

Q=QUESTION question\_description  
A=ANSWER answer\_description

question\_explanation question\_type question\_difficulty  
answer\_explanation answer\_isright 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	records		0	4
Q	_____		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	cloud includes _____		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	_____ provided by the cloud		M	1
A	Community		0	1
A	Applications		0	2
A	Services		1	3
A	Features		0	4
Q	computerized systems, such as computer-assisted		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			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	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	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	other source is		0	3
A	A group chosen from a population		1	4
Q	is to			1

A	the industry.		1	1
A	than your competitors.		0	2
A	to existing products		0	3
A	internal business processes		0	4
Q	and direct access to management reports			1
A	Interface		0	1
A	Dashboard		1	2
A	Whiteboard		0	3
A	Openboard		0	4
Q	all managerial decisions fall?	M		1
A	Operational control		0	1
A	Management control		0	2
A	Inventory control		1	3
A	Strategic planning		0	4
Q	is converted to individual attributes.			1
A	First		1	1
A	Second		0	2
A	Third		0	3
A	Fourth		0	4
Q	formats such as text, graphics, and tables is known as:			1
A	Image Processing		0	1
A	Data Visualization		1	2
A	Human Machine Interaction		0	3
A	Data Segmentation		0	4
Q	or to steal something is called a _____			1
A	Hacker		1	1
A	Cracker		0	2
A	Jammer		0	3
A	Spammer		0	4
Q	inserted into another program is _____	M		1
A	Worm		0	1
A	Virus		1	2

A	Sniffer		0	3
A	Spoofing		0	4
Q	of information technology is called _____			1
A	Snooping		0	1
A	Electronic Surveillance		1	2
A	Investigation		0	3
A	Data collection		0	4
Q	updated and is intended for general public reading is			1
A	Weblog		1	1
A	Electronic bulletin boards		0	2
A	Newsgroups		0	3
A	Electronic discussions		0	4

**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	
<b>Q.No.1</b>	The 73rd amendment Act pertains to which of the following		<b>B</b>
Option A	Statehood of Delhi		
Option B	Panchayati Raj Institutions		
Option C	Municipalities		
Option D	Land reforms		
<b>Q.No.2</b>	The Panchayati Raj is included in the		<b>B</b>
Option A	Union list		
Option B	State list		
Option C	Concurrent list		
Option D	Residuary list		
<b>Q. No.3</b>	Which of the following was the first committee on Panchayati raj in India		<b>A</b>
Option A	Balwant Rai Mehta		
Option B	Ashok Mehta		
Option C	L.M.Singhvi		
Option D	S. Mohinder Singh		
<b>Q.No.4</b>	Which of these is a factor that affects ethical and unethical behaviour		<b>A</b>
Option A	Ethical dilemma		
Option B	Diversity		
Option C	Teamwork		
Option D	Open communication		<b>C</b>
<b>Q. No.5</b>	When is National Panchayati Day celebrated		
Option A	23rd December		
Option B	1st June		
Option C	24th April		
Option D	15th September		
<b>Q.No.6</b>	Those individuals who raise ethical concerns to others inside or outside the organisation are called		<b>B</b>
Option A	Entrepreneur		
Option B	Whistle blower		
Option C	Social entrepreneur		
Option D	Social impact management		
<b>Q.No.7</b>	The term that refers to principles, values, beliefs that define right or wrong behaviour is		<b>C</b>
Option A	Customer satisfaction		
Option B	Innovation		
Option C	Ethics		
Option D	Empowerment		

<b>Q.No8</b>	Which of the following principles is the essential principle of utilitarian school of ethics		<b>B</b>
Option A	Greatest health principle		
Option B	Greatest Happiness principle		
Option C	Greatest wealth principle		
Option D	Greatest respect principle		
<b>Q.No9</b>	Which of the following is an appropriate general principle with regard to engineering ethics		<b>A</b>
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		
<b>Q.No10</b>	Which of the following statements is the most correct description of the relationship between humans and technology		<b>C</b>
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		
<b>Q.No 11</b>	Which of the following elements must always be in the mind of the engineer while performing his duties vis-a-vis Ethics (1)public safety, (2) economy, (3) health, (4) welfare		<b>D</b>
Option A	1,2,3		
Option B	1,2,3,4		
Option C	1,4		
Option D	1,3,4		
<b>Q.No 12</b>	73rd amendment gave practical shape to which article of the constitution		<b>C</b>
Option A	Article 14		
Option B	Article 32		
Option C	Article 40		
Option D	Article 51		
<b>Q.No 13</b>	Which one of the following is not correct ?		<b>C</b>
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.		
<b>Q.No 14</b>	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		<b>C</b>
Option A	1,2,3		
Option B	2,3,4		
Option C	1,3,4		
Option D	1,2,4		
<b>Q.No 15</b>	The multi-dimensional poverty index is a measure developed by the		<b>D</b>
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		
<b>Q.No 16</b>	Which state has no Panchayati Raj Institution at all		<b>A</b>
Option A	Mizoram		
Option B	Manipur		
Option C	Arunachal Pradesh		
Option D	Tripura		
<b>Q.No 17</b>	Which state first reserved 50% seats for women		<b>D</b>
Option A	Andhra Pradesh		
Option B	Uttar Pradesh		
Option C	Madhya Pradesh		
Option D	Bihar		
<b>Q.No 18</b>	Which of the following system is established on the basis of direct election		<b>A</b>
Option A	Gram Panchayat		
Option B	Block Committee		
Option C	Zila Parishad		
Option D	District		
<b>Q.No 19</b>	The following is true about khap panchayat		<b>A</b>
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		
<b>Q.No 20</b>	In which five year plan the Panchayat Raj System was introduced in India for the first time		<b>B</b>
Option A	First		
Option B	Second		
Option C	Fifth		



Option D	Sixth		
<b>Q.No 21</b>	Which of the following years has been declared year of Gram Sabha		<b>B</b>
Option A	2008-09		
Option B	2009-10		
Option C	2011-12		
Option D	2012-13		
<b>Q.No 22</b>	Engagement of local people in development project refers to		<b>C</b>
Option A	Economic development		
Option B	Social development		
Option C	Participatory development		
Option D	Sustainable development		
<b>Q.No 23</b>	Panchayati Raj system is based on the vision of		<b>B</b>
Option A	Pandit Jawaharlal Nehru		
Option B	Mahatma Gandhi		
Option C	Lal Bahadur Shastri		
Option D	Sardar Patel		
<b>Q.No 24</b>	Panchayats are constituted for		<b>B</b>
Option A	four years		
Option B	five years		
Option C	six years		
Option D	three years		
<b>Q.No 25</b>	The G.V.K.Rao committee was appointed by		<b>B</b>
Option A	Government of India		
Option B	Planning Commission		
Option C	Block development office		
Option D	Zilla Parishad		

