Master of Technology
Second Semester Examination, June-2021
Advance Soft Computing [MTCTA201]

Time: 3:00 Hrs   **Max Marks 70**

Note: **Attempt any five questions. All question carry equal marks.**

Q.1   State fuzzy set operations and properties of fuzzy sets. Why the excluded middle law does not get satisfied in fuzzy logic? With suitable examples, explain how membership assignment is performed.

Q.2   Explain the architecture of a fuzzy logic controller and the steps involved in designing a fuzzy controller with suitable example.

Q.3   State and explain the classifications of the parallel genetic algorithm.

Q.4   Explain the bucket brigade algorithm with example.

Q.5   Write the four activation functions of neurons. You are given the task of identifying human gestures computationally. Which neuron learning model will you use? Why?

Q.6   Describe a neural network that could be used to control the steering o f a robotic car on a race track. How can it be tracked? With an application of your choice?

Q.7   Explain the various stages of Fuzzy Controller. Include the block diagram, fuzzy sets, membership functions that are being decided upon, Fuzzy rule base.

Q.8   Write down at least one unique application area for each of the following learning process:-
(i) Fuzzy logic (or) fuzzy control process
(ii) Neural network
(iii) Genetic algorithm

Master of Technology
Second Semester Examination, June-2021
Advance Computer Network [MTCTA202]

Time: 3:00 Hrs   **Max Marks 70**

Note: Attempt any five questions out of eight.

Q.1   Explain VPN. How VPN inter connects two completely private sites over the global internet with the help of example? What is VPN and why is it needed? Discuss VPN host management in brief.

Q.2   Explain the concept of virtual LANs and virtual private networks.

Q.3   What is SNMP? Explain different security level implementing in SNMP? What is ICMP explain its different formats?

Q.4   Why does HTTP, FTP, SMTP, POP3 and IMAP run on top of TCP rather than on UDP? Discuss.

Q.5   What are ARP and RARP? Discuss with the packet formats. Explain CIDR. Why CIDR also called super netting?

Q.6   What is network file system? How it is implemented. BGP is also distance vector protocol? How is it different from RIP?

Q.7   What is proxy ARP? Explain the ARP packet format. Give the difference between IPV4 and IPV6 in details.

Q.8   Explain the following terms:
(i) CIDR
(ii) MOSPF

Master of Technology
Second Semester Examination, June-2021
Advance Programming with J2EE [MTCTA203]

Time: 3:00 Hrs   **Max Marks 70**

Note : Attempt any five questions out of eight.
        All question carry equal marks.

Q.1   Explain the working of JDBC and ODBC Bridge, and role of driver manager

Q.2   What is garbage collection? What are its uses and purpose?

Q.3   Explain Java bean, Java bean properties, Types of beans? Explain how java beans can be used for reusability of code. Explain With suitable example

Q.4   Explain the concept of multi-threading by giving suitable example.

Q.5   What is servlet? Discuss the servlet lifecycle.

Q.6   Explain CORBA with its architecture.

Q.7   Explain the client server architecture.

Q.8   Write notes on (any four)-
        (i)   JSP
        (ii)   Enterprise java beans
        (iii)   Throw statement
        (iv)   Exception handling
        (v)   Type casting

Master of Technology
Second Semester Examination, June-2021
Software Engineering and Project Management [MTCTA204]

Time: 3:00 Hrs   **Max Marks 70**

Note : Attempt any five questions out of eight. All question carry equal marks.

Q.1   Compare and contrast various software development models in tabular form. State the advantages and disadvantages of each model.

Q.2   Explain risk analysis in detail. What is decision tree analysis in context to risk management?

Q.3   Write short note on client-server software development with its applications.

Q.4   What is reverse reengineering and forward reengineering? What are the reengineering software products?

Q.5   What is the relationship between OOA, software requirement and OOD? Explain using suitable examples.

Q.6   What is software configuration management? Describe SCM process and its components.

Q.7   What are the different levels of testing? And what are the goals of it? How project scheduling takes place after integration testing?

Q.8   Write short notes on (any three)-
        (i)   PERT
        (ii) SQA
        (iii) COCOMO
        (iv) Client server software development

Master of Technology
Second Semester Examination, June-2021
Distributed System [MTCTA205]

Time: 3:00 Hrs   **Max Marks 70**

Note : **Attempt any five questions out of eight.**
All question carry equal marks.

Q.1   Why architectural model is important in the distributed system design? Also discuss the resource sharing and its importance?

Q.2   Discuss about IP-multicast communication. What are process and threads? Differentiate it.

Q.3   What is distributed deadlock? How they can detect?

Q.4   Discuss the distributed mutual exclusion algorithm. What is distributed multimedia? Explain the types of it.

Q.5   What is transaction and replication data? How a physical clock is synchronized in distributed system?

Q.6   What is fault tolerance? What are the services? Explain how the security is achieved in distributed file system.

Q.7   Explain time stamp ordering protocol? Why it is used in transaction processing?

Q.8   Write short notes on-
       (i) Events and notification
       (ii) Atomic commit protocols
       (iii) Concurrency control in distributed transactions