21BCA5E1BI1

B.C.A V Semester Degree Examination, April/May - 2024

COMPUTER SCIENCE

DSE - E1 (B) : Business Intelligence

(NEP)

Time : 2 Hours   Maximum Marks : 60

I. Answer **all** the following questions :   **10x1=10**

1.   (a)   Define Business Intelligence.

       (b)   What is Decision Support System (DSS) ?

       (c)   Give two examples for BI tools.

       (d)   Mention the types of DSS.

       (e)   Define Neural networks.

       (f)   What is speech Analytics ?

       (g)   Expand MCDM.

       (h)   Mention the types of Mathematical Programming Optimization.

       (i)   Write one example for narrow AI.

       (j)   Give two applications of AI.

II. Answer **any four** of the following questions :   **4x5=20**

2.   Explain a framework for BI.

3.   Explain the DSS components.

4.   Write about developing a neural network.

5.   Explain the nearest neighbour for prediction.

6.   Explain Decision analysis with decision trees and tables.

7.   Write a note on Artificial Intelligence.

III. Answer **any three** of the following questions :   **3x10=30**

    8. Explain the Decision making process.

    9. Briefly explain the big data analytics.

    10. Explain the layers of neural network.

    11. Explain mathematical models in DSS.

    12. Write a note on Expert Systems.

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B.C.A. V Semester Degree Examination, April/May - 2024
COMPUTER SCIENCE

DSE - E1(A) : Cloud Computing

(NEP)

Time : 2 Hours   Maximum Marks : 60

SECTION - A

Answer the following sub-questions each sub-question carries **one** mark.   **10x1=10**

1. (a)   What is cloud computing ?

(b)   Write any two types of cloud.

(c)   Expand Iaas.

(d)   What is virtualization ?

(e)   Define aneka.

(f)   Mention any two management tools of aneka.

(g)   Write any two Amazon Web Services (AWS).

(h)   What is storage service ?

(i)   Expand CRM.

(j)   Mention any two Social Networking applications.

SECTION - B

Answer **any four** of the following questions, each question carries **five** marks.
4x5=20

2. Write the characteristics of cloud computing.

3. List the differences between public cloud and private cloud.

4. Explain the service model of Aneka SDK.

5. Write a note on communication services of AWS.

6. Write a note on multiplayer online gaming.

7. Explain any two types of virtualization.

SECTION - C

Answer **any three** of the following questions, each question carries **ten** marks.

3x10=30

8. Mention the different computing paradigms. Explain distributed computing in detail with neat diagram.

9. Explain cloud computing architecture with a neat diagram.

10. Write about the framework overview of aneka cloud.

11. Write a detailed note on Microsoft Azure Concepts.

12. Explain Business and consumer applications in detail.

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21BCA5C13DAL

B.C.A. V Semester Degree Examination, April/May - 2024

COMPUTER SCIENCE

DSC13 : Design and Analysis of Algorithm Lab

(NEP)

Time : 2 Hours   Maximum Marks : 60

SECTION - A

Answer **all** the following sub-questions. Each sub-question carries **one** mark.

10x1=10

1. (a)   Define an algorithm.

(b)   What is time Complexity ?

(c)   Give the meaning of recursive algorithm.

(d)   What is basic operation in an algorithm ?

(e)   Give the worst-case time Complexity of Selection Sort.

(f)   What is Knapsack problem ?

(g)   Define Topological Sorting.

(h)   Mention the various binary Tree Traversals.

(i)   What is Greedy Technique ?

(j)   Define P-Problem.

SECTION - B

Answer **any four** of the following questions. Each question carries **five** marks.

4x5=20

2. Briefly explain the worst, best and average case efficiency with one example.

3. Give General plan of mathematical analysis of non-recursive algorithm with an example.

4.   Write Bubble sort algorithm with an example.

5.   Apply brute force exhaustive search approach to solve Travelling Salesman Problem (TSP)
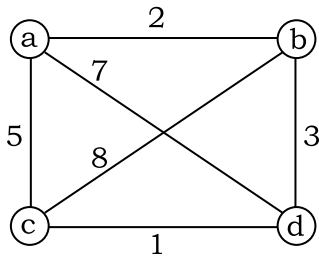
6.   Write an algorithm for Inorder, Post order Binary Tree Traversals.

7.   Explain decision tree with an example.

SECTION - C

Answer **any three** of the following questions. Each question carries **ten** marks.

