

University of Mumbai

Examination June 2021

Examinations Commencing from 1st June 2021

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: 53364 and Course Name: IPR & Patenting

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	As per ____ a work created by an individual represents their specific character as an individual, natural rights demands that we accept the resulting development as its creator's exclusive property.
Option A:	Personality Theory
Option B:	Labour Theory
Option C:	Natural theory
Option D:	Social Contract Theory
2.	A design in India does not include
Option A:	mode or principle of construction
Option B:	features of shape
Option C:	composition of lines or colours
Option D:	shape of the object
3.	What is the challenge faced by Intellectual Property?
Option A:	Biodiversity
Option B:	Digital world
Option C:	Internet
Option D:	Product
4.	A patent is _____ granted by a country to the owner of an invention to make, use, manufacture and market the invention, provided the invention satisfies certain conditions stipulated in the law.
Option A:	exclusive right
Option B:	Inclusive right
Option C:	Private
Option D:	tangible property
5.	_____ can be interpreted stand-alone without associating with any other claims.
Option A:	Dependent claims

Option B:	Independent claims
Option C:	Mutually dependent claims
Option D:	verbatim claim
6.	When did China become a member of the World Intellectual Property Organization (WIPO)?
Option A:	1978
Option B:	1979
Option C:	1980
Option D:	1982
7.	If you file provisional specification, the complete specification is required to be filed within :
Option A:	10 months
Option B:	12 months
Option C:	18 months
Option D:	24 months
8.	Duration of patent is
Option A:	20 years from the date of application
Option B:	20 years from the date of publication
Option C:	20 years from the date of grant
Option D:	20 years from the date of examination
9.	What is the territorial jurisdiction of the Patents Act, 1970?
Option A:	It extends to whole of India except for the State of Jammu & Kashmir
Option B:	It extends to whole of India
Option C:	It extends to the whole of India except for the Union Territories and State of Jammu & Kashmir.
Option D:	It extends to whole of India and members of the World
10.	Every application for a patent shall be for one invention only and shall be filed in Form-1 at an appropriate office
Option A:	One invention- one application
Option B:	Up to four connected inventions are permissible
Option C:	Multiple inventions can be clubbed in one application and special fees to be charged for it
Option D:	One major invention and one minor invention are permissible
11.	Indian Design Act was enacted in the year
Option A:	1970
Option B:	2000
Option C:	1998

Option D:	1995
12.	Which of the following remedies is not available for infringement?
Option A:	Civil
Option B:	Criminal
Option C:	Administrative
Option D:	personal law
13.	Design patents may be granted to whom in US Scenario?
Option A:	anyone who uses design
Option B:	anyone who replicates useful process or machine
Option C:	anyone who invents a new, original, and ornamental design for an article of manufacture
Option D:	anyone who replicates a ornamental design
14.	An inventor was awarded a patent in U.K. on a method for selecting transformed plants and has practiced the mentioned method only in U.K. Six months later, another person who independently invented the same method in Australia wants to obtain a patent in Australia. She:
Option A:	could do it without major problems
Option B:	would not be able to do it because the granted patent was published in the U.K.
Option C:	would not be able to do it because the method is used in the U.K.
Option D:	would not be able to do it because the method is used in the U.K and patent granted was published in UK
15.	The publication of a patent application shall be available
Option A:	Official Journal of the Patent office
Option B:	Official Gazette of the Government of India
Option C:	Website of the Press Information Bureau
Option D:	National Newspapers on every Tuesday
16.	Which of the following are remedies to breach of confidential information?
Option A:	infringement
Option B:	Permanent Injunction
Option C:	Damages
Option D:	Interim Injunction
17.	How many types of compulsory licenses are provided for under the Indian patent Act?
Option A:	1
Option B:	2
Option C:	3
Option D:	4

18.	A National Phase Application may be filed in India because India is a member of the
Option A:	WHO
Option B:	UNICEF
Option C:	PCT
Option D:	NASA
19.	E-commerce thing that needs to be considered with respect to IP is
Option A:	traditional knowledge
Option B:	data
Option C:	logo
Option D:	photos
20.	Typically, transfer technology is done ___ protecting the IPR (i.e. patents and copyrights).
Option A:	before
Option B:	after
Option C:	never
Option D:	anytime

Q2	Solve any Two Questions out of Three	10 marks each
A	List and explain the different IP with examples	
B	What do you understand by claims? Draft five claims for a mobile phone.	
C	Write in brief about pre-grant and post-grant opposition for a patent.	

Q3	Solve any Two Questions out of Three	10 marks each
A	Enumerate the procedure to file trademark in India.	
B	Explain the Berne Convention.	
C	What are impacts of internet on Intellectual Property?	

University of Mumbai

Examination June 2021

Examinations Commencing from 1st June 2021

Curriculum Scheme: Rev2016/2012

Examination: BE Semester VIII

Course Code: 53364 and Course Name: IPR & Patenting

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	A
Q3.	A
Q4	A
Q5	B
Q6	C
Q7	B
Q8.	A
Q9.	B
Q10.	A
Q11.	B
Q12.	D
Q13.	C
Q14.	B
Q15.	A
Q16.	A
Q17.	D
Q18.	C
Q19.	B
Q20.	B

