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.	

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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

Paper Code: 93307

Time: 2 hour 30 minutes

Max. Marks: 80

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

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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.

BE/CMPN/

Course Code: **DLO8012**	Course Name: **Natural Language Processing**
Time: 2 hours 30 minutes	Max. Marks: 80

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

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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

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University of Mumbai
Examinations Summer 2022
Program: IT01028
Curriculum Scheme: Rev2016
Examination: BE Semester VIII
Course Code: 52965 and Course Name: Environmental Management

Time: 2 hour 30 minutes   Paper Code - 93764   Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	The Bhopal gas Tragedy in 1984 is related to--
Option A:	Nuclear disaster
Option B:	Earthquake disaster
Option C:	Man-made disaster
Option D:	Floods
2.	The government of India enacted EPA of 1986 under article___ of the constitution
Option A:	253
Option B:	251
Option C:	249
Option D:	51A
3.	The primary agenda of the Kyoto protocol is:
Option A:	Regulation of hazardous wastes
Option B:	Regulate the production of nuclear energy
Option C:	Control anthropogenic sources of greenhouse gases
Option D:	Control of the worldwide Energy consumption
4.	Which of the following is a prime health risks associated with greater UV radiation through the atmosphere due to depletion of ozone layer?
Option A:	Damage to digestive system
Option B:	Increased liver cancer
Option C:	Increased skin cancer

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Option D:	Neurological disorder
5.	P-D-C-A stands for:
Option A:	Plan-Do-Check-Act
Option B:	Plan-Do-Correct-Act
Option C:	Proceed-Do-Check-Act
Option D:	Proceed-Do-Correct-Act
6.	The combination of all factors that act to limit the growth of a population is:
Option A:	Carrying capacity
Option B:	Environmental resistance
Option C:	Biotic potential
Option D:	Logistic growth
7.	In acid rain PH of water is:
Option A:	Less than 5.6
Option B:	Around 7
Option C:	More than 7
Option D:	around 14
8.	Environment Impact assessment (EIA) is done
Option A:	Before the project
Option B:	After the project
Option C:	During the project
Option D:	Any time in life cycle of project
9.	Energy conversation act was formed in year
Option A:	1997
Option B:	2000

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Option C:	2001
Option D:	1999
10.	The Minamata Disease was caused due to:
Option A:	Methyl Isocyanate
Option B:	Mercury
Option C:	Benzene
Option D:	Lead

Q.2 (A)	Solve any two of the following: (10M)
i)	What are the aspects of Environment Management & challenges faced in it?
ii)	Write a note on loss of Bio-diversity.
iii)	Discuss the EMS certification.
(B)	Solve any one of the following: (10M)
i)	Discuss the Environmental issues relevant to India.
ii)	Write a note on the role of government as a planning & regulating agency.

Q3 (A)	Solve any two of the following: (10M)
i)	Define: Limiting factors & Carrying capacity. Discuss their relation with the environment.
ii)	What are the features of Environment Protection Act, 1986.
iii)	Discuss the role of Central Pollution Control Board (CPCB) in pollution monitoring.
(B)	Solve any one of the following: (10M)
i)	What is ISO-14000? How does adoption of ISO-14000 practices benefit the Industries as well as the Environment?
ii)	What is Hazardous Waste? Note the different health risk caused by it. How does it affect the environment?

Q4. (A)	Solve any two of the following: (10M)
i.	Write a note on the Water(Prevention & control of Pollution)Act.
ii.	Define Ecosystem. What are the components of Ecosystem?
iii.	Differentiate between: Industrial Disasters & Man-made disasters
B	Solve any One (10M)
i.	What is sustainable development? Is sustainable development necessary? What are the parameters affecting it?
ii.	Write a note on; Total Quality Environmental Management & Corporate Environment Responsibility.

