Scheme	**R2016**
Semester	7
Course Code	CSC702
Course Name	Mobile Communication and Computing

Question No.	Answer-Key
1	LTE,LTE-A,LTE-PRO,VOLTE
2	Barker Code
3	4
4	1.Transcoding and rate adaptation, 2. Time and frequency synchronization 3. Voice through full- or half-rate services
5	Dedicated Control Chnnel
6	frequency division duplex.
7	Database of registered users
8	Node B
9	if the medium is detected as busy, a station waits for a random time period after the beginning of a time slot
10	encapsulate and tunnel packet to the COA
11	Route discovery ,Route maintenance
12	M-TCP
13	Contention Methods
14	SIFS (Short Inter Frame Spacing)
15	1
16	Wireless LAN
17	PLCP , Payload
18	Message passing to the agent
19	Foreign agent
20	Support fast Handoff
21	Self configuration, Self optimization, Self healing
22	one-to-one communication
23	X2 interface
24	There is no more circuit switching

25	Unacknowledge Mode

Scheme R2016
Semester 7
Course code CSC702
Course Mobile Communication and Computing

Question No.	Question	a	b	c	d
1	Arrange in the order of evolution	LTE,VOLTE, LTE-A, LTE-PRO	LTE, LTE-A,VOLTE, LTE-PRO	LTE,LTE-A,LTE-PRO,VOLTE	LTE,LTE-PRO,LTE-A,VOLTE
2	Direct Sequence Spread Spectrum uses	Convolution Codes	Hamming Code	Barker Code	FEC
3	What is the Custer Size K, if i=2, j=0	3	4	7	12
4	Functions of BTS are:	To have central master database containing user data, permanent and semi-permanent data of all subscribers	1. Transcoding and rate adaptation 2. Time and frequency synchronization 3. Voice through full- or half-rate services	1. Switching Functions 2. Additional Functions For Mobility Support 3. Management Of Network Resources	1. Performing traffic concentration to reduce the number of lines from the MSC 2. Providing an interface to the Operations and Maintenance Center for the BSS 3. Reallocation of frequencies
5	Channel Quality and Signal strength is send on which logical channel	Dedicated Control Chnnel	Random Access Chanenel	Broadcast Channels	Access Grant Channel
6	The two directions, mobile station to base station and vice versa are separated using different frequencies, called	frequency division simplex.	frequency division duplex.	frequency division full duplex.	frequency division full simplex
7	VLR and HLR in GSM systems are	Gateways for outer connectivity	Database of registered users	Routers and call management service	Weak signals in cell
8	An important task of a _____ is the inner loop control to mitigate near-far effects	RNC	Node B	CN	UE
9	MACA is a non-persistent slotted protocol,Means what?	if the medium is detected as busy, a station waits for a random time period after the beginning of a time slot	The station is not sensing the medium before initiating the transmission	The station keeps listening to see if channel is free and, as soon as the channel is idle, it transmits	If station senses a busy channel, it waits for the end of the transmission, and then transmits with a probability p
10	What is not a functionality of FA (Foreign Agent) in IP packet delivery?	decapsulates the packet	forwards the original packet with CN as source	encapsulate and tunnel packet to the COA	forwards the original packet keeping MN as destination
11	Dynamic source routing (DSR) divides the task of routing into two separate problems as _____and _____.	Route lost , Route maintenance	Route discovery ,Route maintenance	Route broadcast , Route find	Route change , Route divert
12	_____wants to improve overall throughput, to lower the delay, to maintain endto-end semantics of TCP, and to provide a more efficient handover.	I-TCP	Snooping TCP	M-TCP	Traditional TCP
13	Random access is also called the	controlled access	Channelization	Authentication	Contention Methods
14	Which denotes the highest frame priority	PIFS (PCF IFS)	SIFS (Short Inter Frame Spacing)	Reduced Inter-frame Space	All are in equal priority
15	The data rate for Bluetooth technology is _____ Mbit/s.	1	2	3	4
16	Application of HIPERLAN 1 is	Wireless LAN	Access to ATM fixed networks	Wireless Local loop	Point to Point ATM connections
17	IEEE802.11 PHY FHSS frame has____part and ____part as two basic parts	PLCP preamble , Payload	PLCP header , Payload	PLCP , Payload	PLCP , SFD
18	Which ofthe following is not the mobile IP support service?	Agent discovery	Turmeling	Message passing to the agent	Encapsulation
19	A good place for segmenting the connection between mobile host and correspondent host is at _____ of mobile IP	Home agent	Foreign agent	Home server	Foreign server
20	Celullar IP is used for	Support fast Handoff	Support network traffic	for Hard Handoff	for Soft Handoff
21	LTE Self organizing network is divided into three categories. Select the correct option.	Self configuration, Self optimization, Self healing	Self Consistent, Self intergration, Self optimization	Self healing, Self dependent, Self integration	Self optimization, Self integration, Self dependent
22	Which type of communication is between User Equipment (UE) and eNB in LTE architecture.	one-to-many communication	one-to-one communication	many-to-many communication	many-to-one communication
23	Which interface connects multiple eNBs in LTE architecture?	X1 interface	S6 interface	S10 interface	X2 interface
24	Key difference in LTE with older systems	There is no more circuit switching	There is high data rate up to 100 Mbps	There is very low RTT up to 10 ms	There is high data rate up to 200 Mbps
25	Which Radio Link Control (RLC) mode does not require an acknowledgement and is suitable for real time services such as video streaming.	Acknowledge Mode	Transparent Mode	Reliable Mode	Unacknowledge Mode

Scheme	**R2016**
Semester	7
Course Code	CSC703
Course Name	Artificial Intelligence and Soft Computing

Question No.	Answer-Key
1	a
2	a
3	d
4	c
5	d
6	d
7	b
8	b
9	c
10	d
11	a
12	c
13	a
14	d
15	a
16	b
17	a
18	b
19	b
20	b
21	c
22	b
23	c
24	a
25	c

Scheme	**R2016**
Semester	**VII**
Course Code	**CSDLO7031**
Course Name	**Advanced System Security and Digital Forensics**

Question No.	Answer-Key
1	Network configuration
2	An access control list is used in DAC and specifies authorised objects and operations for a particular user.
3	Privacy
4	Subject identification
5	Using a method of identification from at least two of type I, II, or III
6	Single Sign On (SSO)
7	similar
8	Brute force
9	Reference monitor
10	Virus
11	Flask
12	Improper Authentication
13	Spoofing
14	Protecting Communication On Internet
15	Cross-site scripting & SQL Injection
16	CSMA/CA
17	Ad Hoc Networks
18	pre-shared key
19	Offenders can change their IP address
20	Copyright
21	Installing antivirus for protection
22	HIPAA
23	manipulation of computer data.
24	Reconfigure router to minimize flooding
25	pull the power cord from the rear of the computer and 'bag and tag' it.

Scheme	**R2016**
Semester	**VII**
Course Code	**CSDLO7031**
Course Name	**Advanced System Security and Digital Forensics**

Question No.	Question	Option-1	Option-2	Option-3	Option-4
1	Mandatory access control policy decisions are based on	network configuration	IP configuration	Security Configuration	administrative configurations
2	Which of the following statements about access control policies is correct?	An access control list is used	Constrained RBAC supports	In RBAC, permissions can b	MAC provides tighter security because only a system administrator may access or alter controls
3	Which of the following describes the freedom from being observed, monitored, or examined without co	Integrity	Privacy	Authentication	Accountability
4	What is the first step of access control	Accountability logging	ACL verification	Subject authorization	Subject identification
5	What does strong authentication require?	Public/private keys	Using two different methods	Using a method of identificat	Authenticating inside an encrypted tunnel
6	_____ is an authentication scheme that allows a user to log in with a single ID and password to any	Federated Identity Managem	Mandatory Access Control (	Discretionary Access Contro	Single Sign On (SSO)
7	All users in a group get _____ access to a file	different	other	similar	same
8	This type of password recovery is considered more difficult and must work through all possible combin	Passive	Active	Dictionary	Brute force
9	Which of the following best describes the OS protection mechanism that mediates all access that subje	Accountability control	Reference monitor	Security kernel	Security perimeter
10	Which one of the following is not the type of non malicious programming errors.	Buffer Overflow	Incomplete Mediation	Time of Check to Time of Us	Virus
11	Which of the following is an operating system security architecture that provides flexible support for se	OSKit	LOMAC	SE Linux	Flask
12	What flaw can lead to exposure of resources or functionality to unintended actors?	Session Fixation	Improper Authentication	Insecure Cryptographic Stora	Unvalidated Redirects and Forwards
13	In _____ attack, the attacker doesn't actively take over another user to perform the attack.	Phishing	Spoofing	Hijacking	Vishing
14	SSL used for	Protection User	Protectiong Key	Protecting Network	Protecting Communication On Internet
15	Imagine a social networking web app (like Twitter) that allows users to post short blurbs of text.Which	Cross-site scripting	SQL injection	Packet sniffing	Cross-site scripting & SQL Injection
16	Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?	CDMA	CSMA/CA	ALOHA	CSMA/CD
17	If we lack a central point of control, which type of wireless network threat it would be	Non-Traditional Networks	Identity Theft	Ad Hoc Networks	Man in the middle attack
18	A _____ is a secret key shared by the AP and a STA and installed in some fashion outside the sc	pre-shared key	pairwise transient key	master session key	shared key
19	It is unwise to rely only on a recovered IP address because:	An IP address may change m	Offenders can change their IP	By changing the system time	IP addresses only exist in system memory.
20	_____ are designed to protect the expression of ideas. Thus, it applies to a creative work, suc	Copyright	Patent	Watermark	Trade Secret
21	Which of the following is not a type of cyber crime?	Data theft	Forgery	Damage to data and systems	Installing antivirus for protection
22	Which statute protects the privacy of individuals' healthcare data?	Privacy Act	HIPAA	Computer Fraud and Abuse A	Healthcare Act
23	Computer forensics involves all of the following stated activities except:	interpretation of computer da	manipulation of computer da	preservation of computer dat	extraction of computer data.
24	What will be the Response strategy for DOS attack incident?	Investigate website	Reconfigure router to minim	Law enforcement contacted	Monitor attackers activities
25	At a scene of a suspicious death in a domestic property, you find a powered-on computer. No specialist	review each of the running ap	consider the computer no fur	wait until specialist advice de	pull the power cord from the rear of the computer and 'bag and tag' it.