University of Mumbai

Examination 2021

Examinations Commencing from 1st June 2021 to 15th June 2021

Program: **Information Technology**

Curriculum Scheme: Rev-2016

Examination: BE

Semester VIII

Course Code: ITC801 and Course Name: Big Data Analytics

Time: 2 hour

Max. Marks: 80

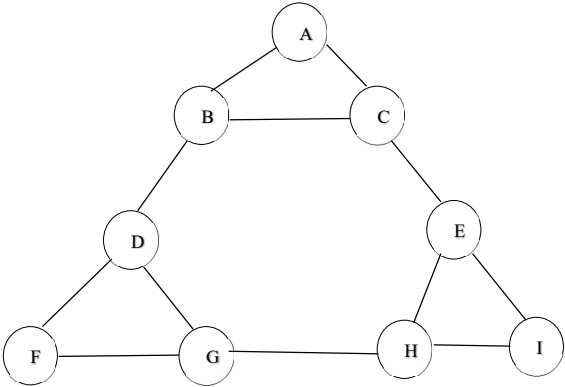
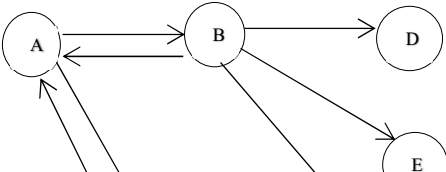
Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Vertical scaling means
Option A:	Adding computers serially
Option B:	Adding computers in parallel
Option C:	Adding computers serially as well as parallel
Option D:	Adding more processors, more memory and faster hardware typically within a single server
2.	NoSQL databases is used mainly for handling large volumes of
Option A:	Structured Data
Option B:	Unstructured Data
Option C:	Semi-Structured Data
Option D:	Relational Data
3.	HBase is _____ type of NOSQL database
Option A:	Key-Value
Option B:	Column family Oriented
Option C:	Document Based
Option D:	Graph Based
4.	Which of the following statements is correct with respect to the statement, "In Hadoop there exists ..."
Option A:	one JobTracker per Mapper
Option B:	one JobTracker per node
Option C:	one JobTracker per Hadoop job
Option D:	one JobTracker per cluster
5.	Which of the following is a valid flow in Hadoop ?
Option A:	Input -> Reducer -> Mapper -> Combiner -> -> Output
Option B:	Input -> Mapper -> Reducer -> Combiner -> Output
Option C:	Input -> Mapper -> Combiner -> Reducer -> Output
Option D:	Input -> Reducer -> Combiner -> Mapper -> Output
6.	How can you disable the reduce step?

Option A:	The Hadoop administrator has to set the number of the reducer slot to zero on all slave nodes. This will disable the reduce step.
Option B:	It is impossible to disable the reduce step since it is critical part of the Map-Reduce abstraction.
Option C:	A developer can always set the number of the reducers to zero. That will completely disable the reduce step.
Option D:	While you cannot completely disable reducers, you can set output to one. There needs to be at least one reduce step in Map-Reduce abstraction.
7.	HBASE satisfies which of the following properties:
Option A:	Partition tolerance – Consistency
Option B:	Availability – Partition Tolerance
Option C:	Consistency – Availability
Option D:	Availability – partition tolerance – Consistency
8.	The number of maps is usually driven by the total size of :
Option A:	Inputs
Option B:	Outputs
Option C:	Tasks
Option D:	Nodes in cluster
9.	Using Map Reduce for Union in map phase what happens
Option A:	Maps tuples and emits all tuples of two set to be united
Option B:	Maps tuples and emits tuples
Option C:	Maps keys and emits keys
Option D:	Maps keys and emits all keys of two set to be united
10.	In order to count the 1's bit from large data stream model, the algorithm we can use as
Option A:	Bloom Filter
Option B:	Flajolet- Martin
Option C:	Sampling Algorithms
Option D:	DGIM
11.	In Flajolet Martin algorithm, if an element appears second time, the value
Option A:	Decreases
Option B:	Increases
Option C:	Increases or Decreases depending on the stream.
Option D:	Remains unchanged
12.	Bloom Filter provides which answer from large collection of Data Set.
Option A:	Member is definitely present in the set.
Option B:	Not sure whether a member is present or not in the set.
Option C:	Member may be present, or definitely not present in the set.
Option D:	Member can be present or absent is not predicted.
13.	You are owner of an online shopping website and have just ended the “Great Indian Shopping Sale” offer. This offer was valid for 2 days. You want to find out

	how many unique customers have utilized the offer during this period. Which big data streaming approach will you adopt to achieve the result.
Option A:	Bloom Filter
Option B:	Flajolet- Martin
Option C:	Sampling Algorithms
Option D:	DGIM
14.	MapReduce can be applied to decision trees if
Option A:	Data is large to be kept in memory and the generated tree is large such that it cannot be stored in single machine memory
Option B:	Data is large to be kept in memory, but the generated tree can be stored in memory
Option C:	Data is small and can be stored in single machine memory, but the generated tree cannot be stored in single memory
Option D:	Data is small and can be stored in single machine memory and the generated tree can be stored in single memory
15.	Margin in SVM is defined as
Option A:	the distance of closest example from the decision boundary/hyperplane
Option B:	the distance between other side of the margin and data point
Option C:	distance between two data points on the same side of hyperplane
Option D:	distance between two data points on the opposite side of hyperplane
16.	Canopy Clustering is usually used as
Option A:	Pre Clustering techniques for very large datasets
Option B:	Clustering techniques for high dimensional datasets
Option C:	Clustering techniques for very small datasets
Option D:	post clustering techniques for Large datasets
17.	The pairs (i, j) that are generated in pass 2 of the PCY are those
Option A:	where one of i or j hash to a frequent bucket
Option B:	where both i and j hash to a frequent bucket
Option C:	where neither i or j hash to a frequent bucket
Option D:	does not depend on the frequent bucket
18.	Data structure format in which graph can be represented
Option A:	Queue
Option B:	Array
Option C:	Matrix
Option D:	Stack
19.	Which of the following factors have an impact on the Google PageRank?
Option A:	The Subject Matter of the site providing the inbound link to a page of a web site
Option B:	The Total Number of inbound links to a page of a web site
Option C:	The Text used to describe the inbound link to a page of a web site
Option D:	The Number of Outbound Links on the page that contains the inbound link to a page of a web site

20.	In a web graph if a set of pages all have outlinks that reach only pages from the same set, the structure is called a
Option A:	Hubs
Option B:	Spider Traps
Option C:	Dead Ends
Option D:	Authorities

Q2. (20 Marks)	Solve any Four out of Six	5 marks each
A	Explain Hadoop Architecture and its Components with proper diagram	
B	Explain CAP theorem and explain how NoSQL systems guarantees BASE property.	
C	Discuss how failures are handled in MapReduce job?	
D	Describe the memory utilization in PCY algorithm	
E	i) Find Jaccard distance $\{1, 2, 3, 4\}$ & $\{2, 3, 5, 7\}$ and $\{a, a, a, b\}$ & $\{a, a, b, b, c\}$ ii) Find Hamming Distance between 110011 & 010101 and 11001 & 01011 iii) Compute the cosines of the angles between $(3, -1, 2)$ and $(-2, 3, 1)$.	
F	Explain with example Collaborative based filtering in a recommendation system.	