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	Unauthorised 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 Regulatory Corporation		0	4

Q=QUESTION	question_description	question_explanation	question_type	question_difficulty
A=ANSWER	answer_description	answer_explanation	answer_isright	answer_position
Q	The inability of system to perform required function		M	1
A	Bug		0	1
A	Defect		0	2
A	Failure		1	3
A	Fault		0	4
Q	Exhaustive testing is		M	1
A	Impractical and impossible		0	1
A	Always possible		0	2
A	Impractical but possible		1	3
A	Practically possible		0	4
Q	The document that created during testing activity is		M	1
A	Test oracle		0	1
A	Testware		1	2
A	Incident		0	3
A	Testcase		0	4
Q	The bug that hags or stop the functioning of software		M	1
A	Minor bug		0	1
A	Major bug		0	2
A	Medium bug		0	3
A	Critical bug		1	4
Q	What is the meaning of Equivalence class partition?		M	1
A	A set of test cases for testing classes of objects.		0	1
A	An input or output range of values such as, only one value		1	2
A	An input or output range of values such that each value in		0	3
A	An input or output range of values such that every tenth		0	4
Q	Which of the following is not the other name for Black		M	1
A	Behavioral testing		0	1
A	Glass box testing		1	2
A	Non Transperant testing		0	3
A	Functional Testing		0	4
Q	A substitute module used in top down integration testing		M	1
A	Sub module		0	1
A	Driver		0	2
A	Dummy module		0	3

A	Stub		1	4
Q	A Boolean graph reflecting logical relationships between		M	1
A	State Transition Graph		0	1
A	Cause Effect Graph		1	2
A	Data Flow Graph		0	3
A	Traceability Matrix		0	4
Q	When software is complete and testing is carried out in		M	1
A	Alpha testing		1	1
A	Beta testing		0	2
A	Regression testing		0	3
A	Management		0	4
Q	Problem to select a subset T' of T with which P' will be		M	1
A	Coverage identification problem		0	1
A	Test suite execution problem		0	2
A	Regression test selection problem		1	3
A	Test suite maintenance problem		0	4
Q	_____ is at the top-level in the test group hierarchy.		M	1
A	Test engineer		0	1
A	Test manager		1	2
A	Test leader		0	3
A	Junior engineer		0	4
Q	Verification plan includes_____.		M	1
A	Unit test plan		0	1
A	Integration test plan		0	2
A	Function design plan		1	3
A	Stress test plan		0	4
Q	Master schedule in V%V planning_____.		M	1
A	Summarizes the V%V tasks and their relationship with		1	1
A	Summarizes the resources needed to perform V%V tasks.		0	2
A	Identifies the organization responsible for performing		0	3
A	Responsible only for verification		0	4
Q	Test log is_____.		M	1
A	An evaluation report prepared when the testing is over.		0	1
A	A form of bug report.		0	2
A	A record of the testing events that take place during test.		1	3
A	A form of suggestions		0	4

Q	Tools that enables the test team to capture the state of		M	1
A	Monitor program		1	1
A	Event program		0	2
A	Snapshot program		0	3
A	Code comprehension		0	4
Q	Tools that help in understanding dependencies, tracing		M	1
A	Monitor program		0	1
A	Event program		0	2
A	Snapshot program		1	3
A	Code comprehension		0	4
Q	Tools that automate the generation of test data based on a		M	1
A	Test data generator		1	1
A	Test case generator		0	2
A	Code comprehension		0	3
A	Test designer		0	4
Q	The tools that record events at the time of running the		M	1
A	Test data generator		0	1
A	Test case generator		0	2
A	Coverage analysis tools		0	3
A	Capture playback tools		1	4
Q	_____ is tested under variety of operating conditions ,		M	1
A	Function		0	1
A	Structure		0	2
A	Performance		1	3
A	Navigability		0	4
Q	Which testing is done in web based to find potential		M	1
A	Compatibility		0	1
A	Security		1	2
A	Interoperability		0	3
A	Usability		0	4
Q	_____ is tested to uncover errors in presentation or		M	1
A	Content model		0	1
A	Interface model		0	2
A	design model		0	3
A	User interface		1	4
Q	Conventional white box and black box case design is used		M	1
A	Component level testing		1	1

	A	Compatibility testing		0	2
	A	Usability testing		0	3
	A	Navigation testing		0	4
	Q	reusability quality factor define which category		M	1
	A	Product revision		0	1
	A	Product operation		0	2
	A	Product transition		1	3
	A	Product modulation		0	4
	Q	Which of these is not a quality factor for consistency		M	1
	A	Correctness		0	1
	A	Reliability		0	2
	A	Maintainability		0	3
	A	Interoperability		1	4
	Q	How many principles are there for Iso 9000:2000		M	1
	A	6		0	1
	A	7		0	2
	A	8		1	3
	A	9		0	4



**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Program: BE Information Technology

Curriculum Scheme: Rev2016/2012

Examination: Fourth Year Semester VII

Course Code:ITC701 and Course Name: Enterprise Network Design

Time: 1 hour

Max. Marks: 50

=====

NOTE to the Question Bank Generator:

1. The question bank consists of 25 MCQ questions with each question carrying a maximum of 2 marks. It should cover all the modules with appropriate weightages.
2. You need to check the questions and their answers for their correctness. There should not be any ambiguity in the questions and the options. Only one option should be the Correct Answer.
3. You must ensure that the same question is not repeated again in this question paper.
4. Among 25-questions, 13 questions can be under the 'Simple' category, 7-questions can be under the 'Moderate' category, and the remaining 5-questions can be under the 'Difficult' category.
5. Please do not reveal answer on this Question Paper.
6. Use another template provided to enter the correct answers.
7. Please save this file with file name as per the sample format given below:

File Name: "Date of Examination\_Scheme\_Program\_Semester\_Subject Code\_QP Set Number"

For example:

QP set number 1 of first core course of Mechanical Engineering Semester V for Rev2016 scheme and scheduled on 25/09/2020 has to have the file name as

**2509\_R16\_Mech\_V\_MEC501\_QP1**

QP set number 1 of Department Level Optional Course of Computer Engineering Semester VI for Rev2012 scheme and scheduled on 28/09/2020 has to have the file name as