Scheme	R2016
Semester	VII
Course Code	CSDLO7032
Course Name	Big Data Analytics

Question No.	Answer-Key
1	A
2	C
3	C
4	A
5	B
6	B
7	C
8	D
9	A
10	B
11	A
12	C
13	A
14	D
15	B
16	B
17	A
18	D
19	B
20	D
21	C
22	B
23	B
24	C
25	A

Scheme	R2016
Semester	VII
Course Code	CSDLO7032
Course Name	Big Data Analytics

Question No.	Question	a	b	c	d
1	Which of these could be a big data use case?	Sales data of all orders served by a popular retail chain like Walmart in a year	Details of all the employees who have ever worked at a multinational company with a strength of 500 employees.	Player-wise ODI statistics of all the Indian cricketers till date	Mobile sensor data of a single person
2	Which one of these is not an example of data generated by people?	User ratings for a movie or product	Facebook and Twitter posts	Data generated by weather stations	Data collected from users in a marketing survey
3	Which use case corresponds to the 'velocity' characteristic of big data?	Storing data that ranges in size from TB to PB	The source of the data is not trustworthy	An online application processing 40,000 requests per second	The data in hand is quite varied. It includes text, images, graphs, etc
4	Which is the slave node that holds the user data in the Blocks	DataNode	NameNode	Data Block	Replication
5	In which mode each daemon runs on a single node but there is separate java process for each daemon	Local (Standalone) mode	Pseudo-distributed mode	Fully distributed mode	Dual distributed mode
6	Which configuration file is used to control the HDFS replication factor?	mapred-site.xml	hdfs-site.xml	core-site.xml	yarn-site.xml
7	Which concept is used by most NoSQL databases to get high availability and disaster recovery?	recovery	scalability	replication	processing
8	_____ stores are used to store information about networks, such as social connections.	Key-value	Document	Wide-column	Graph
9	Which Replication model supports database read and write operations in all the nodes?	Peer to Peer Replication Model	Master Slave Replication Model	Master Master Replication model	Hbase
10	Which of the following options are examples of streaming data?	Offline processing of credit card transactions stored in the HDFS	Sensors continuously monitoring luggage on a conveyor belt	Analysing a company's performance, based on its annual report	Data of a retail shop
11	_____is important when the input rate is controlled externally	Stream Management	Cluster Management	Hadoop management	network Management
12	A weather station collects data from various sources. It wants to process all of this data in real time, with the minimum possible latency. Which of the following methods must it deploy to achieve its goal?	Batch processing	Micro-batch processing	Tuple processing	Individual Data Processing
13	Which one of the following is not an issue in stream processing?	Bounded Memory Requirement	Sliding Window	Approximate Query Answering	Sampling
14	Consider a stream as: S = {1, 2, 1, 3} Let hash function be 2x + 2 mod 4, find the no. of distinct elements.	4	5	8	2
15	Find the stocks whose price is in range Rs 200 to Rs. 300 is an example of what type of query?	continous	one time	adhoc	periodic
16	High order moments calculated as	n(2c-1)	n(c^k-(c-1)^k)	(mi)^2	2c-1
17	To use the CURE algorithm, the data points need to be assumes a presented in _____	Euclidean spcae	Cosine space	Jaccards Space	Edit spcae
18	What does the axiom d(x,y) >= 0 denotes about the distance measure	Distance is symmetric	the triangle equality	distances are positive, except for the distance from a point to itself	no negative distance
19	Which of the following clustering requires merging approach ?	Partitional	Hierarchical	Naive Bayes	model based

20	CURE algorithm assumes _____	Non-Ecludian space	shape of cluster	centroid of cluster	collection of representative points
21	If d1 = 3 2 0 5 0 0 0 2 0 0 and d2 = 1 0 0 0 0 0 0 1 0 2 are two document vectors, Calculate the cosine similarity between these vectors?	0.94	0.856	0.315	0.415
22	Frequent visitors to some book sites often see lists of suggested titles based on their previous purchases at the site. Websites making book recommendations may be using all the following algorithms EXCEPT:	collaborative filtering	instrumental filtering	content-based filtering	rule-based filtering
23	The Social networks are organized primarily by _____ _____.	brands	people	discussions	interests
24	An ecommerce site uses cookies to keep track of customers and to provide recommendation about products for purchase based on prior shopping behavior. The ecommerce is practicing _____ .	on-demand delivery	channel cooperation	personalization	advertising supported model
25	How to define recommendation system in Big data management?	Systems that evaluate quality based on the preferences of others with a similar point of view	Systems that evaluate quality based on the purchase history of any particular person only	Systems that evaluate quality based on the demand of items	Systems that evaluate quality based on the association rule mining Techniques

Scheme	R2016
Semester	VII
Course Code	CSDLO7033
Course Name	ROBOTICS

Question No.	Answer-Key
1	c
2	a
3	a
4	d
5	b
6	b
7	c
8	d
9	b
10	d
11	d
12	a
13	a
14	c
15	b
16	b
17	a
18	a
19	d
20	b
21	a
22	b
23	b
24	b
25	d

Scheme	R2016
Semester	VII
Course Code	CSDLO7033
Course Name	ROBOTICS

Question No.	Question	a	b	c	d
1	For a functional industrial robot, typically, how many degrees of freedom would the robot have?	4	5	6	7
2	Which of the following terms IS NOT one of the five basic parts of a robot?	peripheral tools	end effectors	controller	drive
3	Which of the following terms refers to the use of compressed gasses to drive (power) the robot device?	pneumatic	piezoelectric	hydraulic	photosensitive
4	The main use of robots is in:	medicine	exploration.	education.	manufacturing.
5	The degree of freedom for SCARA robot is	3	4	5	6
6	A work envelope of a Robot is	the area space where robot is working	the shape created when a manipulator reaches forward, backward, up and down.	the cabinet use to keep the robot.	not useful to define the application of robot.
7	The fixed coordinate frame is attached to	The shoulder joint of the robot.	The elbow joint of the robot	The base joint of the robot.	The end effector.
8	Homogeneous transformation matrix is a	3X3 matrix	3X4 matrix	4X3 matrix	4X4 matrix
9	Input to Direct kinematics is…	multiple set of joint parameters	one set of joint parameters.	multiple set of link parameters.	one set of link parameters.
10	Screw transformation is defined as..	rotation about X axis followed by translation about Y axis	rotation about Y axis followed by translation about Z axis	rotation about Z axis followed by translation about X axis	rotation and translation about the same axis
11	Tool Configuration Space is ….	N dimensional.	4 dimensional.	3 dimensional.	6 dimensional.
12	Input to a Inverse Kinematic problem is	a pair of {R, p}	set of Joint variables q = {q1, q2, ….., qn}	set of link parameters	kinematic parameter table
13	A relay is a type of:	sensor.	actuator.	end effector.	controller.
14	What is the name for information sent from robot sensors to robot controllers?	temperature	pressure	feedback	signal
15	Which one of the following is used for electronics actuator drives	Pump and lines	AC servo motors	Servo amplifier	Relay
16	Each joint of Robot is driven or powered by …	Sensors	Actuators	Drive systems	Friction.
17	There are _____ general approaches to robot programming.	3	2	4	5
18	The uncertainty in task planning is represented as	nominal value plus error term	nominal value plus exact value	exact value plus error term	nominal value minus error term
19	Path planning problem requires a search in	two-dimensional space	three-dimensional space	four-dimensional space	six-dimensional space
20	A color vision system can use three gray-scale cameras, equipped with filters that allow which three colors of light to pass?	Blue, red, and yellow.	Blue, red, and green.	Cyan, magenta, and yellow.	Orange, green, and violet.
21	Robot vision system is used for	to automate the manipulation of objects.	to control the robot movement.	to control the movement of camera	to decide the precision of a robot.
22	Robot vision does not include	Image representation.	Motion planning.	Edge detection.	Template matching.
23	In edge detection algorithm which technique is used to extract vertex pixels directly	corner point decoding	vertex point decoding.	corner point encoding	vertex point encoding.
24	What is the form of Fuzzy logic?	Two-valued logic	Crisp set logic	Many-valued logic	Binary set logic
25	Which of the following is not a Capabilities of Expert Systems?	Advising	Demonstrating	Explaining	Expanding

Program: BE ____ Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ILO 7017 and Course Name: Disaster Management and Mitigation Measures

Time: 1 hour Max. Marks: 50

==========

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

Q17.	C
Q18.	A
Q19.	D
Q20.	C
Q21.	A
Q22.	A
Q23.	D
Q24.	B
Q25.	A

Program: BE _____ Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ILO 7017 and Course Name: Disaster Management and

Mitigation Measures

Time: 1 hour Max. Marks: 50

==========

Note to the students:-All the Questions are compulsory and carry equal marks .

Q1.	_____ can be explained as, tragic set of events which consequently cause damage to property and life?
Option A:	Hazards
Option B:	Vulnerability
Option C:	Disaster
Option D:	Risk
Q2.	Which natural disaster is a sudden and violent shaking of the ground, sometimes causing great destruction, as a result of movements within the earth's crust or volcanic action?
Option A:	Earthquake
Option B:	Tsunami
Option C:	Thunderstorm
Option D:	Flooding
Q3.	Which of the following is not a component of disaster management cycle?
Option A:	Preparedness
Option B:	Response
Option C:	Construction
Option D:	Recovery
Q4.	What is EMS?
Option A:	Emergency medical services
Option B:	Effective mitigation system
Option C:	Emergency management system
Option D:	Effective management system
Q5.	N.D.R.F Stands for
Option A:	National Disaster Response Fund
Option B:	Natural Disaster Relief Fund
Option C:	National Dedicated Relief Fund
Option D:	National Dynamic Response Fund
Q6.	Risk can be dealt with following ways except:

Option A:	Risk acceptance
Option B:	Risk avoidance
Option C:	Risk reporting
Option D:	Risk reduction
Q7.	Which of the following is not a man-made hazard?
Option A:	Leakage of Toxic waste
Option B:	War
Option C:	Drought
Option D:	Environmental Pollution
Q8.	Which of the following are not the causes of manmade disaster?
Option A:	Technological
Option B:	Transportation
Option C:	Landslides
Option D:	Production errors
Q9.	Who heads the crisis management Committee
Option A:	Prime Minister
Option B:	President
Option C:	Cabinet Secretory
Option D:	Ministry Of Environment
Q10.	EMS technology helps in aread which are prone to effective disaster management except:
Option A:	Trials of evacuation and general disaster plans
Option B:	Training volunteers
Option C:	Construction of shelter
Option D:	Prevention of next emergency
Q11.	What is called for the manuals that identify the role of each officer in State for managing the natural disasters?
Option A:	State Relief Manuals
Option B:	State Environmental Protection Manuals
Option C:	State Disaster Manuals
Option D:	State Protection Manuals
Q12.	The risk mapping and control does not depend on:
Option A:	The efforts taken by an organization
Option B:	Money
Option C:	Vulnerability analysis
Option D:	The action plans
Q13.	Tsunami’s can occur only during
Option A:	Evening
Option B:	Afternoon
Option C:	Any time of the day or night
Option D:	Morning

Q14.	Under which ministry Disaster Management Authority comes
Option A:	Ministry Of Environment
Option B:	Ministry of Foreign Affaires
Option C:	Ministry of Pollution
Option D:	Ministry of Home Affairs
Q15.	Which of the following components is not the part of EMS?
Option A:	Communication
Option B:	Recovery
Option C:	Budget
Option D:	Materials requirement
Q16.	Which the first step adopted for the assessment of the requests made by the state government to CENTRAL Government.
Option A:	Central Govt directly sends funds to State Govt
Option B:	The central team is deputed to make the on the spot assessment
Option C:	Finance Ministry Guides Cental Govt to relese funds
Option D:	Union Home Secretary visits State Govt affected by Disaster
Q17.	What is CBDM?
Option A:	Customers biased disaster management
Option B:	Cluster based disaster management
Option C:	Community based disaster management
Option D:	Consumer based disaster management
Q18.	The Richter scale expresses an earthquakes
Option A:	Magnitude
Option B:	Location
Option C:	Duration
Option D:	Depth
Q19.	Who is not first responder
Option A:	Police
Option B:	SDRF
Option C:	Fire and Medical Services
Option D:	NDRF
Q20.	Which of the following component of EMS does not add a value to disaster management?
Option A:	Emergency medical services
Option B:	Hazardous Materials Management
Option C:	Prevention of disaster
Option D:	Response and Recovery
Q21.	Prompt and effective response minimizes loss of life and property.
Option A:	Prompt and effective response
Option B:	Resource Allocation

Option C:	Planning
Option D:	Financing
Q22.	Floods can be prevented by
Option A:	Afforestation
Option B:	Cutting the forest
Option C:	Tilling the land
Option D:	Removing the top soil
Q23.	Which amongst the following ensures accurate documentation of all aspects of disaster events for creating good historical records for future research and mitigation planning
Option A:	NDMA
Option B:	MoUD
Option C:	NDRF
Option D:	NIDM
Q24.	The point of the earth's surface directly above the point where an earthquake occurs is called
Option A:	Focus
Option B:	Epicenter
Option C:	Fracture
Option D:	Fault
Q25.	Which committee recommend financial assistance to various disaster acrros country
Option A:	National Executive Committee
Option B:	Finance Committee
Option C:	Central Committee
Option D:	Cabinet Committee

