University of Mumbai

Examinations Summer 2022

Program: Computer Engineering

Curriculum Scheme: Rev2016

Examination: BE   Semester VIII

Course Code: CSC801   Course Name: Human Machine Interaction

Time: 2 hours 30 minutes   Max. Marks: 80

Human Machine Interaction(CSC801)

Q1. (20 Marks)	Choose the correct option for the following questions. All the questions are compulsory and carry equal marks
1.	"For every user action, to simplify new system sign up process, error correction system must be provided to facilitate user" Which rule in Schneiderman Golden Rule suits the statement above?
Option A:	Offer informative feedback
Option B:	Strive for consistency
Option C:	Design dialogues to yield closure
Option D:	Error prevention and simple error handling
2.	The design of the HMI systems is generally influenced by :
Option A:	Psychology of the user
Option B:	The physical look of the system
Option C:	Speed of the system
Option D:	The time is taken by the user to learn the system
3.	The economy in a visual pleasing composition refers to-
Option A:	Uniformity of elements based on some principle or plan.
Option B:	Stabilization or equilibrium, a midway center of suspension
Option C:	Frugal and judicious use of display elements
Option D:	Axial duplication
4.	The message which calls attention to conditions that require user action before the system can proceed is :
Option A:	Informational message
Option B:	Status message
Option C:	Critical message
Option D:	Warning message
5.	Mobile platforms those are sold to device makers for nonexclusive distribution on devices are called as_____.
Option A:	Open-sourced platforms
Option B:	Proprietary platforms
Option C:	Licensed platforms
Option D:	Distributors platforms
6.	People's requirements always take precedence over technical requirements. This defines :
Option A:	Transparency
Option B:	Trade-offs
Option C:	Simplicity
Option D:	Responsiveness

7.	A pie chart allows you to easily see _____.
Option A:	Information about the proportion of parts relative to the whole
Option B:	The total number of each category
Option C:	How much data occurs within a range of numbers
Option D:	The spread of the data
8.	Technically games are really just native applications that use similar platform SDKs to create immersive experiences. But they are different from native applications for the reason:
Option A:	They cannot be easily duplicated with web technologies
Option B:	Porting them to multiple mobile platforms is not easier
Option C:	They can be easily duplicated with web technologies
Option D:	They are not compatible with web technologies
9.	To represent proper information on the screen, screen or window density levels can not be more than
Option A:	50 percent
Option B:	40 percent
Option C:	33 percent
Option D:	30 percent
10.	The first deliverable we use to define mobile information architecture is the _____.
Option A:	Clickstreams
Option B:	Site map
Option C:	Wireframe
Option D:	Prototype

Q2. (20 Marks)	Write short notes on any four	5 marks each
A	Icons	
B	Colors	
C	Multimedia	
D	Ergonomics	
E	Screen navigation and flow	
F	Windows presentation styles	

Q3 (20 Marks)	Solve any two questions out of three	10 marks each
A	Discuss different phases of the goal directed design process.	
B	Differentiate between Graphical User Interface and Web User Interface.	
C	What is Mobile 2.0? Explain the principles of Mobile 2.0.	

Q4 (20 Marks)	Solve any two questions out of three	10 marks each
A	Design a user interface to spread awareness about organ donation. Assume appropriate data required for it.	
B	Design a user interface for the online voting system. Assume suitable data and draw interfaces neatly.	
C	Design a user interface for a movie ticket booking application. Assume suitable data and draw interfaces neatly.	

University of Mumbai

Examinations - Summer 2022
Program: Computer Engineering
Curriculum Scheme: Rev 2016
Examination: BE Semester VIII
Course Code: CSC802 and Course Name: Distributed Computing

Time: 2 hour 30 minutes   Max. Marks: 80

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Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Resources and clients transparency that allows movement within a system is called-
Option A:	Mobility transparency
Option B:	Concurrency transparency
Option C:	Performance transparency
Option D:	Replication transparency
2.	In Data centric model-
Option A:	results of only read operations can be replicated to various stores located nearby immediately
Option B:	results of only write operations can be replicated to various stores located nearby immediately
Option C:	results of read and write operations can be replicated to various stores located nearby immediately
Option D:	results of read and write operations can be replicated to all stores
3.	Following is a type of failure that usually can occur in RPC systems-
Option A:	The server crashes after receiving a request and client cannot locate the server
Option B:	Client Cannot Locate the Server
Option C:	The server crashes after receiving a request
Option D:	Server crashes
4.	Which of the following algorithm is Token Based Algorithm for Mutual Exclusion
Option A:	Lamport Algorithm
Option B:	Ricart–Agrawala's Algorithm
Option C:	Suzuki-Kasami's Broadcast Algorithms
Option D:	Maekawa's Algorithm
5.	What is task assignment approach?
Option A:	in which each process is viewed as an individual task.
Option B:	in which each process is viewed as a collection of related tasks
Option C:	in which each process is viewed as a collection of distinct tasks
Option D:	in which each process is viewed as a coordinator of other's tasks
6.	In a distributed file system, mapping between logical and physical objects is-
Option A:	Transparency
Option B:	Client interfacing
Option C:	Migration
Option D:	Naming