**2809\_R12\_Comp\_VI\_CSDLO6021\_QP3**

=====

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

Q1.	Network infrastructure layer includes...
Option A:	Placement of different IT resources
Option B:	Application networking services
Option C:	Business applications and collaboration services
Option D:	Collaborative Applications
Q2.	At which stage in the PPDIOO process would you analyze a customer's network in order to discover opportunities for network improvement?
Option A:	Prepare
Option B:	Design
Option C:	Implement
Option D:	Plan

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q3.	Which of the following routing protocols is proprietary?
Option A:	BGP
Option B:	EIGRP
Option C:	RIP
Option D:	OSPF
Q4.	The fact with Top down design approach is
Option A:	Network devices and technologies are selected first
Option B:	Risk of having redesign of the network
Option C:	Results in an inappropriate design
Option D:	The uppers OSI layer services are designed first and then the lower layers
Q5.	Which layer of the hierarchical network design model is referred to as the high-speed backbone of the internetwork, where high availability and redundancy are critical?
Option A:	Distribution layer
Option B:	Access Layer
Option C:	Core Layer
Option D:	Data link Layer
Q6.	SNMP message used for security level
Option A:	Trap
Option B:	NoAuthNoPriv
Option C:	Set request
Option D:	Inform Request
Q7.	Which hierarchical design model layer controls the flow of network traffic using policies and delineates broadcast domains by performing routing functions between virtual LANs
Option A:	Distribution layer
Option B:	Access Layer
Option C:	Core Layer
Option D:	Data link Layer
Q8.	Server Farm module consist of
Option A:	Database Servers and Application Servers
Option B:	Campus Core
Option C:	Access layer
Option D:	Distribution layer
Q9.	Enterprise Campus Module functional area in Cisco Enterprise Architecture consist of
Option A:	Access layer and Distribution Layer
Option B:	WAN and MAN
Option C:	Data center
Option D:	Teleworker

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q10.	Which network structure provides connectivity between the individual campus buildings?
Option A:	Peer to Peer
Option B:	Distant remote building
Option C:	An intrabuilding
Option D:	An interbuilding
Q11.	Examples of applications that would be appropriate to reside in a Server Farm dose not include the following:
Option A:	Organizational mail servers
Option B:	Common file servers
Option C:	Common database servers for organizational applications
Option D:	Web Server
Q12.	HSRP is
Option A:	Head Standby Router Protocol
Option B:	Hot Spanning Router Protocol
Option C:	Hot Standby Router Protocol
Option D:	Head Spanning Router Protocol
Q13.	A low-end multilayer switch provides _____ services closer to the end user when multiple VLANs exist.
Option A:	Routing
Option B:	Security
Option C:	availability
Option D:	Reliability
Q14.	Which characteristics should not be considered when designing the campus network
Option A:	Network application characteristics
Option B:	Environmental characteristics
Option C:	Application characteristics
Option D:	Infrastructure device characteristics
Q15.	A WAN network covers _____ geographical Area and its role in enterprise network design is _____
Option A:	1m to 10 m and to Provide Campus Edge Module to Remote Offices of an enterprise Connectivity
Option B:	100Km to 1000 Km and to Provide Campus Edge Module to Remote Offices of an enterprise Connectivity
Option C:	100m to 1 Km and to Provide Campus module to Campus Edge module Connectivity
Option D:	10 Km to 100 Km and to Provide Campus module to Campus Edge module Connectivity
Q16.	File transfer applications have _____ and Interactive application like VOIP have _____ requirements
Option A:	Both have Low throughout requirement
Option B:	File transfer-Low throughout requirement and VOIP -low response time requirement
Option C:	Both have High Throughput Requirement

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option D:	File Transfer- High Throughput Requirement and VOPI- very stringent response time requirements
Q17.	network segmentation technique is supported by _____
Option A:	SP MPLS IP VPN
Option B:	self-deployed MPLS network
Option C:	LAN
Option D:	MAN
Q18.	Which models of Cisco ISRs would be appropriate for a teleworker
Option A:	Cisco-7200
Option B:	Cisco-2000
Option C:	Cisco-4500
Option D:	Cisco-871
Q19.	IP addresses must therefore be mapped to a company's external registered address when sending anything on the Internet
Option A:	Private
Option B:	Public
Option C:	Classfull
Option D:	Classless
Q20.	When all subnet masks in a major network must be the same.
Option A:	VLSM
Option B:	FLSM
Option C:	VSLM
Option D:	FSLM
Q21.	Why is summarization so important to an efficient routed system?
Option A:	It adds detail to the route tables of routers.
Option B:	Summarization sends all subnets as classful networks,
Option C:	Summarization reduces the size of route tables
Option D:	Summarization enforces router authentication
Q22.	Which among the following features is present in IPv6 but not in IPv4?
Option A:	Fragmentation
Option B:	Header checksum
Option C:	Options
Option D:	Anycast address
Q23.	A link local address of the local addresses is used in an
Option A:	Isolated Router
Option B:	Subnets
Option C:	Isolated Subnets
Option D:	Supernets

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q24.	Pick the phrase that best describes Software Defined Networking (SDN)
Option A:	SDN is an architecture that separates the network control and forwarding functions.
Option B:	SDN is a protocol that enables communications between network devices.
Option C:	SDN is an application that can be used to manage networks.
Option D:	SDN is a network device of advanced features.
Q25.	In SDN architecture Applications communicate with the controller using _____.
Option A:	Southbound Interfaces
Option B:	SDN Controller
Option C:	Northbound Interfaces
Option D:	Infrastructure Data Plane

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Program: BE Information Technology Engineering

Curriculum Scheme: Rev2016

Examination: Final Year Semester VII

Course Code: ITC702 and Course Name: Infrastructure Security

Time: 1 hour

Max. Marks: 50

=====

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

Q1.	An attack overwhelms a system's resources so that it cannot respond to service requests is called _____
Option A:	Malware
Option B:	Phishing
Option C:	Denial of service
Option D:	Man in middle
Q2.	_____ is the process of identifying an individual, usually based on a username and password
Option A:	Authentication
Option B:	Authorization
Option C:	Accounting
Option D:	Auditing
Q3.	An attacker hijacks a session between a trusted client and network server is called _____
Option A:	Malware
Option B:	Phishing
Option C:	Denial of service
Option D:	Session hijacking
Q4.	The _____ protocol will encrypt the entire packet from the switch or router to the AAA server?
Option A:	802.1x
Option B:	IPSEC
Option C:	RADIUS
Option D:	TACACS+
Q5.	List the two Types of Buffer overflow attack
Option A:	Stack overflow ,Heap overflow
Option B:	Heap overflow, Buffer overflow
Option C:	Text overflow, Heap overflow
Option D:	global text overflow ,Heap overflow
Q6.	Attack on a Heap Memory of Buffer overflow is Known as
Option A:	Heap overrun
Option B:	Heap override
Option C:	Heap overflow
Option D:	Heap overwrite