Program: _____

Curriculum Scheme: Rev 2016

Examination: Semester VII

Course Code: ILO7012 and Course Name: Reliability Engineering

Time: 1 hour Max. Marks: 50

==========

Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	**A**
Q2.	**B**
Q3.	**C**
Q4	**A**
Q5	**D**
Q6	**A**
Q7	**B**
Q8.	**B**
Q9.	**A**
Q10.	**C**
Q11.	**B**
Q12.	**A**
Q13.	**B**
Q14.	**C**
Q15.	**C**
Q16.	**D**
Q17.	**C**
Q18.	**B**
Q19.	**B**
Q20.	**B**
Q21.	**B**
Q22.	**A**
Q23.	**A**
Q24.	**D**
Q25.	**A**

Program: _____

Curriculum Scheme: Rev 2016

Examination: Semester VII

Course Code: ILO7012 and Course Name: Reliability Engineering

Time: 1 hour Max. Marks: 50

==========

Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	If A and B are two events such that P(a) =0.3, P(b) = 0.6, and P(A/~B) is _____
Option A:	0.3
Option B:	0.5
Option C:	0.8
Option D:	0.2
Q2.	Previous probabilities in Bayes Theorem that are changed with help of new available information are classified as _____
Option A:	Independent Probabilities
Option B:	Posterior probabilities
Option C:	Interior probabilities
Option D:	Dependent probabilities
Q3.	Let X be a random variable with probability distribution function f(x)=0.2 for |x|<1 =0.1 for 1<|x|<4 =0 otherwise The probability P(0.5 < x <5) is _____
Option A:	0.3
Option B:	0.5
Option C:	0.4
Option D:	0.8

Q4.	If 'm' is the mean of a Poisson Distribution, the standard deviation is given by _____.
Option A:	$\sqrt{m}$
Option B:	m^2
Option C:	m
Option D:	$\frac{m}{2}$
Q5.	What is the mean time to failure if time to failure of a gadget follows Weibull distribution with scale =1000 hours and shape = 0.5?
Option A:	2500 hours
Option B:	1500 hours
Option C:	3000 hours
Option D:	2000 hours
Q6.	The failure density function f(t) is defined as the derivative of the
Option A:	Failure probability
Option B:	Intensity
Option C:	Pass probability
Option D:	Density
Q7.	Mean time between failures can be defined as:
Option A:	$\frac{total\ number\ of\ failure}{total\ operation\ time}$
Option B:	$\frac{total\ operation\ time}{total\ number\ of\ failure}$

Option C:	$\frac{total\ operation\ time}{total\ number\ of\ components}$
Option D:	$\frac{total\ number\ of\ components}{total\ operation\ time}$
Q8.	A component with time to failure T has constant failure rate $z(t) = \lambda = 2.5 \times 10^{-5}[hours]^{-1}$ Determine the probability that the component survives a period of 2 months without failure.
Option A:	0.815
Option B:	0.965
Option C:	0.911
Option D:	0.864
Q9.	The system reliability of the parallel system
Option A:	Is greater than the reliability of any subsystem
Option B:	Is equal to the reliability of the best subsystem
Option C:	Decreases as more redundant subsystem are added to the system
Option D:	Increase if the subsystem with the lowest reliability is removed
Q10.	Consider a four component system of which the components are independent and identically distributed with Constant Failure Rate (CFR). If $R_2(100) = 0.95$, find the individual component Mean Time to Failure?
Option A:	0.128
Option B:	0.0128
Option C:	0.000128
Option D:	1

Q11.	What failure rate must each component of a series system have, so that the probability that the system operates beyond 1000 hours is 0.9917 (Assume that all three components are independent, operate simultaneously, and have identical constant failure rates.)
Option A:	0.00278 per hour
Option B:	2.78×10^{-6} per hour
Option C:	2.78×10^{-5} per hour
Option D:	0.0287 per hour
Q12.	The components each with a reliability of 0.9 are placed in series. What is the reliability of the system?
Option A:	0.729
Option B:	0.986
Option C:	0.458
Option D:	0.589
Q13.	If the probability of a car starting on a sub-zero morning is 0.5 and we have two such cars. What is the probability that at least one of the cars will start on a sub-zero morning?
Option A:	0.92
Option B:	0.75
Option C:	0.81
Option D:	0.60
Q14.	Calculate the system unavailability, if the failure rate of a system is 2 failures/year and the average repair time is 20 hours.
Option A:	14.97 hr/yr
Option B:	18.47 hr/yr
Option C:	39.81 hr/yr

Option D:	32.17 hr/yr
Q15.	Which of the following approach is not the redundancy approach?
Option A:	Unit redundancy
Option B:	Component redundancy
Option C:	Strong component should be identified and strengthened for reliability
Option D:	Mixed redundancy
Q16.	For the successful operation of the system, the reliability of the system will be much better due to _____
Option A:	Absence of redundant element and proper operation one element
Option B:	Presence of redundant element and improper operation one element
Option C:	Absence of redundant element and improper operation one element
Option D:	Presence of redundant element and proper operation one element
Q17.	In unit redundancy, for improving the reliability of the system, a similar system should be added to the existing system in _____
Option A:	Series
Option B:	Both series and parallel
Option C:	parallel
Option D:	No connection
Q18.	Redundant system consisting of two or more component connected in parallel and both components were operating simultaneously is called _____
Option A:	Standby redundancy
Option B:	Active redundancy
Option C:	Sitting redundancy
Option D:	Inactive redundancy

Q19.	In order to maintain maintainability in the system, repair time must _____
Option A:	Be increased
Option B:	Be reduced
Option C:	Be kept constant
Option D:	Keeps on changing
Q20.	While discussing the concept of parts interchangeability, “if new part does not meet the required functional substitution then,
Option A:	It should be fractionally interchangeability
Option B:	It should not be physically interchangeability
Option C:	It should be physically interchangeability
Option D:	It should not be fractionally interchangeability
Q21.	The inherent availability can be calculated for repairable system as:
Option A:	$A_I = \frac{MTBF}{MTTF + MTTR}$
Option B:	$A_I = \frac{MTTF}{MTTF + MTTR}$
Option C:	$A_I = \frac{MTTF}{MTBF+MTTR}$
Option D:	$A_I = \frac{MTTF}{MTTF + MTTR}$
Q22.	Risk priority number is
Option A:	Product of severity (S), Occurrence (O) & Detection (D)
Option B:	Sum of severity (S), Occurrence (O) & Detection (D)

Option C:	Maximum of Severity (S), Occurrence (O) & Detection (D)
Option D:	Minimum of Severity (S), Occurrence (O) & Detection (D)
Q23.	Failure mode and effect analysis (FMEA) provide a checklist procedure. Which of the following question is NOT likely to feature on the checklist?
Option A:	What would be the cost of avoiding failure be?
Option B:	How likely is such a failure to be detected before it affects the customer?
Option C:	What is the likelihood that failure will occur?
Option D:	What would the consequences of the failure be?
Q24.	Which of the following is not the advantage of Event Tree Analysis are:
Option A:	Structured, rigorous and methodical approach
Option B:	Can be effectively performed on varying levels of design detail
Option C:	Permits probability assessment
Option D:	Partial successes/failure are distinguishable
Q25.	What is the probability of an impossible event?
Option A:	0
Option B:	1
Option C:	Not defined
Option D:	Insufficient data

Q=QUESTION A=ANSWER	question_description answer_description	question_explanation answer_explanation	question_type answer_isright	question_difficulty answer_position
Q	_____ analyzes customer data for designing and executing targeted marketing campaigns.		M	1
A	Analytical CRM		1	1
A	Operational CRM		0	2
A	Collaborative CRM		0	3
A	Transactional CRM		0	4
Q	Cybersquatting refers to the practice of_____		M	1
A	Using someone else's domain names for profiting from their goodwill		1	1
A	Buying competitors information for profiting		0	2
A	Using illegal means to crash competitor's website		0	3
A	Selling competitors information for profiting		0	4
Q	Social computing forces companies to deal with customers _____		M	1
A	Reactively		0	1
A	Proactively		1	2
A	Neutrally		0	3
A	Economically		0	4
Q	Electronic commerce systems generally includes all of the following except:		M	1
A	Internet websites for online sales		0	1
A	Extranet access of inventory databases		0	2
A	Direct links to credit reporting services		1	3
A	Intranets that allow sales reps to access customer records		0	4
Q	Cloud computing can be best explained by _____		M	1
A	LAN operations		0	1
A	Intranet		0	2
A	Web application		0	3
A	Hadoop		1	4
Q	Pervasive computing systems are _____		M	1
A	Context aware		1	1
A	Content aware		0	2
A	Network specific		0	3
A	Range specific		0	4
Q	____		M	1
A	Cost of data centres is higher		1	1

A	Cost of data centres is less			0	2
A	Cost of cloud is higher			0	3
A	Cost of cloud is less			0	4
Q	Sourcing, Ownership, reliability are the _____provided by the cloud		M		1
A	Community			0	1
A	Applications			0	2
A	Services			1	3
A	Features			0	4
Q	A manufacturing approach that integrates several computerized		M		1
A	Sales force automation			0	1
A	Computer-integrated manufacturing			1	2
A	Product Lifecycle Management			0	3
A	Management of interdependent items			0	4
Q	Systems which typically provide information to managers in the functional areas include_____		M		1
A	ERP systems			0	1
A	Business Intelligence System			0	2
A	Transaction Processing System			1	3
A	HR Information Systems			0	4
Q	An adhoc report which includes only information that falls outside certain threshold standards includes ____		M		1
A	Comparative reports			0	1
A	Drill-down reports			0	2
A	Exception reports			1	3
A	Routine reports			0	4
Q	The three main business processes supported by ERP systems comprises of_____		M		1
A	Transaction and planning processes			0	1
A	Procurement, fulfillment, production processes			1	2
A	Analysis, Administrative and Adhoc Processes			0	3
A	Production planning and Administrative processes			0	4
Q	A business strategy that enables manufacturers to share product-related data that support product design and development and supply chain operations is_____				1
A	Planning Production and Operations			0	1
A	Quality Control			0	2

A	Product Lifecycle Management.			1	3
A	Control and Auditing			0	4
Q	The two different strategies that the production process can follow:				1
A	Make-to-store and Make-to-sell			0	1
A	Make-to-process and Make-to-store			0	2
A	Best order, Least order			0	3
A	Make-to-stock and Make-to-order			1	4
Q	Which out of the subsquent is NOT an example of data?		M		1
A	301062			0	1
A	Blue			0	2
A	32, Primrose Hill			1	3
A	Mumbai			0	4
Q	Definition of Sample in MIS is				1
A	A tool used to collect statistical data			0	1
A	Statistics collected from an entire population			0	2
A	The factual information collected from a survey or other source is			0	3
A	A group chosen from a population			1	4
Q	Cost leadership strategy of the competitive advantage is to				1
A	Produce products and/or services at the lowest cost in the industry.			1	1
A	Offer different products, services, or product features than your			0	2
A	Introduce new products and services, add new features to existing			0	3
A	Improve the manner in which a fi rm executes its internal business			0	4
Q	A _____provides easy access to timely information and direct access				1
A	Interface			0	1

