruses & Related threats
2. What is Computer intruder? Explain types of intruder
3. Explain the types of Firewall in detail

Que. 3 Attempt the following 05
1. What is Confidentiality?
2. Explain Interceptor

Nov-24-02-1636
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov -2024
Computer Security - I – MS23SECBCA-306

Total Marks : 25 **Time : 2 Hours**

Que. 1 Attempt the following (Any Two) 10
1. What is Computer Criminal? List out its types
2. What is Attack? Explain its types
3. Explain different types of security tools

Que. 2 Attempt the following (Any Two) 10
1. Explain Viruses & Related threats
2. What is Computer intruder? Explain types of intruder
3. Explain the types of Firewall in detail

Que. 3 Attempt the following 05
1. What is Confidentiality?
2. Explain Interceptor

Nov-24-02-1631
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov-2024
Data Structure – MS23MJDSCBCA-301

Total Marks :50 **Time : $2^{1}/_{2}$ Hours**

Que. 1 Attempt the following (Any Two) 10

1. Explain Quick Sort with example in detail
2. Explain binary search technique with example
3. What is Collision? Explain any one method to resolve collision

Que. 2 Attempt the following (Any Two) 10

1. What is Stack? Write an algorithms for Stack operations
2. Explain types of Data structure in detail
3. What is Queue? Explain simple Queue operation with example

Que. 3 Attempt the following (Any Two) 10

1. Write an algorithm to remove an element form doubly linked list
2. How to insert an element in singly linked list? Explain with example
3. Explain an algorithms of circular Link List

Que. 4 Attempt the following (Any Two) 10

1. Write an algorithms to delete an element form binary search tree
2. Explain any one traversal technique of Graph
3. Explain BFS algorithm with example

Que. 5 Define the following terms 10

1.	Sorting	2.	Hashing
3.	Leaf node	4.	Null Graph
5.	Isolated Node	6.	Edge
7.	Weighted graph	8.	Sibling
9.	Primitive Data Structure	10.	Complete Binary Tree

Nov-24-02-1651
B.C.A. Sem. -III(NEW) Examination
Course Implemented From June-2020
Nov-2024
BCA-301 Data Structure

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Answer the followings 06
1. Define Collision, Hashing
2. Explain asymptotic analysis and Notation in brief
3. Define Sorting, Searching

1.(b) Answer the followings (Any Two) 12
1. Sort the following data using Shell sort
66,55,34,8,23,12,9,21
2. Explain binary search technique with example
3. Write an algorithm to sort data using Quick sort

2.(a) Answer the followings 05
1. What is Data Structure? Define Primitive Data Structure
2. Compare Stack and Queue

2.(b) Answer the followings (Any Two) 12
1. Write an algorithm for stack operations
2. What is Circular Queue? Explain Circular Queue operations with example
3. Write an algorithm to convert infix expression to postfix expression

3.(a) Answer the followings 06
1. Computer Array and Linked List
2. What is circular Queue? Explain Circular Queue operations with example
3. Write an algorithm to convert infix expression to postfix expression

3.(b) Answer the followings (Any Two) 12
1. Write an algorithm to insert an element into doubly linked list
2. Write an algorithm to create sorted linked list
3. Write an algorithm to remove an element from singly linked list

4.(a) Answer the followings 05
1. Tree
2. Leaf node
3. Graph
4. AVL Tree
5. Null Graph

4.(b) Answer the followings (Any Two) 12
1. Explain Tree traversal techniques with example
2. Explain DFS algorithms with example
3. Explain the process of converting General tree into Binary tree with example

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Nov-24-02-1641

B.C.A. Sem. -III(Old) Examination

Course Implemented before June-2020

Nov-2024

BCA-301 Object Oriented Programming C++

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Do as Directed 06

1. What is encapsulation?
2. What is inheritance
3. What is polymorphism?
4. What is constant?
5. What is class?
6. What is reference variable?

1.(b) Answer the followings (Any Two) 12

1. Explain control statements in detail
2. Explain looping statement in detail
3. Explain enumerated data types with example in detail

2.(a) Do as Directed 05

1. What is overloading?
2. What is constructor?
3. What is data-member?
4. What is the use of default argument?
5. What is member function?

2.(b) Answer the followings (Any Two) 12

1. Explain constructor with example in detail
2. Explain function overloading with example in detail
3. Explain static member function with example in detail

3.(a) Do as Directed 06

1. List out type of type conversions in C++
2. What is the use of Sized of operation?
3. What is ternary operators?
4. How many parameters does a conversion operator may take?
5. What is implicit type conversion?
6. What is unary operator?