Q3. (20 Marks)	Solve any two out of three	10 marks each
A	For the graph given below, use Clique Percolation Method and find all communities. 	
B	Define PageRank. Using the web graph shown below compute the PageRank at every node at the end of the second iteration. Use teleport factor = 0.8. 	

C	<p>Suppose a data stream consists of the integers 3,1,4,1,5,9,2,6,5. Let the hash function being used be:</p> <ul style="list-style-type: none">i) $h(x)=3x+1 \pmod 5$ii) $h(x)= 5x +6 \pmod 5$iii) $h(x) = 2x + 3 \pmod 5$ <p>Show how the Flajolet-Martin algorithm will be used to estimate the number of distinct element in this stream.</p>

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Examination 2021

Examinations Commencing from 1st June 2021 to 15th June 2021

Program: Information Technology

Curriculum Scheme: Rev-2016

Examination: BE

Semester VIII

Course Code: ITC801 and Course Name: Big Data Analytics

Time: 2 hours

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	D
Q2.	B
Q3.	B
Q4	C
Q5	C
Q6	C
Q7	A
Q8.	A
Q9.	A
Q10.	D
Q11.	D
Q12.	C
Q13.	B
Q14.	B
Q15.	A
Q16.	A
Q17.	B
Q18.	C
Q19.	B
Q20.	B

University of Mumbai

Examination June 2021

Examinations Commencing from 1st June 2021

Program: Information Technology

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8045 and Course Name: Enterprise Resource Planning

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	In the _____, information about all the aspects of the organization is stored centrally and is available to all departments
Option A:	Enterprise
Option B:	Management Information system
Option C:	Business process
Option D:	Executive information system
2.	_____ is one of the first activities in any ERP project.
Option A:	Data Process
Option B:	Business Process
Option C:	Data Modelling
Option D:	Business Modelling
3.	Which of the following is not a Common Executive Information System Characteristic?
Option A:	It is useful for routine / repetitive operational process
Option B:	Used directly by top-level executives
Option C:	Tailored to individual executive users
Option D:	Focused on supporting upper-level management decisions.
4.	Which is the process of identifying valid, novel, potential useful and ultimately comprehensive information from database that is used to make crucial business decisions?
Option A:	Data warehousing
Option B:	Data mining
Option C:	MIS
Option D:	DSS

5.	Which technology is designed to address semi structured and unstructured problems?
Option A:	BPR
Option B:	MIS
Option C:	DSS
Option D:	QIS
6.	Except one, all others are the information requirement of Material Requirement Planning (MRP system)
Option A:	Master Production schedule
Option B:	Bill of Material
Option C:	Investment records
Option D:	Inventory records
7.	What is critical link between the marketplace, demand forecasting and master production scheduling?
Option A:	BPR
Option B:	DRP
Option C:	MIS
Option D:	DSS
8.	The component of plant maintenance system which facilitates equipment managers to recognize components with persistent repair issues.
Option A:	Preventive maintenance Control
Option B:	Component Tracking
Option C:	Equipment Tracking
Option D:	Plant Maintenance calibration Tracking
9.	_____system provides information that is useful to all functional areas and encourage cross-functional interaction in manufacturing company
Option A:	MRP-II
Option B:	DRP
Option C:	BOM
Option D:	MPS
10.	Which is a key issue in the formulation of strategic plans in companies?
Option A:	Complexity
Option B:	Security
Option C:	Flexibility
Option D:	Durability

11.	What can be defined in many different ways—excellence, conformance to specifications, fitness for use, value for the price, and so on?
Option A:	Quantity
Option B:	Verification
Option C:	Quality
Option D:	Validation
12.	What means meeting or exceeding customer’s requirements for a product or service?
Option A:	Customer satisfaction
Option B:	Customer retention
Option C:	Customer evaluation
Option D:	Customer facilitation
13.	Which process should eliminate those packages that are not at all suitable for the company’s business processes?
Option A:	post implementation
Option B:	evaluation
Option C:	pre-evaluation
Option D:	gap analysis
14.	Which system reveals not only the strengths of a company’s business process but also and perhaps more importantly its weaknesses?
Option A:	Information
Option B:	Configuration
Option C:	ERP
Option D:	Management information
15.	_____method of implementation approach installs ERP system and all associated modules across the entire organization at once in a single major event.
Option A:	Phased rollout approach
Option B:	Big bang approach
Option C:	Parallel adaption approach
Option D:	Combination of Phased-rollout and parallel adoption
16.	In a local Bank when the teller tries to sell you a new product while you are making a deposit. This strategy of adding the new customers fall into which following category.
Option A:	Empower your customer
Option B:	Integrate sales and services
Option C:	Relationship selling

Option D:	Self-sevice solution
17.	_____ is the primary step in e-business design.
Option A:	Self Judgement
Option B:	Selecting the type of design
Option C:	Design refinement
Option D:	Design creation
18.	The third level of Enterprise architecture planning is _____
Option A:	Getting started
Option B:	The vision of where we want to be
Option C:	Where we are today
Option D:	How we plan to get there.
19.	Self-service solutions has impacted which of the following business force.
Option A:	Intermediary or Middlemen
Option B:	Self-employed
Option C:	Regular-salaried workforce
Option D:	Casual workers
20.	Which of the following e-business design uses the internet as a new channel to directly access customers, make sales and fulfill orders
Option A:	Category killer
Option B:	Channel reconfiguration
Option C:	Infomediary
Option D:	Channel mastery

Q2 (20 Marks)	Solve any Four out of Six	5 marks each
A	Describe Business Modeling Process	
B	What are the elements of CRM? Explain in brief	
C	Define Lead time and Cycle time	
D	Write short notes on OLAP	
E	Explain up-selling and cross-selling with examples.	
F	How does an ERP system help in achieving better customer satisfaction?	