A	Dashboard			1	2
A	Whiteboard			0	3
A	Openboard			0	4
Q	Which one of these is an incorrect category into which all managerial		M		1
A	Operational control			0	1
A	Management control			0	2
A	Inventory control			1	3
A	Strategic planning			0	4
Q	In the _____ normal form, a composite attribute is converted to				1
A	First			1	1
A	Second			0	2
A	Third			0	3
A	Fourth			0	4
Q	The process of data to be presented to users in visual formats such as				1
A	Image Processing			0	1
A	Data Visualization			1	2
A	Human Machine Interaction			0	3
A	Data Segmentation			0	4
Q	A person who breaks into a computer to cause damage or to steal				1
A	Hacker			1	1
A	Cracker			0	2
A	Jammer			0	3
A	Spammer			0	4
Q	A program code that cannot work without being inserted into another		M		1
A	Worm			0	1
A	Virus			1	2
A	Sniffer			0	3
A	Spoofing			0	4
Q	Tracking or monitoring people’s activities with the aid of information				1
A	Snooping			0	1
A	Electronic Surveillance			1	2
A	Investigation			0	3
A	Data collection			0	4
Q	An informal, personal journal that is frequently updated and is				1
A	Weblog			1	1
A	Electronic bulletin boards			0	2
A	Newsgroups			0	3
A				0	4

Program: BE Engineering

Curriculum Scheme: R-2016

Examination: Final Year Semester VII

Course Code: ILOC 7015, Course Name: Operations Research

Time: 1 hour Max. Marks: 50

Enter a, b, c, or d in the correct option column

Question	Correct Option	Question	Correct Option
Q.1	c	Q.14	c
Q.2	b	Q.15	d
Q.3.	b	Q.16	a
Q.4	c	Q.17	d
Q5	a	Q.18	d
Q.6	b	Q.19	c
Q.7	a	Q.20	d
Q.8	d	Q.21	b
Q.9	B	Q.22	**c**
Q.10	d	Q.23	**c**
Q.11	d	Q.24	**b**
Q.12	b	Q.25	**c**
Q.13	d	----	**----**

Program: BE Engineering
Curriculum Scheme: R-2016
Examination: Final Year Semester VII
Course Code: ILOC 7015 Course Name: Operations Research
Time: 1 hour Max. Marks: 50

Note: Each question is for 2 marks.

		Multiple Choice Questions (MCQ)
		ALL questions are compulsory. There are 25 questions, each question carries 2 mark.
1.	Queuing models measure the effect of:	
	a)	Random arrivals
	b)	Random service
	c)	Effect of uncertainty on the behaviour of the queuing system
	d)	Length of queue.
2.	If the number of arrivals during a given time period is independent of the number of arrivals that have already occurred prior to the beginning of time interval, then the new arrivals follow ----------distribution.	
	a)	Erlang
	b)	Poisson
	c)	Exponential
	d)	Normal
3.	An M/M/8 system is a system with --	
	a)	Generic M channel system, exponential arrivals, and Poisson service time.
	b)	Eight channel system, Poisson arrivals, and Exponential service time.
	c)	M channel system with Exponential arrivals and Poisson service times.
	d)	Eight channel system with Binomial arrival times and normally distributed service times
4.	As simulation is not analytical model, therefore result of simulation must be viewed as	
	a)	Unrealistic
	b)	Exact
	c)	approximation
	d)	simplified
5.	Monto-Carlo simulation	
	a)	Randomness is the key requirement
	b)	The model is of deterministic nature
	c)	The random numbers can be used to generate the value of input variables only, if the sampled distributed is uniform
	d)	None of these
6.	While assigning random numbers in Monte-Carlo simulation, it is	
	a)	Not necessary to assign the exact range of random number interval as the probability

	b)	Necessary to develop a cumulative probability distribution
	c)	Necessary to assign the particular appropriate random numbers
	d)	Not necessary to develop a cumulative probability distribution
7.	Which of the following is a property of a dynamic programming problem?	
	a)	Optimal substructure
	b)	Non-Overlapping sub problems
	c)	Local Optimal choice
	d)	The given problem can be reduced to the 3-SAT problem
8.	When a problem is solved using the top-down approach of dynamic programming, it usually …….	
	a)	Decreases both, the time complexity and the space complexity
	b)	Increases the time complexity and decreases the space complexity
	c)	Increases both, the time complexity and the space complexity
	d)	Increases the space complexity and decreases the time complexity
9.	Which of the following problems should be solved using dynamic programming?	
	a)	Long Integer Multiplication
	b)	Reliability problems
	c)	Spanning Tree
	d)	Matrix Multiplication
10.	When Minimax and Maximin criteria matches, then	
	a)	Fair game is exists
	b)	Unfair game is exists
	c)	Mixed strategy exists
	d)	Saddle point exists.
11.	The games with saddle points are:	
	a)	Probabilistic in nature
	b)	Normative in nature
	c)	Stochastic in nature
	d)	Deterministic in nature
12.	The size of the Payoff matrix of a game can be reduced by using the principle of	
	a)	Saddle point
	b)	Dominance
	c)	Game transpose
	d)	Game Inverse
13.	If orders are placed with size the EOQ, then the re-order costs component is	
	a)	Equal to the holding cost component
	b)	Greater than the holding cost component
	c)	Less than the holding cost component
	d)	Either greater or less than the holding cost component
14.	Which cost can vary with order quantity	
	a)	Unit cost only
	b)	Re-order cost
	c)	Holding cost only
	d)	All of these
15.	Annual demand for product costing Rs. 100 per piece is Rs. 900 Ordering cost per order is Rs. 100 and inventory holding cost is Rs.2 per unit per year. The economic lot size is	
	a)	200

	b)	300
	c)	400
	d)	500
16.	Consider the following 7 jobs J1, J2, J3, J4, J5, J6 and J7. They are processed on machines A and B in the order AB. The processing times on machine A for the 7 jobs are [3, 12, 13, 4, 10, 11, 9] and the processing times on machine B for the 7 jobs are [8, 9, 8, 6, 13, 1, 3]. The optimum sequence of the jobs will have the first job going to machine A as -	
	a)	J1
	b)	J3
	c)	J7
	d)	J6
17.	Travelling Salesman Problem can be solved using: a-Simplex Method, b-Assignment Method, c-Dynamic Programming, d- Waiting line Method	
	a)	Only a
	b)	Only b
	c)	Only c
	d)	With b and d
18.	The Vogel approximation method is used for solving transportation problems as it gives -	
	a)	neither optimum nor feasible solution
	b)	both optimum and feasible solution
	c)	Optimum but infeasible solution
	d)	Feasible but non-optimum solution
19.	In the Dual Simplex Method, the Initial Table represents a solution -	
	a)	that is feasible but not Optimal
	b)	that is both feasible and optimal
	c)	that is optimal but not feasible
	d)	neither optimal nor feasible
20.	For a Maximization LPP, if a constraint has a surplus variable, the artificial variable added in the Dual Simplex Method will have -	
	a)	positive large co-efficient in the objective function
	b)	negative large co-efficient in the objective function
	c)	zero co-efficient in the objective function
	d)	artificial variables are not required in Dual Simplex Method
21.	If the primal LPP is Maximization, the dual of the dual for the primal LPP is	
	a)	Minimization
	b)	Maximization
	c)	Can be Minimization or Maximization
	d)	Infeasible
22.	The optimal solution in a linear programming model will	
	a)	always be a slack variable
	b)	always be a surplus variable
	c)	always occur at an extreme point
	d)	always be outside the feasible solution space
23.	A company produces two products: Product A and Product B. Each product must go through two processes. Each Product A produced requires 2 hours in Process 1 and 5 hours in Process 2. Each Product B produced requires 6 hours in Process 1 and 3 hours in Process 2. There are 80 hours of capacity available each week in each process. Each unit	

	of Product A produced generates $6.00 in profit for the company. Each unit of Product B produced generates $9.00 in profit for the company. If A = the number of units of Product A to produce each week and B = number of units of Product B to produce each week, then the capacity constraint for Process 2 would be	
	a)	$5A + 3B \geq 80$
	b)	$6A + 3B \leq 80$
	c)	$5A + 3B \leq 80$
	d)	$5A + 3B < 80$
24.	A company produces two products: Product A and Product B. Each product must go through two processes. Each Product A produced requires 2 hours in Process 1 and 5 hours in Process 2. Each Product B produced requires 6 hours in Process 1 and 3 hours in Process 2. There are 80 hours of capacity available each week in each process. Each unit of Product A produced generates $6.00 in profit for the company. Each unit of Product B produced generates $9.00 in profit for the company. The optimal weekly profit for the company would be	
	a)	$125
	b)	$150
	c)	$156
	d)	$162
25.	The following transportation table shows the cost of shipping one unit from each source to each destination in the upper right hand corner of each cell, as well as the supply capacities and demand requirements:	

		Destination			
		Los Angeles	New York	Houston	Supply
Source	Memphis	5	4	2	6,000
	Boise	3	6	4	3,000
	Omaha	6	5	3	8,000
	Demand	5,000	7,500	4,500	17,000

The optimal solution is:

		Destination		
		Los Angeles	New York	Houston
Source	Memphis	**0**	**1500**	**4500**
	Boise	**3000**	**0**	**0**
	Omaha	**2000**	**6000**	**0**

The total amount shipped from Boise to Los Angeles is:

	a)	3
	b)	6
	c)	3,000
	d)	5,000

----------xx----------xx----------xx----------

Q=QUESTION	question_description	question_explanation	question_type	question_difficulty
A=ANSWER	answer_description	answer_explanation	answer_isright	answer_position
Q	Which of them is not a wireless attack?		M	1
A	Eavesdropping		0	1
A	MAC Spoofing		0	2
A	Wireless Hijacking		0	3
A	Phishing		1	4
Q	Who deploy Malwares to a system or network?		M	1
A	Criminal organizations, Black hat hackers, malware developers, cyber-terrorists		1	1
A	Criminal organizations, White hat hackers, malware developers, cyber-terrorists		0	2
A	Criminal organizations, Black hat hackers, software developers, cyber-terrorists		0	3
A	Criminal organizations, gray hat hackers, Malware developers, Penetration testers		0	4
Q	Compromising confidential information comes under_____		M	1
A	Threat		1	1
A	Bug		0	2
A	Vulnerability		0	3
A	Attack		0	4
Q	What is the best option for thwarting social-engineering attacks?		M	1
A	Technology		0	1
A	Training		1	2
A	Policies		0	3
A	Physical controls		0	4
Q	Botnets are managed by _____		M	1
A	Bot-holders		0	1
A	Bot-herders		1	2
A	Bot-trainers		0	3
A	Bot-creators		0	4
Q	_____ is a code injecting method used for attacking the database of a system / website.		M	1
A	HTML injection		0	1
A	SQL Injection		1	2
A	Malicious code injection		0	3
A	XML Injection		0	4
Q	Try not to keep _____ passwords, especially fingerprint for your smart-phone, because it can lead to physical hacking if you're not aware or asleep.		M	1
A	Biometric		1	1
A	PIN-based		0	2
A	Alphanumeric		0	3
A	Short		0	4
Q	By default, Bluetooth devices operate in which security mode?		M	1
A	Mode 1; "non-secure" mode		1	1
A	Mode 2; leaving security up to each application.		0	2
A	Mode 3; enforce link encryption for all traffic.		0	3
A	Mode 4; security settings default to a mobile policy server.		0	4
Q	Which of the following is NOT real security threat?		M	1
A	Virus		0	1
A	Worms		0	2
A	Spam		1	3
A	Trojans		0	4
Q	A small piece of code used as a payload in the exploitation of software vulnerability, is called as _____		M	1
A	Assembly code		0	1
A	Shell code		1	2
A	C and C++ code		0	3
A	Malicious code		0	4
Q	If you fall for a phishing scam, what should you do to limit the damage?		M	1
A	Change Username		0	1
A	Delete the phishing email.		0	2
A	Unplug the computer. This will get rid of any malware		0	3
A	Change any compromised passwords		1	4
Q	What kind of attempts is made by individuals to obtain confidential information from a person by falsifying their identity?		M	1
A	Phishing		1	1
A	Computer viruses		0	2
A	Spyware		0	3
A	Malware		0	4
Q	Phishers often develop _____ websites for tricking users & filling their		M	1
A	Legitimate		0	1
A	Illegitimate		1	2
A	Genuine		0	3
A	Official		0	4
Q	_____ is a generic term which refers to all the legal and regulator aspects of Internet and the World Wide Web		M	1
A	Cyber law		1	1
A	Cyber dyne		0	2
A	Cyber café		0	3
A	Electronic law		0	4
Q	Which factor determines when your IT system will be available for knowledge workers to access?		M	1
A	Reliability		0	1
A	Accessibility		0	2
A	Availability		1	3
A	Admissibility		0	4
Q	Accessing data without permission is known as.....		M	1
A	unlawful access		0	1
A	Illegal Access		0	2
A	Legal Access		0	3
A	Unauthourized Access		1	4
Q	_____ is the application of information and communication technology (ICT) for delivering government services		M	1
A	Governance		0	1
A	Governance and ethics		0	2
A	Electronic governance		1	3
A	Risk and governance		0	4