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q7.	A cyber sabotage from a person within an organization who can have access to sensitive data is a
Option A:	Cyber attack
Option B:	Logic Bomb
Option C:	Cyber warfare
Option D:	Cyber sabotage
Q8.	Which scripts are manipulated to modify the Dom objects
Option A:	Server side scripts
Option B:	Attacker side scripts
Option C:	Web-based scripts
Option D:	Client-side scripts
Q9.	Discuss how can you protect Integrity of your database
Option A:	Error correction
Option B:	Rollback & Commit
Option C:	Integrity solution
Option D:	Error solution
Q10.	The Process in which an Operating system makes Files directories on a storage device available for users.
Option A:	Installing
Option B:	launching
Option C:	Executing
Option D:	Mounting
Q11.	Which is not the Wireless LAN Components
Option A:	AAA Server
Option B:	Hub
Option C:	Wireless NIC
Option D:	Proxy server
Q12.	Ciphering key generating algorithm used in GSM ---
Option A:	A3
Option B:	A8
Option C:	A6
Option D:	A4
Q13.	_____ is defined as security discipline that enables the access of right resources by authorized people at right times and for right reason.
Option A:	Access Control
Option B:	Authentication
Option C:	Authorization
Option D:	Identity management
Q14.	Which of the following is not an appropriate method of defacing web server?
Option A:	Mail server intrusion

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option B:	Web application bugs
Option C:	Web shares misconfiguration
Option D:	Sessions hijacking
Q15.	Which of the following is not a characteristic of cloud computing?
Option A:	On-demand service
Option B:	Narrow network access
Option C:	Resource pooling
Option D:	Rapid Elasticity
Q16.	Which is a not disadvantage of wireless network -----
Option A:	Regulations of frequencies
Option B:	Bandwidth and delays
Option C:	Always shared medium
Option D:	AAA Server
Q17.	SAML uses ____ and OAuth uses ____
Option A:	JSON,XML
Option B:	XML,JSON
Option C:	JSON,SSL
Option D:	SSL, XML
Q18.	Which of the following is not an appropriate way to compromise web servers?
Option A:	Misconfiguration in networks
Option B:	Using network vulnerabilities
Option C:	Bugs in OS which allow commands to run on web servers
Option D:	Misconfiguration in OS
Q19.	Wireless LANs operate in almost the same way as wired LANs, it just uses ----- ----- to transmit data throughout a small area.
Option A:	Propagation delay
Option B:	Radio signals
Option C:	Adware
Option D:	Environment variables
Q20.	_____ attack is the exploitation of the web-session & its mechanism that is usually managed with a session token.
Option A:	Session Hacking
Option B:	Session Hijacking
Option C:	Session Cracking
Option D:	Session Compromising
Q21.	Phishers often develop _____ websites for tricking users & filling their personal data.
Option A:	legitimate
Option B:	illegitimate
Option C:	genuine
Option D:	Official



**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q22.	During a DoS attack, the regular traffic on the target _____ will be either dawdling down or entirely interrupted.
Option A:	network
Option B:	system
Option C:	website
Option D:	Router
Q23.	How to avoid browser based hacking in information technology security.
Option A:	Anti-malware in browsers
Option B:	Remote browser access
Option C:	Adware remover in browsers
Option D:	Incognito mode in a browser
Q24.	Which method is used for attacking the database/website
Option A:	HTML injection
Option B:	SQL Injection
Option C:	Malicious code injection
Option D:	XML Injection
Q25.	Important aspect of disaster recovery is
Option A:	Restoration of business functions
Option B:	protection of individual life
Option C:	Control of critical assets
Option D:	complete damage assessment

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Program: BE Information Technology

Curriculum Scheme: Rev2016

Examination: Final Year Semester VII

Course Code: ITC703 and Course Name: Artificial Intelligence

Time: 1 hour

Max. Marks: 50

=====

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

Q1.	Which is used to improve the agent's performance?
Option A:	Learning
Option B:	Perceiving
Option C:	Observing
Option D:	Acting upon
Q2.	Which element in agent are used for selecting external actions?
Option A:	Learning
Option B:	Perceive
Option C:	Performance
Option D:	Actuator
Q3.	What is state space?
Option A:	The whole problem
Option B:	Representing your problem with variable and parameter
Option C:	Problem you design
Option D:	Your definition to a problem
Q4.	When is the breadth-first search optimal?
Option A:	When there is less number of nodes
Option B:	When all step costs are equal
Option C:	When there is large number of nodes
Option D:	When all step costs are unequal
Q5.	How many successors are generated in the backtracking search?
Option A:	2
Option B:	4
Option C:	1
Option D:	3
Q6.	Web crawler is a/an_____.
Option A:	Problem-solving agent
Option B:	Simple reflex agent
Option C:	Model based agent
Option D:	Intelligent goal-based agent
Q7.	To which depth does the alpha-beta pruning can be applied?

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option A:	10 states
Option B:	8 states
Option C:	Any depth
Option D:	6 states
Q8.	What is the heuristic function of greedy BFS?
Option A:	$f(n) > h(n)$
Option B:	$f(n) < h(n)$
Option C:	$f(n) \neq h(n)$
Option D:	$f(n) = h(n)$
Q9.	The type of search in which traversal is done in both , from start to goal node and from goal node to start node is _____.
Option A:	Uniform Cost Search
Option B:	Depth First Search
Option C:	Breadth First Search
Option D:	Bidirectional Search
Q10.	To eliminate the inaccuracy problem in planning problem or partial order planning problem we can use _____ data structure/s.
Option A:	Queue
Option B:	Planning Graphs
Option C:	BST (Binary Search Tree)
Option D:	Stacks
Q11.	a general strategy of delaying a choice during search is called
Option A:	Non linear planning
Option B:	Least commitment approach
Option C:	Most commitment approach
Option D:	opportunistic planning
Q12.	Building the plan using conditional steps that will check state of environment and decide what to do next is called
Option A:	partial order planning
Option B:	replanning
Option C:	continuous planning
Option D:	conditional planning
Q13.	How is Fuzzy Logic different from conventional control methods?
Option A:	DO approach
Option B:	FOR approach
Option C:	WHILE approach
Option D:	IF and THEN approach