7.	In a distributed file system, when a file's physical storage location changes _____
Option A:	file name need to be changed
Option B:	file name need not to be changed
Option C:	file's host name need to be changed
Option D:	file's local name need to be changed
8.	Which of the following is concurrency transparency
Option A:	Hide differences in data representation and how a resource is accessed
Option B:	Hide that a resource may be shared by several competitive users
Option C:	Hide that a resource may be moved to another location while in use
Option D:	Hides that the resource has multiple copies
9.	In the Bully algorithm, process which is elected as the coordinator is the one having –
Option A:	Lowest Timestamp value
Option B:	Lowest process ID
Option C:	Highest timestamp value
Option D:	Highest process ID
10.	Which of the following is the Passive Server Physical Clock Synchronization algorithm
Option A:	Berkley's Algorithm
Option B:	Cristian's Algorithm
Option C:	Lamport's Algorithm
Option D:	Bully Algorithm

Q2.	
A	**Solve any Two (5 marks each)**
i.	Discuss in brief the different architectural models in Distributed System?
ii.	What is coordinator process? Explain algorithms used for the selection of coordinator.
iii.	Explain desirable features of Global Scheduling Algorithm
B	**Solve any One (10 marks each)**
i.	What is the need for Code Migration? Explain the role of Process to resource and Resource to Machine binding in Code Migration.
ii.	Write short note on File caching schemes.

Q3.	
A	**Solve any Two 5 marks each**
i.	Discuss the different issues and steps involved in a good Load Balancing algorithm.

ii.	What are different Data Consistency Models? (Any 5)
iii.	What are physical clocks? Explain any one Physical Clock Synchronization Algorithm.
B	**Solve any One (10 marks each)**
i.	Explain Hadoop distributed file system.
ii.	Explain Different issues and goals related to design of Distributed System. Explain Transparency in detail.

Q4.	
A	**Solve any Two (5 marks each)**
i.	Describe different types of failure models.
ii.	Differentiate between NOS, DOS and Middleware in the design of a distributed systems?
iii.	Explain how Monotonic Read consistency model is different from Read your Write consistency model. Support your answer with suitable example.
B	**Solve any One (10 marks each)**
i.	Define remote procedure call (RPC)? Describe the working of RPC in detail.
ii.	Differentiate between Token-based algorithm and Non-Token-based algorithm. Explain in detail Raymond's Tree-Based algorithm.

Course Code: **DLO8012**   Course Name: **Natural Language Processing**

Time: 2 hours 30 minutes   Max. Marks: 80

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Q1.	Choose the correct option for the following questions. All the questions are compulsory and carry equal marks
1.	What does morphological disambiguation mean?
Option A:	It is a process to check semantics in the given context
Option B:	It is a process of choosing the proper morphological interpretation of a token in a given context.
Option C:	Process of defining only rules.
Option D:	Process of selecting the algorithm
2.	_____is a process of assigning a corresponding part of speech like a noun, verb, adverb and adjective to each word in a sentence.
Option A:	Stemming
Option B:	Lemmatization
Option C:	Part-of-speech tagging
Option D:	Parsing
3.	The process of deciding what pronouns and other noun phrases refer to is known as
Option A:	Inferable
Option B:	Coreference Resolution
Option C:	Reflexive
Option D:	Verb Semantics
4.	Lesk algorithm
Option A:	converts words to vectors
Option B:	finds comparison between two words
Option C:	measures overlap between sense definitions for all words in context
Option D:	check for similarity between words in context
5.	Which of the following is an example of "hyponym-hypernym" semantic relationship?
Option A:	Car-Vehicle
Option B:	Car-Wheel
Option C:	Wheel-Car
Option D:	Car-Ford
6.	The stemming algorithm is used to
Option A:	Form complex words from base form
Option B:	Generates the parse tree of a sentence
Option C:	Check meaning of a word in dictionary
Option D:	Reduce inflected form of a word to a single base form

7.	In which of the summarization technique, the summary contains the sentences from the given document only?
Option A:	Extractive Summarization
Option B:	Abstractive summarization
Option C:	Mixed Summarization
Option D:	Copied summarization
8.	The ambiguity in the sentence - Rima went to Gauri. She said, "I am tired."
Option A:	Syntactic Ambiguity
Option B:	Semantic Ambiguity
Option C:	Lexical Ambiguity
Option D:	Referential Ambiguity
9.	Pragmatic refers to
Option A:	Literal meaning
Option B:	Intended meaning
Option C:	Structural meaning
Option D:	Wordnet dictionary meaning
10.	Natural Language Generation does not involve the following task
Option A:	Producing meaningful phrases and sentences
Option B:	Mapping the given input in natural language into useful representations.
Option C:	Retrieving the relevant content from the knowledge base.
Option D:	Mapping sentence plan into sentence structure

Q 2	Solve any Two Questions out of Three (20 Mark)
A	What is information retrieval and machine translation in applications? Give a brief answer on both.
B	What is Word Sense Disambiguation? Illustrate with an example how the Dictionary-based approach identifies the correct sense of an ambiguous word.
C	Explain derivational and inflectional morphology in detail with suitable example

Q 3	Solve any Two Questions out of Three (20 Mark)
A	Why it is important to preprocess text data in natural language? Explain in detail the steps of preprocessing with examples.
B	What are the five types of referring expressions? Explain with example
C	Write Note on Text Summarization

Q 4	Solve any Two Questions out of Three (20 Mark)
A	What is a language model? Explain the N-gram model
B	How HMM is used for POS tagging? Explain in detail.
C	What is lexicon, lexeme and Explain the different types of relations that hold between lexemes with example