3.(b) Answer the followings (Any Two) 12

1. Explain type conversion with all types in details
2. Explain operators overloading with all types in details
3. Explain class to class type conversion with example

4.(a) Answer the followings 05

1. What is hybrid inheritances?
2. What is abstract class?
3. What is pointer
4. What is virtual base class?
5. What is pure virtual function

4.(b) Answer the followings (Any Two) 12

1. Explain inheritance with all types in details
2. Write a program for multi level inheritance in C++
3. What is virtual function? Write rules for virtual function

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Nov-24-02-1635
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov-2024
Health Education - MS23VACBCA-305

Total Marks :25 **Time : 2 Hours**

Que. 1 Attempt the following (Any Two) 10
1. Discuss Level of Health care in India
2. Explain Effects of Smoking Drugs and Alcohol
3. Discuss School Health Service and Programmes

Que. 2 Attempt the following (Any Two) 10
1. Explain Type of Pollution
2. Discuss about Population
3. Explain Malaria and Rabies

Que. 3 Attempt the following 05
1. What is Balanced Diet?
2. Full Form : PHC
3. What is Environmental Health?
4. What is Hypertension?
5. Full Form : CHD

Nov-24-02-1635
B.C.A. Sem. -III (NEP) Examination
Course Implemented From June-2023
Nov -2024
Health Education - MS23VACBCA-305

Total Marks : 25 **Time : 2 Hours**

Que. 1 Attempt the following (Any Two) 10
1. Discuss Level of Health care in India
2. Explain Effects of Smoking Drugs and Alcohol
3. Discuss School Health Service and Programmes

Que. 2 Attempt the following (Any Two) 10
1. Explain Type of Pollution
2. Discuss about Population
3. Explain Malaria and Rabies

Que. 3 Attempt the following 05
1. What is Balanced Diet?
2. Full Form : PHC
3. What is Environmental Health?
4. What is Hypertension?
5. Full Form : CHD

Nov-24-02-1632

B.C.A. Sem. -III (NEP) Examination

Course Implemented From June-2023

Nov-2024

Relational Database Management System– MS23MJDSCBCA-301A

Total Marks : 50 **Time : $2^{1}/_{2}$ Hours**

Que. 1 Attempt the following (Any Two) 10

1. Discuss Concurrency problem in detail
2. What is Deadlock? Explain it in detail
3. Explain Database Recovery in detail

Que. 2 Attempt the following (Any Two) 10

1. What is an integrity constraints? Explain its types in detail
2. Explain any five string function with example
3. What is joins? Explain its types in detail

Que. 3 Attempt the following (Any Two) 10

1. What is a cursor? Explain Implicit cursor in detail
2. Explain Block structure of PLSQL
3. Discuss Simple loop, While loop and For loop with example

Que. 4 Attempt the following (Any Two) 10

1. What is View? Explain it in detail
2. What is function? Explain it with example
3. Explain Trigger in detail

Que. 5 Define the following terms 10

1. Define : Alter command
2. _____ property of ACID states that a transaction must be treated as an atomic unit.
3. What is use of Grant Command?
4. What is sub query?
5. Define : Distinct clause
6. Define : Foreign Key
7. Define : Dual Table
8. Define : Sequence
9. Define : Exception
10. List out LOB types in PLSQL

Nov-24-02-1652
B.C.A. Sem. -III(NEW) Examination
Course Implemented From June-2020
Nov-2024
BCA-302Advance Database Management System

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a) Answer the followings 06
1. What is Locking?
2. What is Integrity?
3. Explain in brief Deadlock

1.(b) Answer the followings (Any Two) 12
1. Discuss ACID PROPERTIES
2. What is Recovery? Explain Media Recovery
3. What is Concurrency? Explain concurrency problem

2.(a) Answer the followings 05
1. Discuss Join
2. List out Numerical Functions

2.(b) Answer the followings (Any Two) 12
1. Discuss String Function with example
2. Explain DDL commands with example.
3. What is Constraint? Explain with example

3.(a) Answer the followings 06
1. Difference between SQL and PL/SQL
2. Discuss Data Types
3. Describe : Loops in PL/SQL

3.(b) Answer the followings (Any Two) 12
1. Explain PL/SQL Block in detail
2. Discuss CURSOR
3. Explain ERROR handling in detail

4.(a) Answer the followings 05
1. Discuss Procedure
2. What is difference between Producer and Function?

4.(b) Answer the followings (Any Two) 12
1. What is View? Explain in detail
2. Discuss SEQUENCE with example
3. Explain TRIGGER with example

Nov-24-02-1642

B.C.A. Sem. -III(Old) Examination

Course Implemented before June-2020

Nov-2024

BCA-302Advance Database Management System

Total Marks :70 **Time : $2^{1}/_{2}$ Hours**

1.(a)	Do as Directed	06
	1. Group By..Having Clause.	
	2. Sub Query	
1.(b)	Answer the followings (Any Two)	12
	1. Explain Entity Integrity Constraint	
	2. Explain different type of SET operator.	
	3. Explain DDL commands with example	
2.(a)	Do as Directed	05
	1. Views	
	2. Sequence	
	3. Indexes	
2.(b)	Answer the followings (Any Two)	12
	1. Explain attributes of cursors.	
	2. Explain system defined exception handling	
	3. Explain types of Triggers	
3.(a)	Do as Directed	06
	1. Data Mining	
	2. Temporal key	
	3. Calculated columns	
3.(b)	Answer the followings (Any Two)	12
	1. Define DSS. Explain aspects of DSS	
	2. Explain OLAP in detail	
	3. Explain Database Design for DSS	
4.(a)	Answer the followings	05
	1. Data Encryption	
	2. Mandatory Access Control	
	3. Two phase commit	
4.(b)	Answer the followings (Any Two)	12
	1. Explain System Recovery	
	2. Explain problems of concurrency	
	3. Define Distributed Databases and explain its problems.	