Q	The following cannot be exploited by assigning or by licensing the rights to others		M	1
A	Patents		0	1
A	Designs		0	2
A	Trademark		1	3
A	Ownership		0	4
Q	When IT Act 2000 came into effect?		M	1
A	17 October,2000		1	1
A	11 November,2000		0	2
A	17 October,2001		0	3
A	11 November,2001		0	4
Q	Which section of IT Act deals with Hacking of computer systems and its penalties?		M	1
A	Section 65		0	1
A	Section 66		1	2
A	Section 67		0	3
A	Section 69		0	4
Q	Which are the sections of IT Act applicable for Cyber pornography?		M	1
A	66, 66A, 66B		0	1
A	67, 67A, 67B		1	2
A	67, 67C, 67D		0	3
A	43, 43D, 69D		0	4
Q	Penalty for Breach of confidentiality and privacy is defined in section ----		M	1
A	71		0	1
A	72		1	2
A	73		0	3
A	74		0	4
Q	Sarbanes-Oxley Act (SOX) is used for		M	1
A	to stop hacking		0	1
A	protect equity shares		0	2
A	protect employee		0	3
A	To protect shareholders and the general public from accounting errors and fraudulent practices in enterprises		1	4
Q	HIPPA Act of 1996 stands for _____		M	1
A	Health Insurance Policy and Administration Act		0	1
A	Health Insurance Policy and Accountability Act		0	2
A	Health Insurance Portability and Administration Act		0	3
A	Health Insurance Portability and Accountability Act		1	4
Q	NERC Stands for_____		M	1
A	North African Electric Reliability Corporation		0	1
A	North American Electric Reliability Corporation		1	2
A	North American Electronic Reliability Corporation		0	3
A	North American Electric Regularatory Corporation		0	4

Program: BE Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ILO7018 and Course Name: Energy Audit and Management

Time: 1 hour Max. Marks: 50

==========

==========

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

Q17.	B
Q18.	A
Q19.	A
Q20.	A
Q21.	A
Q22.	B
Q23.	D
Q24.	A
Q25.	B

Program: BE Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ILO7018 and Course Name: Energy Audit and Management

Time: 1 hour Max. Marks: 50

==========

==========

Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Choose the correct source of renewable energy.
Option A:	Natural gas
Option B:	Coal
Option C:	Tidal
Option D:	Nuclear
Q2.	Primary energy content of all fuels are generally expressed in terms of
Option A:	KW
Option B:	KVA
Option C:	KVAR
Option D:	Ton of oil equivalent (toe)
Q3.	Which of the following is a form of secondary energy?
Option A:	Steam
Option B:	Petrol
Option C:	Crude oil
Option D:	Coal
Q4.	The objective of Energy Management is to
Option A:	Minimize energy costs
Option B:	Minimize production
Option C:	Minimize duration of work
Option D:	Minimize manpower
Q5.	Energy Audit is the key to a systematic approach for decision-making in the area of
Option A:	Time management
Option B:	Water management.
Option C:	Pollution management
Option D:	energy management
Q6.	The verification, monitoring and analysis of use of energy and its report with recommendations is
Option A:	Energy monitoring

Option B:	Energy Conservation
Option C:	Energy Audit
Option D:	energy management
Q7.	Bench-mark in Energy Audit refers to:
Option A:	Trend of energy use
Option B:	Profit margin in energy business
Option C:	Reference point for managing energy in organization
Option D:	Energy Losses
Q8.	Energy Audit can be classified into the following types.
Option A:	Short Audit and Lengthy Audit
Option B:	Preliminary Audit and Secondary Audit
Option C:	Feasible Audit and non-feasible Audit
Option D:	Preliminary Audit, targeted energy audit and Detailed Audit
Q9.	For charging Maximum demand charges, maximum demand is measured in
Option A:	kWh
Option B:	kVA
Option C:	kVAr
Option D:	KV
Q10.	Power factor is ratio of
Option A:	Active power to apparent power
Option B:	Active power to reactive power
Option C:	Reactive power to apparent power
Option D:	Apparent power to active power
Q11.	Maximum demand controller is used to
Option A:	Switch off non-essential loads in a logical sequence
Option B:	Controls the power factor of the plant
Option C:	Switch off essential loads in a logical sequence
Option D:	Exceed the demand of the plant
Q12.	For which among the following consumers was penalty imposed for low power factor before 1st April, 2020
Option A:	Residential
Option B:	Industrial
Option C:	Agricultural
Option D:	BPL customers
Q13.	The basic functions of electronic ballast exclude one of the following:
Option A:	To ignite the lamp
Option B:	To reduce lumen output of the lamp
Option C:	To supply power to the lamp

Option D:	To stabilize the gas discharge
Q14.	Find the **odd** retrofit group for illumination from the following
Option A:	capacitor based control
Option B:	photo-sensors
Option C:	timer based control
Option D:	Occupancy sensors
Q15.	Motor loading calculation is based on
Option A:	Ideal load of motor
Option B:	actual operating load of motor
Option C:	90 % load of motor
Option D:	future load of the motor
Q16.	The motor input power Pi in pump can be measured by using
Option A:	Stroboscope
Option B:	Efficiency meter
Option C:	Portable power analyzer.
Option D:	Tachometer
Q17.	One Tons of refrigeration (TR) is equivalent to
Option A:	3420 Btu/h
Option B:	3024 kCal/h
Option C:	1200 thermal kW
Option D:	3024 kW/ton
Q18.	What does a LEED rating reflect?
Option A:	The cost of a building
Option B:	How green a building is
Option C:	The carbon footprint of a building's occupants
Option D:	The location of a building
Q19.	What is the name for the procedure used to clear buildings of contaminants before they are occupied?
Option A:	Flush-out
Option B:	Infiltration
Option C:	Ventilation
Option D:	Ex-filtration
Q20.	Which of the following trap has intermittent discharge for large load
Option A:	Inverted bucket
Option B:	Float
Option C:	Thermostatic
Option D:	Bimetallic

Q21.	Which is the best steam for an industrial process heating
Option A:	Dry saturated steam
Option B:	Wet steam
Option C:	Dry steam
Option D:	Superheated steam
Q22.	Which one is the most efficient equipment having Star rating
Option A:	2 star
Option B:	5 star
Option C:	4 star
Option D:	1 star
Q23.	Which one is NOT the reason of incomplete combustion
Option A:	Shortage of air
Option B:	Excess of fuel
Option C:	Poor distribution of fuel
Option D:	GCV of fuel
Q24.	The heat loss from the surface is expressed in
Option A:	Watt
Option B:	Watt/sq. meter-deg K
Option C:	Watt/sq. meter-deg C
Option D:	Joules
Q25.	Which is the purpose of insulation
Option A:	To facilitate free flow of heat
Option B:	Offers better process control by maintaining process temperature
Option C:	Reduce temperature of steam
Option D:	Refrigerated surface below due point

UNIVERSITY OF MUMBAI

CURRICULUM SCHEME R2016

EXAMINATION: FINAL YEAR SEMESTER VII

COURSE CODE ILO7019 COURSE NAME : DEVELOPMENT ENGINEERING

TIME: 1 Hr Marks 50

QUESTION PAPER-1

	QUESTION	**Answer**
Q.No.1	The 73rd amendment Act pertains to which of the following	**B**
Option A	Statehood of Delhi	
Option B	Panchayti Raj Institutions	
Option C	Municipalities	
Option D	Land reforms	
Q.No.2	The Panchayati Raj is included in the	**B**
Option A	Union list	
Option B	State list	
Option C	Concurrent list	
Option D	Residuary list	
Q. No.3	Which of the following was the first committee on Panchayati raj in India	**A**
Option A	Balwant Rai Mehta	
Option B	Ashok Mehta	
Option C	L.M.Singhvi	
Option D	S. Mohinder Singh	
Q.No.4	Which of these is a factor that affects ethical and unethical behaviour	**A**
Option A	Ethical dilemma	
Option B	Diversity	
Option C	Teamwork	
Option D	Open communication	**C**
Q. No.5	When is National Panchayati Day celebrated	
Option A	23rd December	
Option B	1st June	
Option C	24th April	
Option D	15th September	
Q.No.6	Those individuals who raise ethical concerns to others inside or outside the organisation are called	**B**
Option A	Entrepreneur	
Option B	Whistle blower	
Option C	Social entrepreneur	
Option D	Social impact management	
Q.No.7	The term that refers to principles, values, beliefs that define right or wrong behaviour is	**C**
Option A	Customer satisfaction	
Option B	Innovation	
Option C	Ethics	
Option D	Empowerment	
Q.No8	Which of the following principles is the essential principle of utilitarian school of ethics	**B**
Option A	Greatest health principle	
Option B	Greatest Happiness principle	
Option C	Greatest wealth principle	
Option D	Greatest respect principle	
Q.No9	Which of the following is an appropriate general principle with regard to engineering ethics	**A**
Option A	The engineer shall regard his duty to the public welfare as paramount to all other obligations	

Option B	The engineer shall regard his duty to the objectives of the company as paramount to all other obligations	
Option C	The engineer shall regard his duty to the Profession of engineering as paramount to all other obligations	
Option D	The engineer shall regard his duty to his excellence as paramount to all other obligations	
Q.No10	Which of the following statements is the most correct description of the relationship between humans and technology	**C**
Option A	Technology impacts upon human action and human beings	
Option B	Human beings" act on, use,make" technology	
Option C	Technology provides apparatus for human action	
Option D	Technology hijacks human autonomy	
Q.No 11	Which of the following elements must always be in the mind of the engineer while performing his duties vis-a-visEthics (1)public safety, (2) economy, (3) health, (4) welfare	**D**
Option A	1,2,3	
Option B	1,2,3,4	
Option C	1,4	
Option D	1,3,4	
Q.No 12	73rd amendment gave practical shape to which article of the constitution	**C**
Option A	Article 14	
Option B	Article 32	
Option C	Article 40	
Option D	Article 51	
Q.No 13	Which one of the following is not correct ?	**C**
Option A	Growth is quantitative and value neutral	
Option B	Development means a qualitative change which is always value positive	
Option C	Positive growth and development refer to changes over a period of time	
Option D	Both growth and development refer to changes over a period of time.	
Q.No 14	The Human Development Index ranks the countries based on their performance in the key areas of (1) health, (2) sex-ratio, (3)education (4) access to resources	**C**
Option A	1,2,3	
Option B	2,3,4	
Option C	1,3,4	
Option D	1,2,4	
Q.No 15	The multi-dimensional poverty index is a measure developed by the	**D**
Option A	UNCTAD	
Option B	World Bank	