Q3. (20 Marks)	Solve any Two Questions out of Three	10 marks each
A	List and explain phases of ERP Implementation	
B	Explain ERP's Finance Module and Quality management module in detail.	
C	Explain in detail e- Procurement Process. Also discuss the advantages of adopting e-Procurement	

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Examination June 2021

Examinations Commencing from 1st June 2021

Program: Information Technology

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8045 and Course Name: Enterprise Resource Planning

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	D
Q3.	A
Q4	B
Q5	C
Q6	C
Q7	B
Q8.	B
Q9.	A
Q10.	C
Q11.	C
Q12.	A
Q13.	C
Q14.	B
Q15.	B
Q16.	B
Q17.	A
Q18.	B
Q19.	A
Q20.	B

University of Mumbai
Examination June 2021

Examinations Commencing from 1st June 2021

Program: Information Technology

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: **ITC802** and Course Name: **Internet of Everything**

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	-----are the entity identifiers of the IoT application.
Option A:	Thing identifiers
Option B:	Device identifiers
Option C:	User identifiers
Option D:	Communication identifiers
2.	Thein the objects help the IoT devices interact with physical entities.
Option A:	Data
Option B:	Process
Option C:	Actuators
Option D:	Sensors
3.	RFID tags are also referred as
Option A:	Transponder
Option B:	Transmitter
Option C:	Receiver
Option D:	Responder
4.	In ----- tag, the battery/energy source is not used for communication.
Option A:	Active
Option B:	Passive
Option C:	Semi-Passive
Option D:	Active and Passive
5.	RFID functions mainly involve three aspects like
Option A:	Monitoring, Learning, Predicting
Option B:	Monitoring, Tracking, Learning
Option C:	Tracking, Learning, Supervising
Option D:	Monitoring, Tracking, Supervising
6.	STT stands for
Option A:	Smart Tree Traversal Protocol
Option B:	Smart Trend Traversal Protocol

Option C:	Smart Tree Training Protocol
Option D:	Smart Trend Training Protocol
7.	BAT anti-collision protocol is used for
Option A:	Active Tags
Option B:	Passive Tags
Option C:	Semi Passive Tags
Option D:	Semi Active Tags
8.	NFC works on the principle of -----
Option A:	Electromagnetic Wave Propagation
Option B:	Skywave propagation
Option C:	Magnetic induction
Option D:	NFC works on the principle of
9.	CoAP stands for -----
Option A:	Constrained Application Protocol
Option B:	Cost dependent Application Protocol
Option C:	Core Application Protocol
Option D:	Cooperative Application Protocol
10.	Sensor MAC (S-MAC) and Timeout MAC (T-MAC) are example of:
Option A:	Efficiency based protocol
Option B:	contention-based protocols
Option C:	reservation based protocols
Option D:	schedule-based protocols
11.	Y-MAC
Option A:	Is a TDMA-based multi-channel MAC protocol, allocates a time slot to each node in the network, Time is divided into several variable-length frames, and each frame is having a broadcast period.
Option B:	Is a TDMA-based multi-channel MAC protocol, allocates a time slot to each node in the network, Time is divided into several frames, and each frame is composed of a unicast period
Option C:	Is a TDMA-based multi-channel MAC protocol, allocates a time slot to each node in the network, Time is divided into several fixed-length frames, and each frame is composed of a broadcast period and a unicast period
Option D:	Is a CSMA-based multi-channel MAC protocol, allocates a time slot to each node in the network, Time is divided into several fixed-length frames, and each frame is composed of a broadcast period and a unicast period
12.	Greedy-face-greedy routing is a variant of
Option A:	Gradient based routing

Option B:	Geographic routing
Option C:	Multi hop routing
Option D:	Greedy routing
13.	In GRAB, $\alpha(\text{used}) = P_{(\text{consumed})} + C_{(\text{receiver})} - C_{(\text{source})}$ α refers to
Option A:	the amount of power assigned to the packet at the source, it determines the "height" of the forwarding mesh.
Option B:	the amount of credit assigned to the packet at the source, it determines the "width" of the forwarding mesh.
Option C:	the amount of debit assigned to the packet at the source, it determines the "width" of the forwarding mesh.
Option D:	the amount of budget assigned to the packet at the source, it determines the "height and width" of the forwarding mesh.
14.	In active mode of link layer handoff session -----.
Option A:	the HN sends in additional PROBE broadcast packets on each channel and receives probe responses from AP
Option B:	the MN sends in additional PROBE broadcast packets on each channel and receives probe responses from AP.
Option C:	the MN listens for beacon messages (sent periodically by the AP), on assigned channels.
Option D:	the MN terminates upon the reception of an ASSOCIATION RESPONSE message.
15.	The link layer handoff comprises four steps: 1. Recognizing the loss of the connection 2. Re-/Authentication with the newly discovered AP 3. Search for and detection of a new adequate AP 4. Re-/Association with the newly discovered AP
Option A:	1-2-3-4
Option B:	1-3-2-4
Option C:	4-3-2-1
Option D:	2-1-3-4
16.	In L3 handover, movement detection mechanisms is divided into:
Option A:	advertisement based and hidden based
Option B:	advertisement based and on demand hint based
Option C:	advertisement based and hint based
Option D:	Computing based and hint based
17.	In MIP the main issue when transmitting real-time traffic is non-synchronization of the handover process at the -----
Option A:	Link and network layers
Option B:	Link and application layers
Option C:	datalink and network layers

Option D:	Physical and network layers
18.	Which of the following features you will use for accessing third-party jars during the execution of MapReduce job?
Option A:	Distributed cache
Option B:	Speculative execution
Option C:	Data locality
Option D:	Erasur coding
19.	_____ is a Java web application used to schedule Apache Hadoop jobs.
Option A:	Oozie
Option B:	Impala
Option C:	storm
Option D:	Mahout
20.	-----is a parallel processing framework that is used for in-memory processing to boost big data applications.
Option A:	Apache Oozie
Option B:	Apache Storm
Option C:	Apache Spark
Option D:	Apache Hadoop

Q2.	Attempt both the sections 2A and 2B	20 marks
A	Solve any Two	5 marks each
i.	Explain different Identifier in IOT	
ii.	Draw Hadoop architecture and explain its different components.	
iii.	Describe STT protocol.	
B	Solve any One	10 marks each
i.	Explain in detail the working of Gradient Based Routing protocol.	
ii.	Discuss in detail the design and working of Mobile IP (MIP) – IETF communication protocol - IEEE 802.11 - along with its issues.	

Q3.	Attempt both the sections 3A and 3B	20 marks
A	Solve any Two	5 marks each
i.	Describe the functional architecture of Puppet.	
ii.	State the factors that need to be taken care of while designing an RFID.	
iii.	Describe BAT protocol.	
B	Solve any One	10 marks each
i.	What do you mean by Resource in the REST framework? What are the tools used for creating RESTFull web services?	
ii.	Explain the process of Network layer handoff in MIP along with the working of passive and active scanning in the same.	

