ASSIGNMENT 1
M.Sc. DEGREE EXAMINATION, MAY - 2020
Second Year
SOFTWARE ENGINEERING
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) Explain Prototype model and compare it with Water Fall process model.

Q2) Write the importance of software specification of   requirements. Explain a typical SRS structure and its parts.

Q3) Explain data architectural and procedural design for a software?

Q4) Explain the integration testing process and system testing process and also describe their outcomes.

Q5) Discuss project metrics and process metrics in detail.

Q6) Outline the software development life cycle.

Q7) Explain different categories of risks.

Q8) What are functional and non - functional software   requirements?

Q9) What do you mean by the terms cohesion and coupling in the context of software design?

Q10) Draw DFD lavel - 0 and DFD Level -1 for Library Management System.

ASSIGNMENT 2
M.Sc. DEGREE EXAMINATION, MAY - 2020
Second Year
SOFTWARE ENGINEERING
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) Differentiate alpha testing and beta testing.

Q2) What is verification and validation criteria for a software.

Q3) Differentiate metrics and measurement?

Q4) What is software product?

Q5) Define Behavioral Modeling.

Q6) Distinguish between horizontal and vertical partitioning?

Q7) Define cyclomatic complexity.

Q8) Define black box testing.

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ASSIGNMENT 1
M.Sc. DEGREE EXAMINATION, MAY - 2020
Second Year
PROGRAMMING WITH C++
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) Explain the features of object programming language?

Q2) Discuss various control structures used in C++ with suitable example.

Q3) Explain about function overloading with example.
Illustrate friend function with suitable example.

Q4) What is advantages of inheritance? Explain single, multiple, multilevel and hierarchical inheritance.

Q5) What is an Exception? Explain about try, throw and catch with example?

Q6) Differentiate between user defined data types and derived data types.

Q7) Write a C ++ program to find reverse of the string and concatenation of two strings.

Q8) What is syntax of class declaration? How does it   accomplish data biding?

Q9) Write a C++ program to overload increment and   decrement operators (++ and – –)

Q10) What is Copy Constructor? Give an example.

ASSIGNMENT 2
M.Sc. DEGREE EXAMINATION, MAY - 2020
Second Year
PROGRAMMING WITH C++
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1)   Explain about user defined manipulators.

Q2)   What is Virtual function? What are the rules for   Virtual functions?

Q3)   How to create class template? Explain.

Q4)   What is use of new and delete operators?

Q5)   What is an array?

Q6)   What is meant by function prototyping?

Q7)   What is static binding?

Q8)   Define container class.

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Q1) Explain about classful internet addresses in detail.

Q2) Explain about internet datagram and its options in detail.

Q3) Explain about distance vector rooting and link - state rooting.

Q4) Explain about TCP/IP over ATM networks.

Q5) Explain about Client - server model.

Q6) Explain about asynchronous transfer mode.

Q7) Discuss about interconnection through IP rooters.

Q8) Explain about address resolution through direct mapping.

Q9) Explain about reverse address resolution protocol.

Q10) Explain about establishing a TCP connection.

ASSIGNMENT 2
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
INFORMATION TECHNOLOGY
TCP/IP
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) Discuss about UDP encapsulation and protocol layering.

Q2) Explain about IP address manipulation routines.

Q3) Explain about the need of dynamic configuration and dynamic host configuration.

Q4) What are weaknesses in internet addressing?

Q5) What is ARP cache timeout?

Q6) What is the need for stream delivery?

Q7) What are socket library calls?

Q8) What are alternatives to the Client - server Model?

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ASSIGNMENT 1
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
INFORMATION TECHNOLOGY
Datamining and Techniques

MAXIMUM MARKS :30

ANSWER ALL QUESTIONS

Q1) Explain about the maximum likelihood estimation and Bayesian estimation with example.

Q2) What is classification? How to construct decision tree for classification using CART algorithm?

Q3) Explain the score function for descriptive models.

Write about gradient based methods for optimizing the smooth functions.

Q4) Discuss about partitioned based clustering algorithms.

Q5) Explain different ways to organizing the data in databases and data warehouse.

Q6) What are the interacting the roles of statistics and data mining?

Q7) Describe the data visualization tools for displaying single and two variables.

Q8) Describe the joint probabilistic model for unordered categorical data.

Q9) Write Apriori algorithm for association rule mining.

Q10) Explain Univariate parameter optimization with example.

ASSIGNMENT 2
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
INFORMATION TECHNOLOGY
Datamining and Techniques

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1)   What are the requirements for clustering.

Q2)   Describe Naïve Bayes classification model.

Q3)   State the different OLAP operations.

Q4)   Define Manhattan distance.

Q5)   Define data cube.

Q6)   What is association rule mining?

Q7)   Define data visualization.

Q8)   Define perceptron.

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ASSIGNMENT 1
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
INFORMATION TECHNOLOGY
Cryptography and Network Security
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) Write briefly the categories of attacks. What are the x.800 listed attacks?

Q2) What is the structure of AES? Explain how Encryption/Decryption is done in AES.

Q3) Explain single round DES with block diagram and also specify its limitations.

Q4) Explain in detail about Elgamal Cryptosystem and Chinese Remainder theorem.

Q5) Describe the steps in finding the message digest using SHA - 512 algorithm. What is the order of finding two messages having the same message digest?

Q6) Briefly explain about the mono alphabetic cipher.

Q7) What are Confusion and Diffusion properties of Modern Ciphers?

Q8) Determine the Numbers which are relatively Prime to 21 by using Euler Totient function.

Q9) How is GCD calculated with Euclid's algorithm?

Q10) What are the principal elements of public - key cryptosystem?

ASSIGNMENT 2
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
INFORMATION TECHNOLOGY
Cryptography and Network Security
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1)   Explain the functions provided by S/MIME.

Q2)   What are the properties of hashing functions?

Q3)   Explain packet filtering router in case of fire wall.

Q4)   Define Avalanche Effect.

Q5)   What is Public key cryptography?

Q6)   What is RSA crypto system?

Q7)   What is digital certificate?

Q8)   List two goals of fire wall.

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ASSIGNMENT 1
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
Artificial Intelligence
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) State Tic - Tac - Toe problem? Construct state space tree for this problem.

What is Intelligence? Discuss types of problems requiring Intelligence to solve it.

Q2) What is Hill Climbing? Explain Simple Hill Climbing and Steepest - Ascent Hill Climbing and also mention limitations of hill climbing.

Q3) Represent the following statements into predicate form:
    i)   Roses are red and Violets are Blue
    ii)   All dogs are Mammals.
    iii)   Some program has Bugs.
    iv)   All pompeians died when the volcano erupted in 79 A.D.
    v)   All the indoor games are easy.
Write about resolution algorithm in predicate logic.

Q4) What is matching? Describe different matching techniques.

Q5) What is an expert system? Briefly describe five major components of an expert system.

Q6) Describe various AI techniques.

Q7) Explain about generate and test algorithm with example.

Q8) Explain the Means - ends analysis with robot navigation problem.

Q9) Differentiate forward and backward reasoning.

Q10) Write about unification theorem in predicate logic.

ASSIGNMENT 2
M.Sc. DEGREE EXAMINATION, MAY - 2020

Second Year
Artificial Intelligence
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

Q1) Explain about dependency directed backtracking with suitable example.

Q2) Explain about Dempster - Safer theory with suitable example.

Q3) Briefly explain about common sense ontologies.

Q4) Define state space search.

Q5) What is AND - OR graph?

Q6) Define clause form.

Q7) What is procedural knowledge?

Q8) Define monotonic reasoning.

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