Option C	International Monetary Fund IMF	
Option D	Oxford poverty and human development initiative , OPHDI , and the UNDP	
Q.No 16	Which state has no Panchayati Raj Institution at all	**A**
Option A	Mizoram	
Option B	Manipur	
Option C	Arunachal Pradesh	
Option D	Tripura	
Q.No 17	Which state first reserved 50% setas for women	**D**
Option A	Andhra Pradesh	
Option B	Uttar Pradesh	
Option C	Madhya Pradesh	
Option D	Bihar	
Q.No 18	Which of the following system is established on the basis of direct election	**A**
Option A	Gram Panchayat	
Option B	Block Committee	
Option C	Zila Parishad	
Option D	District	
Q.No 19	The following is true about khap panchayat	**A**
Option A	based on caste system	
Option B	Consists of elected representatives	
Option C	Are constitutional bodies	
Option D	Follow rule of law of the land	
Q.No 20	In which five year plan the Panchayat Raj System was introduced in India for the first time	**B**
Option A	First	
Option B	Second	
Option C	Fifth	
Option D	Sixth	
Q.No 21	Which of the following years has been declared year of Gram Sabha	**B**
Option A	2008-09	
Option B	2009-10	
Option C	2011-12	
Option D	2012-13	
Q.No 22	Engagement of local people in development project refers to	**C**
Option A	Economic development	
Option B	Socila development	
Option C	Participatory development	
Option D	Sustainable development	
Q.No 23	Panchayati Raj system is based on the vision of	**B**
Option A	Pandit Jawaharlal Nehru	
Option B	Mahatma Gandhi	
Option C	Lal Bahadur Shastri	
Option D	Sardar Patel	
Q.No 24	Panchayats are constituted for	**B**
Option A	four years	
Option B	five years	
Option C	six years	
Option D	three years	
Q.No 25	The G.V.K.Rao committee was appointed by	**B**
Option A	Government of India	
Option B	Planning Commission	
Option C	Block development office	
Option D	Zilla Parishad	

	The Following questions to be replaced in ILOC_7015 scheduled on 16/10/2020	
5	The process of simulation	
	a)	Is a powerful mathematical technique
	b)	**Is often referred to as Monte-Carlo simulation**
	c)	Usually require use of computers to solve the problems
	d)	Involve the criteria where in the output of a simulation model is independent of the simulation run
		Correct Answer: Option b
14	In inventory control theory, the economic order quantity is	
	a)	Average level of inventory
	b)	**Optimum lot size**
	c)	Lot size corresponding to break even analysis
	d)	Capacity of a warehouse
		Correct Answer: Option b
15	Annual demand for a product is 40,000 units. The product is used at a constant rate over the 365 days the company is open every year. The annual holding cost for the product is estimated to be $2.50 per unit and the cost of placing each order is $125.00. If the company orders according to the economic order quantity (EOQ) formula then its optimal order size for this product would be:	
	a)	**2,000 units**
	b)	4,000 units
	c)	20,000 units
	d)	40,000 units
		Correct Answer: Option a

From,
Prof. (Dr.) Rajesh Jaware
Convener, ILOC_7015
Online Examination-2020

Program: BE Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: **ILO7014** Course Name: **Design of Experiments**

Time: 1 hour Max. Marks: 50

==========

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

Q16.	C
Q17.	A
Q18.	D
Q19.	A
Q20.	C
Q21.	A
Q22.	A
Q23.	A
Q24.	B
Q25.	D

Program: BE Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: **ILO7014** Course Name: **Design of Experiments**

Time: 1 hour Max. Marks: 50

==========

Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	_____ is a vital part of the scientific (or engineering) method
Option A:	Evaluation
Option B:	Experimentation
Option C:	Estimation
Option D:	Authentication
Q2.	The general approach to planning and conducting the experiment is called the _____.
Option A:	Strategy of experimentation
Option B:	Method of experimentation
Option C:	Preparation of experimentation
Option D:	Outline of experimentation
Q3.	The basic principles of experimental design are____.
Option A:	Randomization, repetition, blocking
Option B:	Replication, blocking randomization
Option C:	Randomization, repetition, factorization
Option D:	Optimization, blocking, factorization
Q4.	Consider the mathematical model Y = f(x, z); $\Delta y = \frac{\partial f}{\partial x}\Delta x + \frac{\partial f}{\partial z}\Delta z$ now Determining the most influential variables on the response y is called
Option A:	Process control
Option B:	Robust design
Option C:	Process characterization
Option D:	Process optimization

Q5.	The strategy which fails to consider any possible interaction between the factors is called
Option A:	Multiple factors at a time (MFAT)
Option B:	one-factor-at-a-time (OFAT)
Option C:	Best guess
Option D:	Best fit
Q6.	Which of the following is a correct expression for a multiple linear regression model having three regressor variables?
Option A:	$y = x_1 + \beta_2 x_2 + \beta_3 x_3 + \epsilon$
Option B:	$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \epsilon$
Option C:	$y = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3$
Option D:	$y = \beta_0 - \beta_1 x_1 + \beta_2 x_2 - \beta_3 x_3 + \epsilon$
Q7.	The _____is typically used to estimate the regression coefficients in a multiple linear regression model.
Option A:	Method of least squares
Option B:	Method of Jacobians
Option C:	Runge-Kutta Method
Option D:	Method of Moments
Q8.	In multiple linear regression problems, certain _____ about the model parameters are helpful in measuring the usefulness of the model.
Option A:	tests of hypotheses
Option B:	tests of uniqueness
Option C:	tests of convergence
Option D:	tests of divergence
$Q9.$	How many dependent variables does a two-way ANOVA have?
Option A:	Four
Option B:	Two
Option C:	Three
Option D:	One
Q10.	The analysis of variance will have _____ parts
Option A:	One
Option B:	Three
Option C:	Two
Option D:	Four

Q11.	In Split spot design, Randomization is done in ____ stages
Option A:	1
Option B:	2
Option C:	3
Option D:	4
Q12.	In field experiments certain factors may require _____ plots than for others.
Option A:	Lesser
Option B:	Same
Option C:	Larger
Option D:	Small
Q13.	The key idea used for the successful implementation of fractional factorial design are _____.
Option A:	Sparsity of effects principle, randomization, repetition
Option B:	Sparsity of effects principle, projection property, sequential experimentation
Option C:	Sparsity of effects principle, projection property, randomization
Option D:	Sparsity of effects principle, projection property, randomization, repetition
Q14.	When we estimate A, B, and C with complementary one-half fraction, we are really estimating _____.
Option A:	(A X BC, B X AC, C X AB)
Option B:	(A + BC, B + AC, C + AB)
Option C:	(A – BC, B – AC, C – AB)
Option D:	(A – BC, B X AC, C + AB)
Q15.	ANOVA is a statistical method of comparing the _____ of several populations
Option A:	Variance
Option B:	Standard deviations
Option C:	Means
Option D:	Mean deviation
Q16.	In a factorial experiment _____.
Option A:	Testing one factor at a time
Option B:	Cannot estimate interactions
Option C:	all possible combination of factor levels are tested
Option D:	Levels are not tested
Q17.	Factorial designs allow us to study both _____ effects of the independent variables on the dependent(s).
Option A:	Main and interactive

Option B:	Rank order and correlational
Option C:	Symbiotic and dichotomous
Option D:	Dependent and independent
Q18.	What statistical procedure is used to assess the statistical significance of the main effects and the interaction(s) in a factorial design?
Option A:	Analysis of covariance
Option B:	Correlation
Option C:	T-test
Option D:	Analysis of variance
Q19.	Which of the following item is required to be considered in logistics of testing?
Option A:	a plan to acquire materials needed for various test combinations
Option B:	regression model
Option C:	Taguchi Orthogonal Array
Option D:	missing runs
Q20.	Which of the following is an example of a plan for identifying results of the experimental trials?
Option A:	conducting missing trials
Option B:	tagging parts with trial and repetition numbers
Option C:	confounding
Option D:	preparing data sheets
Q21.	Large differences in results from trial to trial can happen in case of _____.
Option A:	good data sets
Option B:	bad data sets
Option C:	sample data sets
Option D:	attribute data sets
Q22.	Consistent results within a trial can be achieved with _____.
Option A:	good data sets
Option B:	bad data sets
Option C:	sample data sets
Option D:	conducting missing trials
Q23.	Which of the following is known as a structured approach for determining the ”best” combination of inputs to produce a product or service _____.
Option A:	Taguchi approach
Option B:	signal to noise ratio

Option C:	design of experiments
Option D:	linear regression
Q24.	The factors whose values are hard-to-control during normal process or use conditions are called as-
Option A:	control factors
Option B:	noise factors
Option C:	random factors
Option D:	robust factors
Q25.	Which of the following is not an example of common types of noise factors?
Option A:	environmental factors
Option B:	customer usage
Option C:	Degradation that occurs through usage and environmental exposure
Option D:	cake mixture ingredients

Program: BE_ Engineering
Curriculum Scheme: Rev2016
Examination: Fourth Year Semester VII
Course Code: ILO7011 and Course Name: Product Life Cycle Management
Time: 1 hour Max. Marks: 50

==========

Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	D
Q2.	B
Q3.	A
Q4	D
Q5	A
Q6	B
Q7	C
Q8.	C
Q9.	D
Q10.	C
Q11.	A
Q12.	B
Q13.	C
Q14.	A
Q15.	D
Q16.	D
Q17.	A
Q18.	D
Q19.	C
Q20.	A
Q21.	C
Q22.	B
Q23.	A
Q24.	C
Q25.	D

Program: BE____ _____ Engineering
Curriculum Scheme: Rev2016
Examination: Fourth Year Semester VII
Course Code: ILO7011 and Course Name: Product Life Cycle Management
Time: 1hour Max. Marks: 50
==========
==========

Note to the students: - All the Questions are compulsory and carry equal marks .

Q1.	The PLC describes the stages a new product goes through in the---
Option A:	Introduction phase
Option B:	Test Market
Option C:	Product Development
Option D:	Market Place
Q2.	In introduction stage of PLC sales grow slowly and
Option A:	Competition becomes tough
Option B:	Profit is Minimal
Option C:	More Investors needed
Option D:	Profit is Maximum
Q3.	Marketing Objective for the maturity stage of PLC is
Option A:	Maintain Brand Loyalty
Option B:	Stress Differentiation
Option C:	Harvest
Option D:	Deletion
Q4.	PLC stage where Competitors appears is
Option A:	Introduction phase
Option B:	Decline Phase

Option C:	Maturity
Option D:	Growth
Q5.	The stage when the cost of gaining new Buyers increases
Option A:	Growth
Option B:	Introduction
Option C:	Maturity
Option D:	Pre-Investment
Q6.	Color and size of the product, brand and packaging are considered as,
Option A:	Chemical features of product
Option B:	Physical features of product
Option C:	Product designing
Option D:	Product manufacture
Q7.	Developing a unique superior product with high quality, new features, and high value in use is _____ in new product development strategy.
Option A:	New product development process
Option B:	Typical reasons for failure
Option C:	Success factors
Option D:	Product concept
Q8.	Reason of product failure associated with its feature is due to,
Option A:	Good quality of product
Option B:	Good quantity of product
Option C:	Poor quality of product
Option D:	Poor quantity of product

Q9.	Which of the following is the first step of product development process?
Option A:	Production ramp-up
Option B:	Prototyping
Option C:	Product design
Option D:	Identification of customer needs
Q10.	In which of the following stage of Product Development Process, a detailed specification for the product development and pricing is established?
Option A:	Launch
Option B:	Testing
Option C:	Feature specification
Option D:	Idea screening
Q11.	Product data management is the activity of _____
Option A:	Managing product data.
Option B:	Invention data recording.
Option C:	Managing computer for data.
Option D:	Manipulation of data.
Q12.	A _____ is a high-level data model that shows, from the user viewpoint, the main entities and the relationships between them. It may also define the entities, and show their attributes and structure
Option A:	Physical data model
Option B:	Conceptual data model
Option C:	Entity-relationship model
Option D:	Logical data model

Q13.	A_____ is a very detailed model that is specific to the technology (e.g., database). It shows how the data will be physically stored and accessed.
Option A:	Logical data model
Option B:	Conceptual data model
Option C:	Physical data model
Option D:	Entity relationship model
Q14.	Virtual product development is the Practice of _____ and developing the products in entire 2D/3D environment
Option A:	prototyping
Option B:	producing
Option C:	protecting
Option D:	purchasing
Q15.	____ is not the component of virtual product development
Option A:	Virtual product design
Option B:	Virtual product simulation
Option C:	Virtual product manufacturing
Option D:	shop floor manufacturing
Q16.	_____is not a part of digital manufacturing
Option A:	virtual plant design
Option B:	virtual process planning
Option C:	virtual assembly visualization
Option D:	realistic manufacturing
Q17.	Sustainability Science is the study of the concepts of sustainable development and--------- ___ .