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Examinations Commencing from 1st June 2021

Program: Information Technology

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: **ITC802** and Course Name: **Internet of Everything**

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	C
Q3.	A
Q4.	C
Q5.	D
Q6.	B
Q7.	A
Q8.	C
Q9.	A
Q10.	B
Q11.	C
Q12.	B
Q13.	B
Q14.	B
Q15.	B
Q16.	C
Q17.	A
Q18.	A
Q19.	A
Q20.	C

University of Mumbai

Examination June 2021

Examinations Commencing from 1st June 2021

Program: BE(INFORMATION TECHNOLOGY)

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8042 and Course Name: Information Retrieval System

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	_____ is usually provided by most modern information retrieval systems.
Option A:	Information and knowledge retrieval
Option B:	Information or knowledge retrieval
Option C:	Information and data retrieval
Option D:	Information or data retrieval
2.	Which operations transform the original documents and generate a logical view of them?
Option A:	The text operations
Option B:	The query operations
Option C:	Indexing operations
Option D:	Searching Operations
3.	Which visualization technique supports the analysis of large hierarchical structure data?
Option A:	Panning and zooming
Option B:	Tree views
Option C:	Focus and context
Option D:	Brushing and linking
4.	Which of the following is not a classical model of information retrieval?
Option A:	Boolean
Option B:	Cluster
Option C:	Probabilistic
Option D:	Vector space
5.	Humans are highly attuned to _____ for visualization and understanding
Option A:	Image
Option B:	Text
Option C:	Animation
Option D:	inherently abstract information
6.	Which of the following statement is false with regards to Boolean retrieval model?
Option A:	It answers query based on Boolean expression
Option B:	It views document as a set of terms
Option C:	It is very precise as it meets a very specific condition

Option D:	It cannot combine two operators "AND NOT" and "OR-NOT"
7.	In which model, the query term defines a fuzzy
Option A:	Boolean
Option B:	Vector
Option C:	Probabilistic
Option D:	Set theoretic
8.	Which of the following items is not a component of a complete search system?
Option A:	Document cache
Option B:	Horizontal index
Option C:	Spell correction
Option D:	Indexes
9.	With Boolean querying system _____ of document is not provided
Option A:	Highlights occurrence of the word
Option B:	Ranking
Option C:	Sorting
Option D:	Feedback
10.	What is a sequence of single word queries called as?
Option A:	Boolean
Option B:	Natural Language
Option C:	Phrase
Option D:	Regular expression
11.	In the following words observe the pattern and tell the type of pattern matching: Computer , Computation, Computing
Option A:	Prefix matching
Option B:	String matching
Option C:	word matching
Option D:	Suffix matching
12.	A pattern is defined as a set of _____.
Option A:	Systematic and meaning full ranking of documents
Option B:	Combination of Boolean feature and ranking
Option C:	Symmetric feature
Option D:	Syntactic feature
13.	An information retrieval object is identified by _____ components.
Option A:	one (Tasks)
Option B:	two (Tasks and Context)
Option C:	three (Tasks, Form, and Context)
Option D:	zero
14.	Which of the following software text search algorithm is fastest?
Option A:	Brute Force Approach

Option B:	Knuth-Morris-Pratt
Option C:	Boyer-Moore
Option D:	Robin-Karp
15.	_____ is the automatic recognition and the generation of categories of entities that can be text documents.
Option A:	Clustering
Option B:	Gathering
Option C:	Crawling
Option D:	Browsing
16.	A metric derived by taking the log of N divided by the document frequency where N is the total number of documents in a _____.
Option A:	Document frequency
Option B:	tf-idf weight
Option C:	collection frequency
Option D:	inverse document frequency
17.	A good compression algorithm is able to reduce the text to _____ of its original.
Option A:	20-25%
Option B:	40-45%
Option C:	25-30%
Option D:	30-35%
18.	Which of the following can also be compressed independently of the index?
Option A:	Image
Option B:	Audio
Option C:	Text
Option D:	Video
19.	Searching and compression were traditionally regarded as _____ operations.
Option A:	inclusive
Option B:	independent
Option C:	exclusive
Option D:	dependent
20.	Knuth-Morris-Pratt algorithm moves
Option A:	a window over the text and a pointer inside the window
Option B:	a window below the text and a pointer outside the window
Option C:	a window over the text and a pointer outside the window
Option D:	a window below the text and a pointer inside the window

Q2	Solve any Two Questions out of Three	10 marks each
A	Explain the Retrieval Process with diagram.	
B	What is an information access process? Explain with diagram.	

C	What are different models for Browsing? Explain any one in detail.
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Q3.	
A	Solve any Two 5 marks each
i.	Explain Metadata in detail.
ii.	Compare different Text Comparison Techniques.
iii.	Write short note on- Pattern Matching.
B	Solve any One 10 marks each
i.	What are the different classical information retrieval models available? Explain any one in detail.
ii.	Explain in detail about Search Engine.

University of Mumbai

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Examinations Commencing from 1st June 2021

Program: BE (INFORMATION TECHNOLOGY)

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8042 and Course Name: Information Retrieval System

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	A
Q3.	B
Q4	B
Q5	C
Q6	D
Q7	D
Q8.	B
Q9.	B
Q10.	C
Q11.	A
Q12.	D
Q13.	C
Q14.	C
Q15.	A
Q16.	D
Q17.	D
Q18.	C
Q19.	C
Q20.	A

University of Mumbai
Examination June 2021

Examinations Commencing from 1st June 2021

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8043 and Course Name: Knowledge Management