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q14.	What is the basic element for a language?
Option A:	Literal
Option B:	Random variable
Option C:	Variable
Option D:	Function
Q15.	Where does the bayes rule can be used?
Option A:	Decreasing complexity
Option B:	Solving queries
Option C:	Answering probabilistic query
Option D:	Increasing complexity
Q16.	Which is NOT the characteristic of WUMPUS world environment?
Option A:	Multiagent
Option B:	Fully Observable
Option C:	Deteministic
Option D:	Discrete
Q17.	What is the process of associating an FOL expression with a phrase?
Option A:	Semantic interpretation
Option B:	Interpretation
Option C:	Augmented reality
Option D:	Augmented interpretation
Q18.	What is the process of capturing inference process as a single inference rule?
Option A:	Ponens
Option B:	Generalised modus ponens
Option C:	Clauses
Option D:	Variables
Q19.	Which is used to construct the complex sentences?
Option A:	Logical connectives
Option B:	Symbols
Option C:	Connections
Option D:	variables
Q20.	One of the main challenge/s of NLP is _____.
Option A:	Handling summarisation
Option B:	Handling tokenisation
Option C:	Handling ambiguity of sentences
Option D:	Handling POS-tagging
Q21.	Which can be adapted for planning algorithms?

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option A:	Constrained
Option B:	Most-constrained literal
Option C:	Most-constrained variable
Option D:	Most-constrained function
Q22.	Which of the following is a Well formed formula in Predicate logic
Option A:	$\forall x \forall y (P(f(x)) \rightarrow \sim (f(P(x)) \rightarrow Q(y)))$
Option B:	$\forall x \forall y (P(f(x)) \rightarrow \sim (P(x) \rightarrow Q(f(y,z))))$
Option C:	$\forall x \forall y (P(f(x)) \rightarrow \sim (P(x,y) \rightarrow Q(f(y))))$
Option D:	$\forall x \forall y (P(f(x)) \rightarrow \sim (P(x) \rightarrow Q(f(y))))$
Q23.	In NLP, The process of identifying people, an organization from a given sentence, paragraph is called
Option A:	Stop word removal
Option B:	Named entity recognition
Option C:	Stemming
Option D:	Lemmatization
Q24.	Which of the following is used to mapping sentence plan into sentence structure?
Option A:	Handling tokenisation
Option B:	Text planning
Option C:	Sentence planning
Option D:	Text Realization
Q25.	Which of the following is used study of construction of words from primitive meaningful units?
Option A:	Morphology
Option B:	Phonology
Option C:	Morpheme
Option D:	Shonology

**University of Mumbai**  
**Examination under 2020 under cluster 5 (APSIT)**

Program: BE Information Technology Engineering

Curriculum Scheme: Revised 2016

Examination: Final Year Semester VII

Course Code: ITDLO7035 and Course Name: Soft computing

Time: 1hour

Max. Marks: 50

=====

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

Q1.	Membership function are characterized by which of the following features
Option A:	Intuition, Inference, Rank Ordering
Option B:	Fuzzy Algorithm, Neural network, Genetic Algorithm
Option C:	Core, Support , Boundary
Option D:	Weighted Average, center of Sums, Median
Q2.	Which of the following is not a centroid method?
Option A:	Centre of gravity method (CoG)
Option B:	Centre of sum method (CoS)
Option C:	Centre of area method (CoA)
Option D:	Centre of Mass (CoM)
Q3.	Defuzzification is done to obtain
Option A:	Crisp output
Option B:	Fuzzy output
Option C:	precise fuzzy value
Option D:	The best evaluation rule to follow
Q4.	Fuzzy logic is usually represented as _____
Option A:	IF-THEN-ELSE rules
Option B:	IF-THEN- rules
Option C:	Both IF-THEN-ELSE rules & IF-THEN rules
Option D:	SWITCH rules
Q5.	One difference between Mamdani approach and Takagi-Sugeno approach to FuzzyLogic Controller design is that
Option A:	Mamdani approach needs defuzzification module whereas Takagi-Sugeno approach does not
Option B:	Takagi-Sugeno approach does not require any fuzzification module whereas Mamdani approach needs
Option C:	Takagi-Sugeno approach is more interpretable but less accurate
Option D:	Takagi-Sugeno approach is more accurate

Q6.	Fuzzy Inference Systems is
Option A:	The process of formulating the mapping from a given input to an output using fuzzy logic
Option B:	Changing the output value to match the input value to give it an equal balance
Option C:	Having a larger output than the input
Option D:	Having a smaller output than the input
Q7.	A 4-input neuron has weights 1, 2, 3 and 4. The transfer function is linear with the constant of proportionality being equal to 2. The inputs are 4, 10, 5 and 20 respectively. The output will be
Option A:	238
Option B:	76
Option C:	119
Option D:	123
Q8.	Which of the following is true? (i) On average, neural networks have higher computation rates than conventional computers. (ii) Neural networks learn by example (iii) Neural networks mimic the way the human brain works
Option A:	(i),(ii) ,(iii) are true
Option B:	(ii) and (iii) are true
Option C:	(i),(ii) are true
Option D:	Only (i) is true
Q9.	An Automatic car, with interactive interface is an example of _____.
Option A:	Unsupervised learning
Option B:	Supervised learning
Option C:	Active learning
Option D:	Reinforcement learning
Q10.	What was the name of the first model which can perform weighted sum of inputs?
Option A:	Hopfield model of neuron
Option B:	Marvin Minsky neuron model
Option C:	McCulloch-pitts neuron model
Option D:	none of the mentioned
Q11.	What is ART in neural networks?
Option A:	automatic resonance theory
Option B:	artificial resonance theory
Option C:	adaptive resonance theory
Option D:	none of the mentioned
Q12.	What is the best way to reduce the noise saturation dilemma in ART