Option A:	Environmental Science
Option B:	General Science
Option C:	Social science
Option D:	Geo science
Q18.	UN decade of education for Sustainable development
Option A:	2002-11
Option B:	2003-12
Option C:	2004-13
Option D:	2005-14
Q19.	Number of sustainable development goals (SDGs) by UN are
Option A:	15
Option B:	16
Option C:	17
Option D:	18
Q20.	LCA stands for
Option A:	life cycle assessment
Option B:	life cycle analogy
Option C:	Life cycle assurance
Option D:	Life cycle Array
Q21.	Product is the ultimate objective of variety reduction
Option A:	Simplification
Option B:	Standardization
Option C:	Specialization
Option D:	Socialization

Q22.	An attractive idea must be developed into a
Option A:	Product idea
Option B:	product concept
Option C:	Test market
Option D:	Product image
Q23.	There are _____ basic components of an EDM/PDM system
Option A:	NINE
Option B:	SEVEN
Option C:	SIX
Option D:	FIVE
Q24.	Select suitable potential reasons why to implement PDM
Option A:	Data missing in hard drives, systems not responding, less data is stored
Option B:	Life cycle is managed, less systems available, data is sufficient
Option C:	Data is not centralized, CAD versions are not supported, messed up with data in mapping
Option D:	Data is available but extended facility is not existing.
Q25.	Select suitable reasons, so that PDM can lead to major benefits
Option A:	Huge investments may attract more profits
Option B:	Eases data availability, no data is missing, data storage is done
Option C:	Generates revenues, quality of product improves
Option D:	Reduces product development times by 25%, reduces cost by 15%.

University of Mumbai

Examination 2020 under cluster ALL (Lead College: VCET)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7017

Course Name: Disaster Management and Mitigation Measures

Time: 2 hour Max. Marks: 80

==========

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

Q16.	B
Q17.	A
Q18.	C
Q19.	B
Q20.	A

University of Mumbai

Examination 2020 under cluster ALL (Lead College: VCET)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7016 and Course Name:Cyber Security and Laws

Time: 2 hour Max. Marks: 80

==========

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

University of Mumbai

Examination 2020 under cluster ALL (Lead College: VCET)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7016 and Course Name: Cyber Security and Laws

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 are wireless attacks?
Option A:	MAC Spoofing , Phishing
Option B:	Eavesdropping,, MAC Spoofing
Option C:	Phishing, Repudiation
Option D:	Eavesdropping , Non- Repudiation
2.	This attack can be deployed by infusing a malicious code in a website's comment section.
Option A:	Cross Site Request Forgery (XSRF)
Option B:	SQL injection
Option C:	HTML Scripting
Option D:	Cross Site Scripting (XSS)
3.	The Objective of Firewalls is to protect?
Option A:	Data Driven Attacks
Option B:	Unauthorized Access
Option C:	Confidentiality
Option D:	Integrity
4.	The user activities are sniff and forward this information as a background process to the attackers
Option A:	Adware
Option B:	Malware
Option C:	Spyware
Option D:	Warms
5.	It is a class of computer threat?
Option A:	Stalking
Option B:	Phishing

Option C:	DOS attacks
Option D:	Soliciting
6.	Someone posing as IT tech requests information about your computer configuration. What kind of attack is this?
Option A:	Whaling
Option B:	Social Engineering
Option C:	Insider Threat
Option D:	Phishing
7.	The Primary objective of worm is to Spread the infection from….
Option A:	computer to computer
Option B:	File to file on a computer
Option C:	Website to website
Option D:	Router to routers
8.	It is usually targeted by nature where the emails are exclusively designed to target any exact user.
Option A:	Algo-based phishing
Option B:	Vishing
Option C:	Domain Phishing
Option D:	Spear phishing
9.	In this attack, someone is repeatedly harassed to individuals or organizations using any electronics means.
Option A:	Identity theft
Option B:	Phishing
Option C:	Cyber stalking
Option D:	Bullying
10.	It is a kind of attempts by individuals to get confidential or sensitive information from a individuals to falsifying their identity?
Option A:	Identity theft scam
Option B:	Phishing scams
Option C:	Spyware scams
Option D:	Trojan horse Scam

11.	It cannot be exploited by assigning or by licensing the rights to others.
Option A:	Designs
Option B:	Patents
Option C:	Copy rights
Option D:	Trademark
12.	Which of following would not gain copyright protection?
Option A:	A DVD
Option B:	An unrecorded speech
Option C:	Written lyrics of a song
Option D:	A hand knitted jumper
13.	Which one of the following statements is true?
Option A:	The definition of an invention is set out in the Patents Act 1977.
Option B:	Copyright must be registered in order to gain protection.
Option C:	A patent must be registered in order to gain protection.
Option D:	The owner of a patent cannot sell it but can prevent others using his invention.
14.	Which one of the following is outside the scope of IT Act 2000
Option A:	Electronic message
Option B:	Electronic Evidence
Option C:	Power of Attorney with digital signature
Option D:	Electronic gift
15.	Which Act casts responsibility on body corporate to protect sensitive personal information and provide punishment for offences by companies.
Option A:	IT Act 2000
Option B:	Indian Evidence Act 1872
Option C:	Indian penal code
Option D:	IT (Amendment)Act 2008
16.	What is the proposed punishment for Cyber Terrorism in IT Act?
Option A:	10 year imprisonment
Option B:	Life Imprisonment

Option C:	5 year imprisonment
Option D:	1 Lac rupees penalty
17.	Which of the following NERC Standard provide cyber-security framework for identification and protection of critical cyber assets to support the reliable operation of BES
Option A:	CIP-001
Option B:	CIP-002
Option C:	CIP-002 through CIP-009
Option D:	CIP-003
18.	Standard CIP-002 is used for
Option A:	Critical cyber asset identification
Option B:	Electronic Security Perimeter
Option C:	Physical Security of Critical cyber assets
Option D:	Sabotage reporting
19.	Which of the following are part of key provisions of Sarbanes-Oxley Act ?
Option A:	Physical Security of Critical cyber assets
Option B:	Bulk Electric System (BES)
Option C:	Critical assets
Option D:	Corporate Responsibility for financial reports
20.	ISO 27000 was originally published in ____ as the BS 7799 by the British Standards Institute (BSI)
Option A:	1995
Option B:	1998
Option C:	2000
Option D:	2012

Q2 **(20 Marks)**	
A	**Solve any Two** **5 marks each**
i.	Explain Active and Passive Attacks with example
ii.	Explain how Appeal can be made under the IT Act 2000
iii.	Explain Key IT Requirement of GLBA/GLB
B	**Solve any One** **10 marks each**
i.	How Criminal Plan the Attack? Explain various steps

ii.	Explain E-Contracts. Discuss E-Contracts Act 1872.

Q3. **(20 Marks)**	
A	**Solve any Two** **5 marks each**
i.	Explain Bluetooth Hacking with various tools
ii.	Explain Vishing, Phishing and Smishing in Cyber Security
iii.	Explain Key IT Requirement of FISMA
B	**Solve any One** **10 marks each**
i.	Explain how Intellectual Property Laws protect the rights of the owner of the Intellectual Property
ii.	Explain Key features of Indian Information Technology Act 2000.

University of Mumbai

Examination 2020 under cluster ALL (Lead College: VCET)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7018 and Course Name: EAM_

Time: 2 hour Max. Marks: 80

==========

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

University of Mumbai

Examination 2020 under cluster ALL (Lead College:)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7018 and Course Name: EAM

Time: 2 hour Max. Marks: 80

==========

Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
1.	Energy that is available in market for definite price is known as
Option A:	Renewable energy
Option B:	Commercial energy
Option C:	Non-commercial energy
Option D:	Traditional energy
2.	As per the report "BP Statistical Review of World Energy-2014", for how many years the coal reserve in India available for energy production?
Option A:	500
Option B:	300
Option C:	100
Option D:	200
3.	Which source of energy dominates the energy production mix in India?
Option A:	Natural gas
Option B:	Coal
Option C:	Oil
Option D:	Nuclear
4.	Assisting and implementing ENCON recommendation measures and monitoring the performance are done in
Option A:	Pre Audit phase
Option B:	Audit phase
Option C:	Post Audit phase
Option D:	Pre and Audit phase
5.	The height of a column in a pump is called as
Option A:	Horizontal head
Option B:	Static head
Option C:	Multi head
Option D:	Vertical head
6.	What covers study of Variations occurring in energy costs, availability and reliability of supply of energy, energy mix, identify energy conservation technologies, retrofit for energy conservation equipment.
Option A:	Performance assessment

Option B:	Energy Audit
Option C:	Energy reliability
Option D:	Energy planning
7.	Which type of audit offers the most accurate estimate of energy savings and cost?
Option A:	Preliminary Audit
Option B:	Detailed Audit
Option C:	Overall Audit
Option D:	Secondary Audit
8.	Obtaining site drawings like building layout, steam, air distribution, electricity distribution are performed in which phase of audit?
Option A:	Post Audit phase
Option B:	Pre Audit phase
Option C:	Audit phase
Option D:	In between Pre and Post Audit phase
9.	Power factor can be improved by connecting which among these?
Option A:	Semiconductor device
Option B:	Resistors
Option C:	Inductor
Option D:	Static capacitors
10.	Fixed charge and Variable charge are dependent on what factor for HT consumer?
Option A:	Average load ,Energy consumption
Option B:	Energy consumption, Maximum Demand
Option C:	Maximum demand, Energy Consumption
Option D:	Maximum demand ,Peak load demand
11.	Energy savings potential of variable torque applications compared to constant torque application is:
Option A:	Higher
Option B:	Equal
Option C:	Lower
Option D:	Does not depend on Torque
12.	Electronic soft starters are used for motors to:
Option A:	improve the loading
Option B:	provide smooth start and stop
Option C:	achieve variable speed
Option D:	provide jerk during starting
13.	For large space lighting we prefer
Option A:	Time based control
Option B:	day light based controllers
Option C:	Localized Switching
Option D:	Photo sensors
14.	Formation of bubbles in an impeller is called
Option A:	Cavitation

Option B:	Defects
Option C:	Friction
Option D:	Heat burn
15.	If no instrument other than tachometer is available, what method you would suggest for measuring the motor load?
Option A:	Slip method
Option B:	Input power measurement method
Option C:	Line current measurement method
Option D:	Terminal voltage method
16.	In lighting performance assessment ILER stands for
Option A:	International Lighting Energy Regulation
Option B:	Indian Lighting Efficiency Regulation
Option C:	Installed Load Efficacy Ratio
Option D:	Interior Lighting Energy Ratio
17.	To have lighting performance assessment satisfactory to good, ILER value must be
Option A:	0.75 and above
Option B:	0.5 and less
Option C:	between 0.25 to 0.5
Option D:	below 0.25
18.	Which LEED rating system requires durability?
Option A:	LEED for Schools
Option B:	LEED for Commercial Interiors
Option C:	LEED for Homes
Option D:	LEED for Existing Buildings: Operation and Maintenance
19.	Photovoltaic cell converts solar energy into
Option A:	Heat energy
Option B:	Electric energy
Option C:	Mechanical energy
Option D:	Chemical energy
20.	Which insulation material is used for high temperatures
Option A:	Magnesia
Option B:	Polyurethane
Option C:	Expanded Polystyrene
Option D:	Calcium Silicate

Q2	
A	**Solve any Two** **5 marks each**
i.	Explain any FIVE special features of green building.
ii.	Explain advantages of power factor improvement.
iii.	A pump is filling water in to a rectangular overhead tank of 5 m x 4 m with a height of 8 m. The inlet pipe to the tank is located at height of 20 m above ground. Pump suction : 3 m below pump level Overhead tank overflow line : 7.5 m from the bottom of the tank Power drawn by motor : 5.5 kW Motor efficiency η : 92% Time taken by the pump to fill the overhead tank up to overflow level : 180 minutes. Find the pump efficiency.
B	**Solve any One** **10 marks each**
i.	What is the need of energy audit and explain types of energy audit.
ii.	Describe General fuel economy measures in furnaces

Q3	
A	**Solve any Two** **5 marks each**
i.	Explain Benchmarking and its types.
ii.	A 7.5 kW, 415 V, 15 A, 970 RPM, 3 phase rated induction motor with full load efficiency of 86 % draws 7.5 A and 3.23 kW of input power. Find the percentage loading of the motor.
iii.	Explain what is thermal insulations and its benefits.
B	**Solve any One** **10 marks each**
i.	Describe energy saving opportunities in water pumps.
ii.	Explain energy conservation opportunities in lighting controls.