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	The two major forms of knowledge, tacit and explicit, are distinguished by
Option A:	Grew out of a different KM root discipline
Option B:	The fact that they represent two different extremes in a spectrum that represents how well the knower can articulate the content.
Option C:	Arose at a different point in time during the evolution of the KM concept
Option D:	Are used in different types of organizations
2.relates to the understanding that we develop through our past actions.
Option A:	Experience
Option B:	Common sense
Option C:	Action
Option D:	Flow
3.	Knowledge acquired through years of proper experience is
Option A:	Shallow Knowledge
Option B:	Deep Knowledge
Option C:	Formal Knowledge
Option D:	Knowledge as Know-How
4.	Which of the following is not part of knowledge management?
Option A:	Production
Option B:	Creativity
Option C:	Research
Option D:	Strategy
5.	The definition of a best practice is
Option A:	Learning through repeated practice
Option B:	Learning through trial and error
Option C:	The optimal way of performing a task according to published theory
Option D:	A successful outcome by your peers that you can replicate
6.	The _____ layer of the KM system creates a competitive edge for the learning organization.
Option A:	authorized access
Option B:	Middleware
Option C:	Transport

Option D:	Knowledge-enabling application
7.	In KMSLC, the knowledge developer tests the evaluating system from _____ of the cycle
Option A:	End
Option B:	Start
Option C:	Middle
Option D:	Any point
8.	The set of processes developed in an organization to create, gather, store, transfer, and apply knowledge, best describes:
Option A:	organizational learning
Option B:	knowledge management
Option C:	organizational memory
Option D:	knowledge assets
9.	When an inexperienced and unskilled employee is placed in work environment, he learns and acquired new knowledge and skill. In this situation one of the SECI processes has implemented that process is
Option A:	Skills
Option B:	Patent Asset
Option C:	Intellectual Rights
Option D:	Intellectual Capital
10.	The approach used to capture, describe, and subsequently code knowledge depends on the
Option A:	Testing
Option B:	data mining
Option C:	type of knowledge
Option D:	Database
11.	In ____ Protocols are collected by asking experts to solve the specific problem and verbalize their decision process by stating directly they think.
Option A:	Protocol Analysis
Option B:	Consensus Decision making
Option C:	Repertory Grid
Option D:	Black Boarding
12.	The, which provides access to the information assets of the company via the logic incorporated in the process layer.
Option A:	data
Option B:	Process
Option C:	Network
Option D:	user interface
13.	____ is used for capturing and evaluating the expert's model
Option A:	Protocol Analysis
Option B:	Consensus Decision making
Option C:	Repertory Grid

Option D:	Black Boarding
14.	are conditional statement that specify an action to be taken if a certain condition is true
Option A:	Frames
Option B:	Production rule
Option C:	CBR
Option D:	Decision Tables
15.	The Classifies and categorizes a problem domain using his/her own model.
Option A:	Domain Expert
Option B:	User
Option C:	DBA
Option D:	Tester
16.	Knowledge can be preserved in all of the following forms EXCEPT:
Option A:	Patents
Option B:	Books
Option C:	Documentaries
Option D:	Languages
17.	___ is make sure that the system produces correct results.
Option A:	User Acceptance testing
Option B:	Knowledge testing
Option C:	Software testing
Option D:	Logical testing
18.	Which of the following is the knowledge that people carry in their minds and is, therefore, difficult to access?
Option A:	Explicit knowledge
Option B:	Tacit knowledge
Option C:	Procedural knowledge
Option D:	Declarative knowledge
19.	Represent knowledge about a particular idea in a data structure called ____
Option A:	Frames
Option B:	Production rule
Option C:	CBR
Option D:	Decision Tables
20.	is a level of testing that validates the complete and fully integrated software product
Option A:	Software testing
Option B:	Logical testing
Option C:	Knowledge testing
Option D:	System testing

Q2 (20 Marks Each)	
A	Solve any Two 5 marks each
i.	<i>What is logical testing? List any four advantages of logical testing.</i>
ii.	<i>Explain with example knowledge, information and data.</i>
iii.	<i>Explain knowledge capture and knowledge codification.</i>
B	Solve any One 10 marks each
i.	<i>Briefly explain about Nonaka's model of knowledge creation and transformation.</i>
ii.	<i>Write a short note on impact of KM on society and organization.</i>

Q3 (20 Marks Each)	
A	Solve any Two 5 marks each
i.	<i>Describe the Challenges in Building KM Systems.</i>
ii.	<i>What is knowledge management? Explain need of KM.</i>
iii.	<i>Define Knowledge worker and list out roles of knowledge worker.</i>
B	Solve any One 10 marks each
i.	<i>What is meant by Knowledge transfer? Explain different methods of knowledge transfer.</i>
ii.	<i>Define Knowledge Capture. What are the different techniques of knowledge capture? Explain any 3 techniques with example.</i>

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Examinations Commencing from 1st June 2021

Program: _____

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8043 and Course Name: Knowledge Management

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	B
Q2.	A
Q3.	B
Q4	A
Q5	D
Q6	D
Q7	B
Q8.	B
Q9.	D
Q10.	C
Q11.	A
Q12.	D
Q13.	C
Q14.	B
Q15.	A
Q16.	D
Q17.	D
Q18.	B
Q19.	A
Q20.	D

University of Mumbai
Examination June 2021

Examinations Commencing from 1st June 2021

Program: **Mechanical Engineering**

Curriculum Scheme: Rev 2016

Examination: BE Semester VIII

Course Code: ILO 8021 and Course Name: Project Management

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Projects are unique and temporary, while operations are
Option A:	Specific And Targeted
Option B:	Ongoing and Permanent with a Repetitive Output
Option C:	Unique And Permanent With Non-Repetitive Outputs
Option D:	Ongoing And Temporary
2	From a practical perspective, what is the most important element of a good project communication management approach?
Option A:	Setup a regular and frequent method for communicating with team members and stakeholders and then follow it.
Option B:	Conduct one-on-one meetings (face-to-face or virtual) with project team members every week.
Option C:	Ensure all project communication between team members and stakeholders goes through the Project Leader so that there is no opportunity for misunderstanding.
Option D:	Telephonic conversation, and Emails
3.	The lowest element in the hierarchical breakdown of the WBS is
Option A:	Work package
Option B:	Responsibility matrix
Option C:	Bottoms up budget
Option D:	Deliverable
4.	Use of PMIS is comparatively less in this process group of project management
Option A:	Initiating
Option B:	Executing
Option C:	Monitoring and Controlling
Option D:	Planning
5.	Which of the following represents the estimated value of the work actually accomplished?
Option A:	Earned value (EV)
Option B:	Planned value (PV)
Option C:	Actual cost (AC)
Option D:	Cost variance (CV)