University of Mumbai
Examination June 2021   Paper Code: 94072
Examinations Commencing from 15th May 2022
Program: _B.E (Mechanical Engineering)__
Curriculum Scheme: **Rev2016**
Examination: **BE Semester VIII**
Course Code: _ILEC II_ and Course Name: **Finance Management**
Time: 2 hour 30 minutes   Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	The long-run objective of financial management is to
Option A:	Maximize earnings per share
Option B:	Maximize the value of the firm's common stock
Option C:	Maximize return on investment
Option D:	Maximize market share
2.	The regulator for Primary and secondary market is
Option A:	IRDA
Option B:	SEBI
Option C:	RBI
Option D:	CRISIL
3.	A low risk-taking individual will most probably invest in which of these instruments:
Option A:	Equity
Option B:	Debt
Option C:	Fixed Deposits
Option D:	Mutual Funds
4.	Axis Bank, PNB, SBI, ICICI are:
Option A:	Foreign Banks
Option B:	Public Sector Banks
Option C:	Commercial Banks
Option D:	Private Sector Banks
5.	With a well-diversified portfolio, an investor can reduce
Option A:	Unsystematic risk
Option B:	systematic risk
Option C:	Market Risk
Option D:	finance risk
6.	Relationship between annual nominal rate of interest and annual effective rate of interest, if frequency of compounding is greater than one

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Option A:	Effective rate < Nominal rate
Option B:	Effective rate = Nominal rate
Option C:	Effective rate > Nominal rate
Option D:	can't be determined

7.	Patents, Copyrights and Trademarks are
Option A:	Current assets
Option B:	Fixed assets
Option C:	Intangible assets
Option D:	Investments

8.	Working capital management is concerned with the inter-relationship existing between
Option A:	Total assets and total liabilities
Option B:	Total assets and current liabilities
Option C:	Current assets and total liabilities
Option D:	Current assets and current liabilities

9.	The Internal Rate of Return is defined as
Option A:	the discount rate which causes the payback to equal one year.
Option B:	the discount rate which causes the NPV to equal zero.
Option C:	the ROE when the NPV equals 0
Option D:	the ROE associated with project maximization

10.	Which of the following are NOT functions of a financial system?
Option A:	The operation of a payments system.
Option B:	Providing the means of portfolio adjustment.
Option C:	Helping to reduce unemployment.
Option D:	Channelling funds between lenders and borrowers.

Q2	Attempt any two 10 marks each
a).	Distinguish between equity & debt instruments. (10 marks)
b).	The expected cash flows of a project are as follows

Year	0	1	2	3	4	5
Cash flow	-100000	20000	30000	40000	50000	30000

The cost of the capital is 12 percent. Calculate the NPV and IRR of the project (10 marks)

c).	What are leverage ratios? Explain any two types of the same.
Q3	Attempt any two 10 marks each
a).	Financial statements of XYZ company reveals following information. Balance sheet (10 marks)

Liabilities	2019	Assets	2019
Current Liabilities		Current Assets	

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Accounts payable	60	cash and equivalents	10
Accruals	140	Accounts Receivble	375
Notes Payable	110	Inventories	615
Total CL	**310**	**Total CA**	**1000**
Long Term Bonds	750	Net Fixed Assets	
Total Liabilities	**1060**	Plant and equipment	1000
Common equity		less depri	0
Common stock(50 million shares)	130	Other assets	0
Retained Earnings	810	**Total Assets**	**2000**
Total Common Equity	940		
Total Liabilities and equity	**2000**		

P & L statement

	2019
Net Sales	**3000**
Operating cost except depreciation and amortization	2616.2
Depreciation and Amortization	100
Total operating cost	**2716.2**
Operating income EBIT	**283.8**
less Interest	88
EBT	**195.8**
Less Tax(40%)	78.32
Net Income	**117.48**
less Retained earnings	60
Total Dividend	57.48

Find out following ratios from the given data.
   a) Current Ratio
   b) Inventory Turn Over Ratio
   c) Debt – Equity Ratio.
   d) Net Profit Margin Ratio
   e) Interest coverage Ratio.

b).	Briefly explain the types of financial services
c).	Differentiate between ordinary annuity and annuity due with examples.
Q4	**Attempt any two** **10 marks each**
a).	Explain various Financial Instruments in detail
b).	Define risk and return. Explain Measurement of Historical Returns and Expected Returns of a Single Security and a Two-security Portfolio
c).	What is Capital Budgeting? Discuss the various factors that influence the capital budgeting decisions.