Option A:	Shunting network with no interaction
Option B:	Shunting network with low interaction
Option C:	Recurrent on-centre-off-surround network architecture
Option D:	Normal shunting no interaction
Q13.	The noise saturation dilemma in Adaptive Resonance Theory states that
Option A:	Saturation of signals as they are stronger than the operating level so can be treated as noise as well
Option B:	The disturbance caused due to external factor is noise, too much noise causes saturation
Option C:	If the operating levels of neuronal signals are small they can be treated as noise, and as signals work at a certain operating level ,strong signals can saturate the system.
Option D:	If the operating levels of neuronal signals are small and cause lower saturation, where as if signals are very strong they may be treated as noise
Q14.	The degree of similarity required for the patterns to be assigned to the same cluster unit is called_____.
Option A:	Similarity parameter
Option B:	Vigilance parameter
Option C:	Inhibition parameter
Option D:	Activation parameter
Q15.	The following options makes it sensible to use the sigmoid (logistic) function as the activation function in a Back-Propagation network, choose the one that does not
Option A:	As it exists between (0 to 1) ,so probability of anything exists only between the range of 0 and 1, sigmoid is the right choice.
Option B:	The function is differentiable. That means, we can find the slope of the sigmoid curve at any two points.
Option C:	The softmax function is a more generalized logistic activation function which is used for multiclass classification.
Option D:	The softmax function is integral and give precise values
Q16.	Following are the points that highlight that genetic algorithm is different than traditional methods, choose the one that does not
Option A:	GA works with the coding of a parameter set, not the parameter itself
Option B:	GA uses objective function information , not any derivative or other auxiliary information
Option C:	GA uses probabilistic transition rule, not deterministic rule
Option D:	GA searches a single point from a population
Q17.	Ranking is a technique used for
Option A:	deleting undesirable members of the population
Option B:	obtaining the selection probabilities for reproduction
Option C:	copying the fittest member of each population into the mating pool



Option D:	preventing too many similar individuals from surviving to the next
Q18.	_____ is the selection techniques where the proportionate reproduction operator where a string is selected from the mating pool with a probability proportional to the fitness. Then a linear search is done through slots in the wheel weighted in proportion to the individual's fitness values.
Option A:	Roulette Wheel Selection
Option B:	Rank Selection
Option C:	Random Selection
Option D:	Tournament Selection
Q19.	Encoding is the process of representing individual gene. Which of the following is not a type of encoding used in Genetic Algorithm
Option A:	Binary Encoding
Option B:	Hexadecimal Encoding
Option C:	permutation Encoding
Option D:	Trigonal Encoding
Q20.	The asterisk or star *, is a don't care or wild card symbol which matches either a 0 or a 1 at a particular position. For example, consider the length 7 schema H = *11*0**, choose the string that is an example of the above schema H.
Option A:	110
Option B:	0111000
Option C:	011
Option D:	1111110
Q21.	Fuzzy – Genetic Hybrid system is a
Option A:	Fuzzy logic in parallel with the Genetic algorithm
Option B:	Fuzzy logic controlled Genetic algorithm
Option C:	Genetic algorithm controlled Fuzzy logic
Option D:	Fuzzy ANN genetic logic
Q22.	Which of these is a disadvantage of a Neuro Fuzzy Hybrid systems
Option A:	It can handle numeric, linguistic, logic, etc kind of information
Option B:	It can manage imprecise, partial, vague or imperfect information
Option C:	It can resolve conflicts by collaboration and aggregation
Option D:	Neural networks cannot be used if training data is not available
Q23.	Which of these is not true about a Neuro Genetic Hybrid systems
Option A:	GA uses three main types of rules at each step to create the next generation from the current population: Selection ,Crossover and Mutation
Option B:	GA then sends the new child generation to ANN model as new input parameter.
Option C:	ANN model output is predefined
Option D:	Calculation of the fitness by developed ANN model is performed.
Q24.	_____ is developed to use fuzzy logic based techniques for improving

	and modelling Genetic algorithms and vice-versa
Option A:	Fuzzy Genetic Hybrid systems
Option B:	Neuro Fuzzy Hybrid systems
Option C:	Neuro Genetic Hybrid systems
Option D:	Double fuzzy Hybrid Systems
Q25.	What does ANFIS stand for
Option A:	Adaptive-Neuro-based Fuzzy Inference Systems
Option B:	Adaptive-Network-based Fuzzy Information Systems
Option C:	Adaptive-Network-based Fuzzy Inference Systems
Option D:	Adaptive-Neuro-based Fuzzy Information Systems

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Program: BE Information Technology

Curriculum Scheme: Rev2016

Examination: Fourth Year Semester VII

Course Code: ITDLO7031 and Course Name: Storage Area Network

Time: 1 hour

Max. Marks: 50

=====

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

Q1.	Storage type in which all of the disks and devices used to store data are installed in the server itself, rather than in a separate device is known as
Option A:	Network attached
Option B:	Server attached storage
Option C:	Storage Area network
Option D:	Tape Libraries
Q2.	Which switch port is used to connect a N-Port to a switch in a fiber channel topology.
Option A:	E-Port
Option B:	NL-Port
Option C:	G-Port
Option D:	F-Port
Q3.	storage networks which can encompass one or more storage devices, but are perceived by applications and servers as a single source of data are
Option A:	Server Attached Storage
Option B:	Tape Libraries
Option C:	DAS
Option D:	Storage Area Network
Q4.	Which backup makes a copy of all data to a storage device, such as a disk or tape?
Option A:	Full Backup
Option B:	Incremental Backup
Option C:	Thin Provisioning
Option D:	Differential Backup
Q5.	Which process eliminates redundant copies of data and reduces storage overhead.
Option A:	Data Deduplication
Option B:	Deletion
Option C:	Tiered Storage
Option D:	Workload
Q6.	Which of the following technique guarantees consistency of file system even after a system crash is known as
Option A:	Journal
Option B:	Meta Data
Option C:	Snapshot
Option D:	Volume manager

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q7.	In FC structure which layer maps block I/O SCSI commands into FC frames?
Option A:	FC-4
Option B:	FC-1
Option C:	FC-2
Option D:	FC-3
Q8.	Which of the following protocols are not used in NAS
Option A:	SATA
Option B:	NFS
Option C:	CFS
Option D:	SMB
Q9.	Storage which requires a continuous supply of electricity to store/retain data is known as
Option A:	Non-Volatile
Option B:	Volatile
Option C:	Secondary Storage
Option D:	NAS
Q10.	What is the measurement for the consistency of distributed business data within interlinked systems after a disaster incident known as
Option A:	Recovery Consistency Objective
Option B:	Recovery Point Objective (RPO):
Option C:	Recovery Time
Option D:	Business Continuity Planning
Q11.	Which of the following layer in fibre channel protocol stack is responsible for byte encoding
Option A:	FC-2
Option B:	FC-0
Option C:	FC-4
Option D:	FC-1
Q12.	NFS and CIFS are
Option A:	File System
Option B:	Operating System
Option C:	Transport Protocol
Option D:	File Sharing Protocol
Q13.	Which of the following storage technology is a good choice for large unstructured data such as video surveillance and streaming, and post-production storage?
Option A:	NAS
Option B:	DAS
Option C:	FCP
Option D:	iSCSI
Q14.	Which of the RAID Level use Mirroring Technique
Option A:	RAID 0