6.	_____ is the discounting rate, which delivers a Net Present Value equal to zero
Option A:	ARR
Option B:	IRR
Option C:	NPV
Option D:	Profitability Index
7.	Project is stopped due to either its successful or unsuccessful conclusion. Auditing, team on new assignment, assets transferred as per policy is known as :
Option A:	Extinction
Option B:	Addition
Option C:	Integration
Option D:	Starvation
8.	The process of partnering is an attempt to mitigate the risk associated with
Option A:	Networking
Option B:	Uncertainty
Option C:	Risks
Option D:	Subcontracting
9	Project Risk = _____* Consequences of Event. None of the above
Option A:	Loss
Option B:	Outcomes of Event
Option C:	Probability of Event
Option D:	Profit
10.	What is the correct sequence of stages in group development
Option A:	Forming, Norming, Performing, Storming, Adjourning
Option B:	Forming, Norming, Storming, Performing , Adjourning
Option C:	Forming, Storming, Norming, Performing , Adjourning
Option D:	Forming, Performing, Norming, Storming , Adjourning
11.	An activity has an optimistic time 11 days, a most likely time of 15 days, and a pessimistic time of 23 days. What is its variance?
Option A:	15.6
Option B:	16.33
Option C:	4
Option D:	2
12.	What are the determinants of project success as per Iron Triangle?
Option A:	Resources, Cost, Performance
Option B:	Knowledge, Time, Resources
Option C:	Cost, Skills, Performance
Option D:	Cost, Performance, Time

13	<p>What is the correct sequence for the following processes of Project Risk Management:</p> <ol style="list-style-type: none"> 1. Plan Risk Management; 2. Perform Qualitative Risk Analysis; 3. Identify Risks; 4. Perform Quantitative Risk Analysis; 5. Plan Risk Responses; 6. Control Risks
Option A:	1-2-3-4-5-6
Option B:	1-3-2-4-5-6
Option C:	1-3-4-2-5-6
Option D:	3-1-2-4-5-6
14.	<p>Arrange the following elements of the Project Cycle in the right order:</p> <ol style="list-style-type: none"> A- Project Appraisal B- Feasibility Analysis C- Negotiation D- Project Selection
Option A:	A-B-C-D
Option B:	B-A-C-D
Option C:	B-A-D-C
Option D:	B-C-A-D
15.	<p>An activity takes 4 days to complete at a normal cost of Rs.500. If it is possible to complete the activity in 2 days with an additional cost of Rs.700, what is the incremental cost of activity.</p>
Option A:	100
Option B:	125
Option C:	1000
Option D:	250
16.	<p>In PERT/CPM, slack time is :</p>
Option A:	Is the amount of time a task may be delayed without changing the overall project completion time
Option B:	Is the latest time an activity can be started without delaying the entire project
Option C:	Is a task or subproject that must be completed
Option D:	Marks the start or completion of a task
17.	<p>The review of the successes and the mistakes is normally held during _____ phase.</p>
Option A:	Initiation
Option B:	Planning
Option C:	Execution
Option D:	Closure
18.	<p>Cost performance index value is less than 1 indicates :</p>
Option A:	Cost under run
Option B:	Cost overrun

Option C:	Cost average																																			
Option D:	Cost Variance																																			
19.	Why does scope creep cause a delay on a project?																																			
Option A:	The project resources are doing the scope creep work and not the originally planned work, causing the originally planned tasks to be delayed.																																			
Option B:	Project work is postponed until the magnitude of scope creep is defined.																																			
Option C:	Scope creep causes task estimates to increase.																																			
Option D:	Scope creep causes cost estimates to increase.																																			
20.	Goldratt's critical chain method is based on																																			
Option A:	Theory of constraints																																			
Option B:	Critical path method																																			
Option C:	Supply of raw material in time																																			
Option D:	Use of concurrent engineering principle																																			
Q.2	Solve any Four out of Six . 5 Marks Each																																			
A	What are the knowledge areas and process groups in Project Management as per PMI?																																			
B	Explain various project selection models.																																			
C	What is Goldratt's critical chain method?																																			
D	<p>Determine the net present value for a project that costs Rs. 2,40,000/- would yield after tax cash flows as follows. Assume cost of capital is 10%</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>CASH Flow in Rs.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25,000</td> </tr> <tr> <td>2</td> <td>75,000</td> </tr> <tr> <td>3</td> <td>80,000</td> </tr> <tr> <td>4</td> <td>100,000</td> </tr> </tbody> </table> <p>Comment on feasibility of project based on NPV</p>	Year	CASH Flow in Rs.	1	25,000	2	75,000	3	80,000	4	100,000																									
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E	Explain importance of ethics in projects.																																			
F	What are the different ways of closing the project?																																			
Q.3	Solve any Two Questions out of Three 10 Marks Each																																			
A	<p>a. A consulting project has an actual cost of Rs. 45000, Scheduled cost Rs. 35000, and value of completed work is Rs. 40000. Find the Schedule and Cost Variance. Also find SPI and CPI.</p> <p>b. What is a contract? Explain different types of contracts.</p>																																			
B	<p>R & D project has a list of tasks to be performed whose time estimates are given in the as follows.</p> <p style="text-align: center;">Table-1-Time Estimation for R &D Project</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Activity <i>i</i> <i>j</i></th> <th>Activity Time</th> <th>t_o</th> <th>t_m</th> <th>t_p</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>A</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <td>1-3</td> <td>B</td> <td>2</td> <td>3</td> <td>10</td> </tr> <tr> <td>1-4</td> <td>C</td> <td>6</td> <td>8</td> <td>16</td> </tr> <tr> <td>2-4</td> <td>D</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>3-4</td> <td>E</td> <td>6</td> <td>7</td> <td>8</td> </tr> <tr> <td>3-5</td> <td>F</td> <td>6</td> <td>7</td> <td>14</td> </tr> </tbody> </table>	Activity <i>i</i> <i>j</i>	Activity Time	t_o	t_m	t_p	1-2	A	4	6	8	1-3	B	2	3	10	1-4	C	6	8	16	2-4	D	1	2	3	3-4	E	6	7	8	3-5	F	6	7	14
Activity <i>i</i> <i>j</i>	Activity Time	t_o	t_m	t_p																																
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	4-6	G	3	5	7
	4-7	H	4	11	12
	5-7	I	2	4	6
	6-7	J	2	9	10
	<p>a. Draw the project network.</p> <p>b. Find the critical path.</p> <p>c. Find the probability that the project is completed in 19 days. If the probability is less than 20%, find the probability of completing it in 24 days.</p>				
C	<p>Write short notes on.</p> <p>a. Work Breakdown Structure</p> <p>b. Project Procurement Management,</p>				