3x10=30

8.   Explain the fundamentals of algorithmic problem solving.

9.   Write and Explain DFS algorithm with an example.

10. Explain the Asymptotic Notations.

11. Write and Explain binary search algorithm with an example.

12. Explain prim's algorithm.

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21BCA5V1

B.C.A. V Semester Degree Examination, April/May - 2024
COMPUTER SCIENCE
Digital Marketing
(NEP)

Time : 2 Hours   Maximum Marks : 60

SECTION - A

Answer **all** the questions. Each question carries **1** mark.   **10x1=10**

1. (a) Define digital Marketing.
   (b) Expand SEM and PPC.
   (c) What is demographics in digital marketing ?
   (d) Write any two social media channels.
   (e) What do you mean by E-mail marketing ?
   (f) Write one advantage of content marketing.
   (g) Give two examples of Mobile marketing.
   (h) Name two tools for E-mail marketing.
   (i) Define analytics in Digital marketing.
   (j) What is KPI ?

SECTION - B

Answer **any four** questions. Each question carries **five** marks.   **4x5=20**

2. Explain any two types of digital marketing.

3. Give short description on best examples of content strategy for Social Media Marketing.

4. Write any five benefits of Social Media Marketing.

5. Explain E-mail automation.

6. Write Mobile Marketing Strategies.

7. Write a short note on web analytical tools.

SECTION - C

Answer **any three** questions. Each question carries **ten** marks. **10x3=30**

8. Explain importance and benefits of Digital Marketing.

9. What is Social Media Marketing Platform ? Explain any four Social Media Marketing Platforms.

10. Explain benefits of E-mail Marketing.

11. Explain with example Mobile App Marketing.

12. Write and explain tracking and measuring key Performance Indicator.

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21BCA5C15SEL

B.C.A. V Semester Degree Examination, April/May - 2024
COMPUTER SCIENCE
DSC-15 : Software Engineering
(NEP)

Time : 2 Hours   Maximum Marks : 60

SECTION - A

Answer **all** the questions, each question carries **one** mark.   **10x1=10**

1. (a) What is Software Engineering ?
    (b) What is the difference between waterfall model and spiral model ?
    (c) Define requirement validation.
    (d) What is Agile methodology ?
    (e) Expand SRS.
    (f) What is class diagram ?
    (g) What do you mean by deployment ?
    (h) What is meant by stakeholders ?
    (i) What is unit testing ?
    (j) What is a test case ?

SECTION - B

Answer **any four** questions, each question carries **five** marks.   **4x5=20**

2. What are the essential attributes of a good software ?

3. Explain the principles of agile methods.

4. What are the ethics to be followed in Software Engineering ?

5. What are the different ways of writing system requirement specifications ?

6. Explain sequence diagram with suitable example.

7. Write a note on Extreme programming.

SECTION - C

Answer **any three** questions, each question carries **ten** marks. **3x10=30**

8. Describe the different phase of the waterfall model with advantages and disadvantages.

9. Explain Interaction model.

10. Explain requirement elicitation and analysis process.

11. Explain MVC pattern.

12. Write a note on user testing and its types.

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21BCA5C14SPL

B.C.A. V Semester Degree Examination, April/May - 2024
COMPUTER SCIENCE
DSC-14 : Statistical Computing and R Programming
(NEP)

Time : 2 Hours   Maximum Marks : 60

SECTION - A

Answer the following sub-questions. Each sub-question carries **one** mark.   **10x1=10**

1.   (a)   What is R programming ?
     (b)   Define vector.
     (c)   What is visibility in R ?
     (d)   Write the syntax for switch statement.
     (e)   What is data visualization ?
     (f)   Mention four poisson distribution available in R.
     (g)   Define sampling testing.
     (h)   List key steps in hypothesis testing.
     (i)   Mention types of Regression.
     (j)   What are plotting functions ?

SECTION - B

Answer **any four** of the following questions. Each carries **five** marks.   **4x5=20**

2.   Explain the features of R programming.

3.   Explain function in R with syntax give an example.

4.   Explain types of uniform distribution.

5.   Explain one-way ANOVA in R.

6.   Explain specialized text notation.

7.   Write a R program to demonstrate operators and control structures in R.

SECTION - C

Answer **any three** of the following questions. Each question carries **ten** marks.

3x10=30

8. What is data frame ? Explain the manipulation of data frame.

9. Explain the looping statements with an example.

10. Explain R graphics functions : plot ( ), hist ( ), pie ( ), boxplot ( ), scatter plot with neat diagram.

11. Explain the sampling distribution in R.

12. Write a note on the following :
   (a)   Linear Regression
   (b)   3D scatter plot

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