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option B:	RAID 5
Option C:	RAID 1
Option D:	RAID 6
Q15.	The process of collective measures, processes, tools and technologies that enable the securing of a SAN infrastructure is known as
Option A:	SAN Security
Option B:	DAS Security
Option C:	Data Recovery
Option D:	Risk
Q16.	Which of the computer storage can be connected to one computer and not accessible to other computers?
Option A:	Storage area network
Option B:	NAS
Option C:	Direct Attached Storage
Option D:	Server Attached Storage
Q17.	Which protocol will be used by SAN to provide connectivity between hosts and storage?
Option A:	SATA
Option B:	FC
Option C:	NFS
Option D:	CIFS
Q18.	The method of optimizing the efficiency with which the available space is utilized in storage area networks (SAN) is known as
Option A:	Drive Planning
Option B:	Virtualization
Option C:	Storage Planning
Option D:	Thin Provisioning
Q19.	An NAS solution is most appropriate for which type of data environment
Option A:	Secured Access
Option B:	Shared Access
Option C:	Remote Access
Option D:	Parallel Access
Q20.	The process of pooling of physical storage from multiple storage devices into what appears to be a single storage device is known as?
Option A:	Storage Virtualization
Option B:	Data Redundancy
Option C:	Data Duplication
Option D:	Tiered Storage
Q21.	The term which refers to the tracking mechanisms used to keep a record of events on a system is known as
Option A:	Authorization

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option B:	Authentication
Option C:	Accountability
Option D:	Integrity
Q22.	Applications and end users in NAS use the frozen copy of the file system in order to maintain consistency of file system after crashing. What is this frozen state of file system known as
Option A:	Journal
Option B:	Meta Data
Option C:	Snapshot
Option D:	Volume manager
Q23.	In SAN terminology, which is the hardware that connects PCs and servers to storage devices.
Option A:	SMB
Option B:	AFP
Option C:	NFS
Option D:	Fabric
Q24.	CIFS runs over which of the following protocol
Option A:	TCP/IP
Option B:	SNMP
Option C:	DNS
Option D:	FTP
Q25.	Which of the following fibre channel topology defines th bidirectional connection between two devices
Option A:	Fabric
Option B:	Arbitrated Loop
Option C:	Point to point
Option D:	Clustered NAS

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Program: BE Information Technology

Curriculum Scheme: Rev2016

Examination: Final Year Semester VII

Course Code: ITDLO7032 and Course Name: Mobile Application Development

Time: 1 hour

Max. Marks: 50

=====

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

Q1.	Which is not true about limitations of Mobile or embedded devices?
Option A:	Low processing power
Option B:	Limited RAM
Option C:	Low costs associated with data transfer
Option D:	Limited permanent storage capacity
Q2.	Which of the following is not part of Android architecture?
Option A:	Android document
Option B:	Dalvik VM
Option C:	Libraries
Option D:	Linux kernel
Q3.	Building block of Android Applications is _____
Option A:	Activities
Option B:	Applet
Option C:	Servlet
Option D:	Beans
Q4.	XML files that define a user interface layout. They are saved in res/layout/ and accessed from the _____ class.
Option A:	Layout
Option B:	R.Layout
Option C:	R.layout
Option D:	R.raw
Q5.	Activities are created and destroyed, they move in and out of the Activity stack, As they do so, they transition through possible states . Select the activity states.
Option A:	Start,Active,stop,destroy
Option B:	Active, Paused, Stopped, Inactive
Option C:	Active,inactive
Option D:	Start, paused, stopped
Q6.	_____ resources decouples your presentation layer from the application logic, providing the flexibility to change the presentation without changing code.

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option A:	Layout
Option B:	ContentProvider
Option C:	Intent
Option D:	Fragment
Q7.	A two-state button that can be used as an alternative to a check box.
Option A:	Button
Option B:	Checkbox
Option C:	ToggleButton
Option D:	RadioButton
Q8.	Which component is not activated by an Intent?
Option A:	activity
Option B:	services
Option C:	contentProvider
Option D:	BroadcastReceiver
Q9.	What is the name of the class used by Intent to store additional information?
Option A:	Extra
Option B:	Parcelable
Option C:	Bundle
Option D:	DataStore
Q10.	Which of the following is incorrect about the Toast class?
Option A:	You cannot set a custom layout for a Toast.
Option B:	A Toast can only create by an Activity class
Option C:	There is no need to close or hide a Toast, since it closes automatically.
Option D:	A Toast is displayed for only one of the following periods: Toast.LENGHT_SHORT or Toast.LENGTH_LONG
Q11.	Which of the following a Notification object may not contain?
Option A:	A small icon.
Option B:	A detailed text.
Option C:	A notification sound.
Option D:	A title.
Q12.	When contentProvider would be activated
Option A:	Using Intent
Option B:	Using SQLite
Option C:	Using ContentResolver
Option D:	Using BroadcastReceiver



**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Q13.	What is a broadcast receiver in android?
Option A:	It will react to broadcast announcements.
Option B:	It will react on intents
Option C:	It will pass the data between activities.
Option D:	It manages the activities
Q14.	To write files on the external storage, which permission you will write in AndroidManifest.xml file
Option A:	WRITE_STORAGE
Option B:	WRITE_EXTERNAL_DATA
Option C:	WRITE_EXTERNAL_STORAGE
Option D:	STORAGE
Q15.	Which of the following is not a ContentProvider provided natively by Android?
Option A:	The contacts list
Option B:	The telephone log
Option C:	The bookmarks
Option D:	The application list
Q16.	Which of the following can be used to bind data from an SQL database to a ListView in an Android application?
Option A:	SimpleCursor
Option B:	SimpleCursorAdapter
Option C:	SimpleAdapter
Option D:	SQLiteCursor
Q17.	Which element is used to display Google maps in your UI.
Option A:	View
Option B:	Map
Option C:	MapView
Option D:	Mapping
Q18.	By default, Google Maps displays the map of the United States when it is first loaded. How can you display the particular location?
Option A:	You cannot change the default location.
Option B:	setZoom= true.
Option C:	By using the animateTo() method of the MapController class.
Option D:	setZoom= false
Q19.	If you know the address of a location but want to know its latitude and longitude, then which class is used?