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Curriculum Scheme: Rev 2016

Examination: BE Semester VIII

Course Code: ILO 8021 and Course Name: Project Management

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	B
Q2.	A
Q3.	A
Q4	A
Q5	A
Q6	B
Q7	A
Q8.	D
Q9.	C
Q10.	C
Q11.	C
Q12.	D
Q13.	B
Q14.	C
Q15.	A
Q16.	A
Q17.	D
Q18.	B
Q19.	A
Q20.	A

University of Mumbai
Examination June 2021

Examinations Commencing from 1st June 2021

Program: **Information Technology**

Curriculum Scheme: Rev 2016

Examination: BE Semester VIII

Course Code: ITDLO8041 and Course Name: User Interaction Design

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Which of the following is not a design principle that allows the user to maintain control?
Option A:	Provide for flexible interaction
Option B:	Allow user interaction to be interrupt-able and undo-able
Option C:	Show technical internals from the casual user
Option D:	Design for direct interaction with objects that appear on the screen
2.	A central concern of interaction design is to develop interactive products that are:
Option A:	Usable
Option B:	Adaptable
Option C:	Maintainable
Option D:	Scalable
3.	Which of these activities is not a part of interaction design process
Option A:	Identifying needs and establishing requirements.
Option B:	Developing alternative designs that meet those requirements.
Option C:	Building interactive versions of the designs so that they can be communicated and assessed.
Option D:	Maintaining the design over the years
4.	Which of these is not an usability goal
Option A:	Safety
Option B:	Learnability
Option C:	Utility
Option D:	Fault Tolerance
5.	_____ occurs when we use a tool or device in conjunction with an external representation to help us carry out a computation.
Option A:	Cognitive Thinking
Option B:	Computational Offloading
Option C:	Memorability
Option D:	Internal offloading

6.	Studying for an exam, learning a foreign language, and learning to cook are an example of
Option A:	Incidental learning
Option B:	Intentional learning
Option C:	Perception
Option D:	Attention
7.	Issuing commands and selecting options is a _____ interaction type.
Option A:	Instructing
Option B:	Conversing
Option C:	Manipulating
Option D:	Exploring
8.	_____ refers to how good a system is at doing what it is supposed to do.
Option A:	Utility
Option B:	Efficiency
Option C:	Memorability
Option D:	Effectiveness
9.	What are rich descriptions of typical users of the product under development on which the designers can focus and for which they can design products.
Option A:	Personas
Option B:	Scenarios
Option C:	Use cases
Option D:	Design fiction
10.	Identify the task description which focuses on functional requirements and capture interaction and can be used in design or to capture requirements
Option A:	Personas
Option B:	Scenarios
Option C:	Use cases
Option D:	Design fiction
11.	_____ Requirements refer to the circumstances in which the interactive product will operate.
Option A:	Functional
Option B:	Data
Option C:	Usability goals
Option D:	Environmental
12.	Small pieces of cardboard about 3 × 5 inches is a successful and simple way to prototype an interaction which is called as
Option A:	Storyboard
Option B:	Sketch
Option C:	Index Cards
Option D:	System

13.	Which of the following is the most likely interface metaphor used by a smart phone calendar function?
Option A:	Restaurant menu
Option B:	Touch-screen interface
Option C:	A paper diary
Option D:	Mobile technology.
14.	A prototype that evolves into the final product and is built with these engineering principles in mind is called _____.
Option A:	Throwaway prototyping
Option B:	Evolutionary prototyping
Option C:	Paper prototyping
Option D:	Low-fidelity prototyping
15.	Users would appreciate a "Thank You" message and a proof of purchase receipt when they've completed an online purchase. This follows which of the 8 Golden rules of interface design.
Option A:	Strive for consistency
Option B:	Enable frequent users to use shortcuts
Option C:	Design dialogue to yield closure
Option D:	Permit easy reversal of action
16.	"Dialogs should not contain information that is irrelevant or rarely needed" is mapped by which heuristic?
Option A:	Aesthetic and Minimalist Design
Option B:	Help and Documentation
Option C:	Consistency and Standards
Option D:	User Control and Freedom
17.	Which of the following is a usability guideline for navigation?
Option A:	Using sitemaps
Option B:	Use appropriate page and line lengths
Option C:	Avoid horizontal scrolling
Option D:	Avoid using too many image links
18.	A method that does not require human participants serving as test users is the
Option A:	Usability test
Option B:	Experiments
Option C:	In-the-wild studies
Option D:	Heuristic evaluation
19.	It provides a way of examining the performance of an already existing product, such as a website, so that it can be improved.
Option A:	Requirements Gathering
Option B:	Analytics
Option C:	Prototyping
Option D:	Designing

20.	Evaluations that are carried out to assess the success of a finished product are known as
Option A:	formative evaluations
Option B:	analytics
Option C:	heuristic evaluation
Option D:	summative evaluations

Q2 (20 Marks)	
A	Solve any Two 5 marks each
i.	What is Usability? Explain different usability goals.
ii.	What is Prototyping? Why is it needed?
iii.	What care will you take while designing an interface for a blind person?
B	Solve any One 10 marks each
i.	Illustrate the concept of heuristic evaluation.
ii.	Explain different interview styles

Q3. (20 Marks)	Solve any Two Questions out of Three 10 marks each
A	Summarize Principles of good UI Design.
B	Write a note on Good Error Messages with examples
C	Explain Experimental Design and its types.

University of Mumbai

Examination June 2021

Examinations Commencing from 1st June 2021

Program: Information Technology

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ITDLO8041 and Course Name: User Interaction Design

Time: 2 hour

Max. Marks: 80

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	A
Q3.	D
Q4	D
Q5	B
Q6	B
Q7	A
Q8.	D
Q9.	A
Q10.	C
Q11.	D
Q12.	C
Q13.	C
Q14.	B
Q15.	C
Q16.	A
Q17.	A
Q18.	D
Q19.	B
Q20.	D