University of Mumbai

Examination 2020 under cluster ALL (Lead College: VCET)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7019 and Course Name: Development engineering

Time: 2 hour Max. Marks: 80

==========

0701_R16_ALL_VII_ILO7019_AK1

==========

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

University of Mumbai

Examination 2020 under cluster ALL(Lead College: VCET)

Examinations Commencing from 7th January 2021 to 20th January 2021

Program: **ALL_Institute Level Optional Course 1**

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: ILO 7019 and Course Name: Development Engineering

Time: 2 hour Max. Marks: 80

==========

0701_R16_ALL_VII_ILO7019_QP1

==========

Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
1.	Which of the following was the first committee on Panchayati raj in India
Option A:	Balwant Rai Mehta
Option B:	Ashok Mehta
Option C:	L.M.Singhvi
Option D:	S. Mohinder Singh
2.	When is National Panchayati Day celebrated
Option A:	23rd December
Option B:	1st June
Option C:	24th April
Option D:	15th September
3.	73rd amendment gave practical shape to which article of the constitution
Option A:	Article 14
Option B:	Article 32
Option C:	Article 40
Option D:	Article 51
4.	The multi-dimensional poverty index is a measure developed by the
Option A:	UNCTAD
Option B:	World Bank
Option C:	International Monetary Fund IMF
Option D:	Oxford poverty and human development initiative , OPHDI , and the UNDP
5.	Which of the following system is established on the basis of direct election
Option A:	Gram Panchayat
Option B:	Block Committee
Option C:	Zila Parishad
Option D:	District
6.	Engagement of local people in development project refers to
Option A:	Economic development
Option B:	Socila development
Option C:	Participatory development
Option D:	Sustainable development

7.	Panchayats are constituted for
Option A:	four years
Option B:	five years
Option C:	six years
Option D:	three years
8.	Bread labour means
Option A:	To earn one's livelihood by engaging in manual labour
Option B:	Hard physical labour
Option C:	Labour for making bread
Option D:	Engaging in agriculture
9.	The Human Development Index ranks the countries based on their performance in the key areas of (1) health, (2) sex-ratio, (3)education (4) access to resources
Option A:	1,2,3
Option B:	2,3,4
Option C:	1,3,4
Option D:	1,2,4
10.	Which one of the following is not a correct statement ?
Option A:	Growth is quantitative and value neutral
Option B:	Development means a qualitative change which is always value positive
Option C:	Positive growth and development refer to changes over a period of time
Option D:	Both growth and development refer to changes over a period of time.
11.	Which of the following elements must always be in the mind of the engineer while performing his duties vis-à-vis Ethics (1)public safety, (2) economy, (3) health, (4) welfare
Option A:	1,2,3
Option B:	1,2,3,4
Option C:	1,4
Option D:	1,3,4
12.	According to Gandhi, ' Enjoy the wealth by renouncing it'is the essence of
Option A:	Trusteeship
Option B:	Sarvodaya
Option C:	Swaraj
Option D:	Ramarajya
13.	The term that refers to principles, values, beliefs that define right or wrong behaviour is
Option A:	Customer satisfaction
Option B:	Innovation
Option C:	Ethics
Option D:	Empowerment
14.	In which five year plan the Panchayat Raj System was introduced in India for the first time
Option A:	First

Option B:	Second
Option C:	Fifth
Option D:	Sixth
15.	Which of the following is an appropriate general principle with regard to engineering ethics
Option A:	The engineer shall regard his duty to the public welfare as paramount to all other obligations
Option B:	The engineer shall regard his duty to the objectives of the company as paramount to all other obligations
Option C:	The engineer shall regard his duty to the Profession of engineering as paramount to all other obligations
Option D:	The engineer shall regard his duty to his excellence as paramount to all other obligations
16.	Those individuals who raise ethical concerns to others inside or outside the organisation are called
Option A:	Entrepreneur
Option B:	Whistle blower
Option C:	Social entrepreneur
Option D:	Social impact management
17.	Which of the following is not a key intervention to improve governance
Option A:	Facilitating independent and inclusive journalism
Option B:	Capacity building of government officials
Option C:	Advocacy for policy design and implementation
Option D:	Employment for all
18.	Which of the following is not in the 11^{th} schedule of subjects
Option A:	Fisheries industry
Option B:	Safe drinking water
Option C:	Markets and fairs
Option D:	Large irrigation projects
19.	The following is not a stated objective of Self Help Groups
Option A:	Provide employment to the members
Option B:	Create awareness about rights
Option C:	Foster a sense of community
Option D:	Entrepreneurship development
20.	Those individuals who raise ethical concerns to others inside or outside the organisation are called
Option A:	Entrepreneur
Option B:	Whistle blower
Option C:	Social entrepreneur
Option D:	Social impact management

Q2	Solve any Four out of Six 5 marks each
A	Explain the provisions of the 74th amendment
B	What is the scope of information and communication technology in rural India
C	Define ethics and ethical dilemma
D	What are the important components of Green Revolution
E	What are the various steps taken for inclusion of women and the members of the reserved category in decision making
F	Why was there a need to set up rural co-operatives

Q3	Solve any Four out of Six 5 marks each
A	Briefly discuss the various rural development schemes in India
B	What is the importance of ethical conduct in business
C	Human Development Index is a barometer of a nation's progress- Comment on this while giving specific examples to prove your point
D	What are self help groups (SHG)? Explain their significance in rural development
E	Discuss any 2 initiatives of the Government of India towards urban development
F	What are the functions of Panchayat Samiti

University of Mumbai
Examination 2020 under cluster ALL (Lead College: VCET)

Program: **ALL_Institute Level Optional Course 1**
Curriculum Scheme: Rev2016
Examination: BE Semester VII
Course Code: ILO 701**7**
Course Name: Disaster Management and Mitigation Measures
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 occurred as a consequence of earthquake
Option A:	Tsunami
Option B:	Fire
Option C:	Damage to building
Option D:	Drought
2.	Which of the following is NOT the natural cause of flood .
Option A:	River bank erosion
Option B:	Poor natural drainage
Option C:	Heavy rain
Option D:	Deforestation
3.	Terrorism is a _____type of disaster
Option A:	Man made
Option B:	Natural
Option C:	Both natural and man made
Option D:	Neither natural nor man made
4.	World Health Organization (WHO) was established in
Option A:	1950
Option B:	1948
Option C:	1947
Option D:	1960
5.	Who heads NDMA, the apex body for Disaster management
Option A:	Home Minister
Option B:	Finance Minister
Option C:	Prime Minister
Option D:	Home Secretary
6.	Which of the following is a disaster mitigation strategy?
Option A:	Constructing cyclone shelters

Option B:	Giving loans from banks
Option C:	Providing cheap electricity
Option D:	Providing school uniforms to children
7.	Which of the following organization is the apex authority of disaster management in India?
Option A:	NDA
Option B:	NDMA
Option C:	CDMA
Option D:	INDR
8.	If the deficiency of a particular year's rainfall more than 50 % of normal it is termed as
Option A:	Onset of Drought
Option B:	Moderate Drought
Option C:	Severe Drought
Option D:	Simple Drought
9.	Magnitude of earthquake indicates amount of _____.
Option A:	vibrations per second
Option B:	vibrations per minute
Option C:	Oscillations
Option D:	energy released
10.	By which Act, N.I.D.M got the statutory organization status?
Option A:	National Disaster Policy Act 1999
Option B:	NDMP 2019
Option C:	Disaster Management Act 2005.
Option D:	National DM Policy 2009
11.	Amateur Radio is also known as?
Option A:	Ham radio
Option B:	Home radio
Option C:	Pocket radio
Option D:	Silent radio
12.	What are the three phases of disaster management planning?
Option A:	Preparation, Response and Recovery
Option B:	Preparation, Planning and Perception
Option C:	Evacuating, Rebuilding and Re-branding
Option D:	Planning, Evacuating and Recovery
13.	Cyclones, Heat wave , Climate change are part of _____disaster.
Option A:	The Geological Disaster
Option B:	The Hydrological Disasters
Option C:	The Meteorological Disasters
Option D:	The Chemical Disaster

14.	The Indian Tsunami Early Warning Centre (ITEWC) established at Indian National Centre for Ocean Information Sciences is located in
Option A:	Chennai
Option B:	Kochi
Option C:	Goa
Option D:	Hyderabad
15.	In _____ in 2013 cloudburst created the flash flood situation to cause heavy damage to lives and property.
Option A:	Uttarakhand
Option B:	Chennai
Option C:	Kashmir
Option D:	Karnataka
16.	When was the updated & revised National Disaster Management Plan was prepared?
Option A:	2016
Option B:	2019
Option C:	2018
Option D:	2017
17.	Which of the following is the best thing to do during heavy lightning?
Option A:	lie on the ground in an open place
Option B:	Go into a water body
Option C:	Stay indoors, away from metallic doors and windows
Option D:	Stand under a tall tree
18.	The given three actions are arranged for which step i) The planning ii) The training and iii) The supply
Option A:	The prevention step
Option B:	Recovery step
Option C:	The preparation step
Option D:	The recovery step
19.	The Vision of _____ is “To build a safer and disaster resilient India by a holistic proactive technology driven and sustainable development strategy that involves all stake holders and fasters a culture of Prevention, preparedness and Mitigation.
Option A:	N.D.R.F
Option B:	N.D.M.A
Option C:	S.D.R.F
Option D:	N.I.D.M
20.	S.D.R.F Stands for
Option A:	State Disaster Response Fund
Option B:	State Disaster Relief Fund
Option C:	State Dedicated Relief Fund
Option D:	State Dynamic Response Fund

Q2	**Solve any Four out of Six** **5 marks each**
A	State and describe the measures to prevent the global warming.
B	Define "Nuclear Disaster "and describe the effects of Nuclear disasters in India
C	What are the long term and short-term effects of disaster?
D	What are the main phases of Disaster Management?
E	Describe the importance and the methods to create public awareness in Disaster management?
F	Explain the role of Government Agencies in Relief fund raising for Disaster management.

Q3.	**Solve any Two Questions out of Three** **10 marks each**
A	Write detail note on occurrence, causes and measurement of earthquake. List out some of the major earthquakes occurred in India
B	Explain the role of NGO's in post disaster scenario and during rehabilitation.
C	State Do's and Don'ts in case of various disasters.