**University of Mumbai**  
**Examination 2020 under cluster 4 (PCE)**

Option A:	Geocoder
Option B:	Location
Option C:	MapViewLocation
Option D:	ViewLocation
Q20.	In which file, permissions are set in Android?
Option A:	Src
Option B:	AndroidManifest.xml
Option C:	Srcbin
Option D:	Bin
Q21.	In Android, visual components are called.
Option A:	Views
Option B:	Components
Option C:	DLL
Option D:	Class
Q22.	SharedPreferences stores the data in which format?
Option A:	TXT
Option B:	XML
Option C:	DOC
Option D:	CLASS
Q23.	If you want to share the data from one application to other applications, which object will you use?
Option A:	SQLiteDatabases
Option B:	InternalStorage
Option C:	SharedPreferences
Option D:	ContentProvider
Q24.	Which one is not a nickname of android OS?
Option A:	Honeycomb
Option B:	CupCake
Option C:	Muffin
Option D:	Cake
Q25.	What does SAFE stand for with reference to Android?
Option A:	Semiconductor Advances for Future Electronics
Option B:	Samsung Approved for Enterprise
Option C:	Secure Address Foundation Extensions
Option D:	Standard Archive Format for Europe

**University of Mumbai**  
**Examination 2020 under cluster**

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:

**University of Mumbai**  
**Examination 2020 under cluster**

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 Secretary
Option D:	Ministry Of Environment
Q10.	EMS technology helps in areas 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

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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 across country
Option A:	National Executive Committee
Option B:	Finance Committee
Option C:	Central Committee
Option D:	Cabinet Committee

# University of Mumbai

## Examination 2020

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 $P(A/\sim B)$ 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

**University of Mumbai**  
**Examination 2020**

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:	$\frac{\text{total number of failure}}{\text{total operation time}}$
Option B:	$\frac{\text{total operation time}}{\text{total number of failure}}$



**University of Mumbai**  
**Examination 2020**

Option C:	$\frac{\text{total operation time}}{\text{total number of components}}$
Option D:	$\frac{\text{total number of components}}{\text{total operation time}}$
Q8.	<p>A component with time to failure T has constant failure rate</p> $z(t) = \lambda = 2.5 \times 10^{-5} [\text{hours}]^{-1}$ <p>Determine the probability that the component survives a period of 2 months without failure.</p>
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

## University of Mumbai

### Examination 2020

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:	$2.78 \times 10^{-6}$ per hour
Option C:	$2.78 \times 10^{-5}$ 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

**University of Mumbai**  
**Examination 2020**

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

**University of Mumbai**  
**Examination 2020**

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)

**University of Mumbai**  
**Examination 2020**

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

**University of Mumbai**  
**Online Examination 2020**

**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**

## Question Paper Set No. 01

Note: Each question is for 2 marks.

		<b>Multiple Choice Questions (MCQ)</b>
		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.	<p>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:</p> <table><tr><th colspan="2" rowspan="2"></th><th colspan="3">Destination</th><th rowspan="2">Supply</th></tr><tr><th>Los Angeles</th><th>New York</th><th>Houston</th></tr><tr><th rowspan="4">Source</th><th>Memphis</th><td><math>\underline{5}</math></td><td><math>\underline{4}</math></td><td><math>\underline{2}</math></td><td>6,000</td></tr><tr><th>Boise</th><td><math>\underline{3}</math></td><td><math>\underline{6}</math></td><td><math>\underline{4}</math></td><td>3,000</td></tr><tr><th>Omaha</th><td><math>\underline{6}</math></td><td><math>\underline{5}</math></td><td><math>\underline{3}</math></td><td>8,000</td></tr><tr><th>Demand</th><td>5,000</td><td>7,500</td><td>4,500</td><td>17,000</td></tr></table> <p>The optimal solution is:</p> <table><tr><th colspan="2" rowspan="2"></th><th colspan="3">Destination</th></tr><tr><th>Los Angeles</th><th>New York</th><th>Houston</th></tr><tr><th rowspan="3">Source</th><th>Memphis</th><td><b>0</b></td><td><b>1500</b></td><td><b>4500</b></td></tr><tr><th>Boise</th><td><b>3000</b></td><td><b>0</b></td><td><b>0</b></td></tr><tr><th>Omaha</th><td><b>2000</b></td><td><b>6000</b></td><td><b>0</b></td></tr></table> <p>The total amount shipped from Boise to Los Angeles is:</p>				Destination			Supply	Los Angeles	New York	Houston	Source	Memphis	$\underline{5}$	$\underline{4}$	$\underline{2}$	6,000	Boise	$\underline{3}$	$\underline{6}$	$\underline{4}$	3,000	Omaha	$\underline{6}$	$\underline{5}$	$\underline{3}$	8,000	Demand	5,000	7,500	4,500	17,000			Destination			Los Angeles	New York	Houston	Source	Memphis	<b>0</b>	<b>1500</b>	<b>4500</b>	Boise	<b>3000</b>	<b>0</b>	<b>0</b>	Omaha	<b>2000</b>	<b>6000</b>	<b>0</b>
		Destination			Supply																																																
		Los Angeles	New York	Houston																																																	
Source	Memphis	$\underline{5}$	$\underline{4}$	$\underline{2}$	6,000																																																
	Boise	$\underline{3}$	$\underline{6}$	$\underline{4}$	3,000																																																
	Omaha	$\underline{6}$	$\underline{5}$	$\underline{3}$	8,000																																																
	Demand	5,000	7,500	4,500	17,000																																																
		Destination																																																			
		Los Angeles	New York	Houston																																																	
Source	Memphis	<b>0</b>	<b>1500</b>	<b>4500</b>																																																	
	Boise	<b>3000</b>	<b>0</b>	<b>0</b>																																																	
	Omaha	<b>2000</b>	<b>6000</b>	<b>0</b>																																																	
	a)	3																																																			
	b)	6																																																			
	c)	3,000																																																			
	d)	5,000																																																			

-----XX-----XX-----XX-----

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

Option D:	To stabilize the gas discharge
Q14.	Find the <b>odd</b> 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 $P_i$ 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

**University of Mumbai**  
**Examination 2020 under cluster**

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 dew point

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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



**University of Mumbai**  
**Examination 2020 under cluster**

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----- ____ .

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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

**University of Mumbai**  
**Examination 2020 under cluster**

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