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Paper Code: B.Sc-CS-503A

B (SVSU:2023-24/R)

Enrollment No.												
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B.Sc.(CS)

V SEM/ III YEAR EXAMINATION

Subject Code: B.Sc-CS-503-A

Subject Name: Neural Networks & Its Application

[Time : 03:00 Hours]

[Max. Marks : 70]

Note : Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs) [01×15=15]
- I What is true about single layer associative neural networks?
 - (a) performs pattern recognition
 - (b) can find the parity of a picture
 - (c) can determine whether two or more shapes in a picture are connected or not
 - (d) none of the mentioned
 - II Which of the following is false?
 - (a) neural networks are artificial copy of the human brain
 - (b) neural networks have high computational rates than conventional computers
 - (c) neural networks learn by examples
 - (d) none of the mentioned
 - III Which of the following is type of unsupervised learning?
 - (a) clustering
 - (b) association
 - (c) both a and b
 - (d) None of these Bachman
 - IV What is the difference between supervised and unsupervised learning?
 - (a) Supervised learning requires labeled data while unsupervised learning does not.
 - (b) Unsupervised learning requires labeled data while supervised learning does not.
 - (c) Supervised learning does not require data while unsupervised learning does.
 - (d) There is no difference between supervised and unsupervised learning.
 - V In activation dynamics is output function bounded? (a) yes (b). no
 - VI Which of the following is a type of neural network?
 - (a) Decision tree
 - (b) Random forest
 - (c) Convolution neural network
 - (d) Linear regression
 - VII What is ART in neural networks?
 - (a) automatic resonance theory
 - (b) artificial resonance theory
 - (c) adaptive resonance theory
 - (d) none of the mentioned

- VIII Positive sign of weight indicates?
 (a) excitatory input (b) inhibitory input
 (c) can be either excitatory or inhibitory as such
 (d) none of the mentioned
- IX Negative sign of weight indicates?
 (a) excitatory input (b) inhibitory input
 (c) excitatory output (d) inhibitory output
- X Operations in the neural networks can perform what kind of operations?
 (a) serial (b) parallel
 (c) serial or parallel (d) none of the mentioned
- XI Who proposed the first perceptron model in 1958?
 (a) McCulloch-pitts (b) Marvin Minsky
 (c) Hopfield (d) Rosenblatt
- XII Are all neuron in brain are of same type? (a) yes (b) no
- XIII Learning is a?
 (a) slow process (b) fast process
 (c) can be slow or fast in general (d) can't say
- XIV In neural how can connections between different layers be achieved??
 (a) interlayer (b) intralayer
 (c) both interlayer and intralayer (d) either interlayer or intralayer
- XV From given input-output pairs pattern recognition model should capture characteristics of the system? (a) true (b) false
2. Answer in long (any three) [10×3=30]
- I Write a short note on:
 (a) Single- layer networks (b) perception-linear separability
- II What do you mean by neural network? Explain the difference between artificial intelligence and neural network.
- III What do you mean by supervised and unsupervised learning? Explain the difference between supervised and unsupervised learning?
- IV What do you mean by the ANN? What are the Basic Approach of the working of ANN.
3. Answer in short (any five) [5x5=25]
- I What do you mean by Neural Network? Explain its advantages.
- II What do you mean by multi-layer network architecture? Explain the limitation of multi-layer architecture.
- III What is Binary classifier in Machine Learning?
- IV Define and Explain Artificial Inelegancy?
- V What is recurrent network?
- VI What do you mean by maxnet?
- VII What do you mean by Human brain?

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Paper Code: BCS-502B

C (SVSU:2023-24/R)

Enrollment No.														
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B.Sc.(Computer Science)

V SEMESTER/ III YEAR EXAMINATION

Subject Name: Software Engineering

Subject Code: BCS-502-B

[Time: 3:00 Hours]

[Max. Marks: 70]

Note: Attempt all the questions as per given instructions

1. Objectives Question: Answer All Questions. [1x15=15]

- Which of these does not affect different types of software as a whole?
 - Heterogeneity
 - Flexibility
 - Business and social change
 - Security
- The fundamental notions of software engineering does not account for?
 - Software processes
 - Software Security
 - Software reuse
 - Software Validation
- What are the types of requirements?
 - Availability
 - Reliability
 - Usability
 - All of the mentioned
- Select the developer-specific requirement?
 - Portability
 - Maintainability
 - Availability
 - Both Portability and Maintainability
- Which one of the following is not a step of requirement engineering?
 - Elicitation
 - design
 - analysis
 - documentation
- Which is the first step in the software development life cycle?
 - Analysis
 - Design
 - Problem/Opportunity Identification
 - Development and Documentation
- Which tool is use for structured designing?
 - Program flowchart
 - Structure chart
 - Data-flow diagram
 - Module
- A step by step instruction used to solve a problem is known as
 - Sequential structure
 - A List
 - A plan
 - An Algorithm
- In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.
 - Documentation
 - flowchart
 - program specification
 - design
- Who designs and implement database structures.
 - Programmers
 - Project managers
 - Technical writers
 - Database administrator

11. The spiral model was originally proposed by:
 a) IBM b) Barry Baehm c) Pressman d) Royce
12. The reason for software bugs and failures is due to
 a) Software companies b) Software Developers
 c) Both Software companies and Developers d) All of the mentioned
13. What is Software?
 a) Software is set of programs
 b) Software is documentation and configuration of data
 c) Software is set of programs, documentation & configuration of data
 d) none of the mentioned
14. Which of these does not account for software failure?
 a) Increasing Demand b) Low expectation
 c) Increasing Supply d) less reliable and expensive
15. How many phases are there in SCRUM?
 a) 2 b) 3 c) 4 d) 9

II. Long Questions: Attempt any three [10×3=30]

1. What do you mean by the term Software Engineering? What are the roles of a software engineer?
 2. What do you mean by Requirement Engineering? What makes a "Good" Software Requirement?
 3. What do you understand by the review of design and Code? Who involve in review process?
 4. Define the Software Configuration management in detail?
- III. Short Questions: Attempt any five [5×5=25]**
1. Define the Term Software Engineering?
 2. What are the Software Attributes?
 3. What do you understand by object Oriented Life Cycle
 4. Define software configuration management.
 5. Explain the Different Requirement Engineering Techniques.
 6. Design an ER Diagram for the University Administration system?
 7. Define verification and validation?