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

17/5/22

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 Trade-offs
Option C:	Simplicity
Option D:	Responsiveness

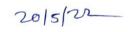
7.	A pie chart allows you to easily see .
Option A:	Information about the proportion of parts relative to the whole
Option B:	The total number of each category
Option C:	How much data occurs within a range of numbers
Option D:	The spread of the data
8.	Technically games are really just native applications 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	
В	Colors	
С	Multimedia	
D	Ergonomics	
Е	Screen navigation and flow	
F	Windows presentation styles	

	10 marks each
Discuss different phases of the goal directed of	design process.
Differentiate between Graphical User Interfac	e and Web User Interface.
What is Mobile 2.0? Explain the principles of	Mobile 2.0.
	Discuss different phases of the goal directed of Differentiate between Graphical User Interfact What is Mobile 2.0? Explain the principles of

Q4 (20 Marks)	Solve any two questions out of three	10 marks each
(20 Marks)	Design a user interface to spread awareness al	oout organ donation.
A	Assume appropriate data required for it.	
	Design a user interface for the online voting s	ystem. Assume suitable
В	data and draw interfaces neatly.	
-	Design a user interface for a movie ticket boo	king application. Assume
C	suitable data and draw interfaces neatly.	

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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

Q1.	Choose the correct option for following questions. All the Questions are	
ζ	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	
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	
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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	

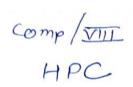
7.	In a distributed file system, when a file's physical storage location changes
Option A:	file name need to be changed
Option B:	file name need not to be changed
Option C:	file's host name need to be changed
Option D:	file's local name need to be changed
8.	Which of the following is concurrency transparency
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 havin
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 algo
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. 233	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
В	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.

ii.	What are different Data Consistency Models? (Any 5)
iii.	What are physical clocks? Explain any one Physical Clock Synchronization Algorithm.
В	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	
В	Solve any One (10 marks each)	
í.	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.	

Max. Marks: 80



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Examinations Summer 2022

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Time: 2 hour 30 minutes

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	classified the computers on the basis of organization of the constituent elements in the computer.
Option A:	Flynn
Option B:	Handler
Option C:	Shore
Option D:	Feng
2.	Two stage instruction pipeline has
Option A:	fetch and Execute instruction
Option B:	Fetch and Write Instruction
Option C:	Fetch and Decode
Option D:	Fetch and Memory Excess

3.	Control hazards occurs due to
Option A:	ADD instruction
Option B:	MUL instruction
Option C:	DIV instruction
Option D:	Branch instruction
4.	We anticipate which pages we are going to browse ahead of time and issue requests for them in advance are known as
Option A:	Prefetching
Option B:	Multithreading
Option C:	Multitasking
Option D:	Latency
5.	Messages in Cut through routing are divided into?

Option A:	Packets
Option B:	Segments
Option C:	Flits
Option D:	smaller units
The state of the s	
6.	The number and size of tasks into which a problem is decomposed determines the of the decomposition.
Option A:	Concurrency
Option B:	Task dependency
Option C:	Granularity
Option D:	Efficiency
7.	suited to problems that are solved using the divide-and-conquer strategy
Option A:	exploratory decomposition
Option B:	Recursive Decomposition

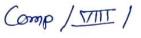
Option C:	speculative decomposition
Option D:	data decomposition
8.	Which speedup could be achieved according to Amdahl's law for infinite number of processors if 5% of a program is sequential and the remaining part is ideally parallel?
Option A:	Infinite speedup
Option B:	5
Option C:	20
Option D:	50
9.	Non-blocking Message Passing Operations are generally accompanied by a operation.
Option A:	Send Buffer
Option B:	Buffer
Option C:	check-status
Option D:	Receive Buffer

10.	Which MPI function is used to determine the label of calling process?
Option A:	MPI_Init
Option B:	MPI_Comm_world
Option C:	MPI_Comm_size
Option D:	MPI_Comm_rank

Q2. (20 Marks Each)	Solve any Two Questions out of Three 10 marks each	
А	Discuss the categories of computers based on Flynn's classification.	
B Discuss in detail Pipeline hazards with its types.		
C What are the limitations of Memory System Performance?		

Q3. (20 Marks Each)	Solve any Two Questions out of Three each	10 marks
А	Explain high performance computing platforms applications.	and their
В	Explain the different mapping techniques that are load balancing.	e used for
С	Explain the Decomposition techniques in parallel cor	nputing.

Q4. (20 Marks Each)	Solve any Two Questions out of Three 10 marks each
А	State and explain Amdahl's law. What is the relevance of Amdahl's law in HPC?
В	Write a MPI program to find sum of N numbers.
С	Explain blocking and non-blocking communication using MPI.



NLP University of Mumbai

Examinations summer 2022
Examination: BE Semester-VIII (Rev2016)

Course Code: DLO8012 Time: 2 hours 30 minutes Course Name: Natural Language Processing

Max. Marks: 80

0.1	Choose the correct option for the following questions. All the questions are		
Q1.	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,		
В	adverb and adjective to each word in a sentence.		
Option A:	Stemming		
Option B:	Lemnatization		
Option C:	Part-of-speech tagging		
Option D:	Parsing		
	e i. known		
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		
4	' cemantic		
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		
10			
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		
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7.	In which of the summarization technique, the summary contains the sentence	
*	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 transl answer on both.	ation in applications? Give a brief
В	What is Word Sense Disambiguation? Illustrate Dictionary-based approach identifies the correct	with an example how the sense of an ambiguous word.
C	Explain derivational and inflectional morphology	in detail with suitable example

Q3	Solve any Two Questions out of Three	(20 Mark)
Α	Why it is important to preprocess text data in na the steps of preprocessing with examples.	tural language? Explain in detail
В	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 n	nodel	
В	How HMM is used for POS tagging? Explain in o		
С	What is lexicon, lexeme and Explain the different between lexemes with example		