Department: Revision: Semester: Subject: Date of Examination:

Option 1 Option 2 Option 3 Option 4 Q. 2 Option 1 Option 2 Option 3 Option 4

Q. 1

Q. 3 Option 1 Option 2 Option 3 Option 4

Q. 4 Option 1 Option 2 Option 3 Option 4 Q. 5 Option 1 Option 2 Option 3 Option 4

Q. 6 Option 1 Option 2 Option 3 Option 4

Q. 7 Option 1 Option 2 Option 3 Option 4

Q. 8

Option 1 Option 2 Option 3 Option 4

Q. 9

Option 1 Option 2

Option 3

Option 4

Q. 10 Option 1

Option 2 Option 3 Option 4

Q. 11 Option 1 Option 2 Option 3 Option 4

Q. 12 Option 1 Option 2 Option 3 Option 4 Q. 13 Option 1

Option 1 Option 2 Option 3

Option 4 Q. 14 Option 1 Option 2 Option 3 Option 4 Q. 15 Option 1 Option 2 Option 3 Option 4 Q. 16 Option 1 Option 2 Option 3 Option 4 Q. 17 Option 1 Option 2 Option 3 Option 4 Q. 18 Option 1 Option 2 Option 3 Option 4 Q 19 Option 1 Option 2 Option 3 Option 4 Q 20 Option 1 Option 2

Option 3

Option 4

Q 21 Option 1 Option 2 Option 3 Option 4

Q 22

Option 1 Option 2 Option 3

Option 4

Q 23

Option 1

Option 2 Option 3

Option 4

Q 24

Option 1 Option 2

Option 3

Option 4

Q 25

Option 1 Option 2 Option 3

Option 4

Online Examination, University of Mumbai

Computer		
R2016		
8		
Human Machine Interaction (CSC801) 2020-10-08		
2020-10-08		
The design of the HMI systems is generally influenced by :	Μ	
Physical look of the system		0
The time taken by the user to learn the system		0
Psychology of the user	CORRECT OPTIC	
Speed of the system		0
When you engaged in a conversation you are more attentive what the other person is		
saying. It is called?	Μ	
Voluntary Attention		0
Involuntary attention		0
Focused Attention	CORRECT OPTIC	_
Divided Attention		0
are unintentional while occur through conscious		
deliberation.	Μ	
Mistakes, slips		0
Slips, mistakes	CORRECT OPTIC	DN
Mistakes, errors		0
Errors, slips		0
Which one of the following is the third generation of user interface designing?	Ν.4	
	Μ	0
Machines that displayed output Intelligent Machines		0
Machines that provided output with feedback	CORRECT OPTIC	
Machines with computing power		0
You can load a VCR tape the right way because of	Μ	
Design constraints		0
Logical constraints		0
Cultural constraints		0
Physical constraints	CORRECT OPTIC	DN
'Ergonomics' is related to human	М	
Flexibility		0
Comfort & Safety	CORRECT OPTIC	-
Safety		0
Comfort		0

Which of the following is not true?	М
Usability is concerned with adding complexity to the system	CORRECT OPTION
Utility refers to the functionality of a system	0
Usability is concerned with making systems easy to use	0
Poorly designed computer system can be extremely annoying to users	0
,has to be kept short, straightforward and asked less while developing	М
Videos Contextual enquiru	0
Contextual enquiry	0 CORRECT OPTION
Interview questions Documentation	
Documentation	0
The gulf of execution refers to	Μ
The system's difficulty in presenting information in the output language	0
The user's difficulty in understanding the feedback from the system	0
	-
The user's difficulty in formulating and articulating an intention to the system	0
The system's difficulty in converting an input expression into the correct system state	
transition	CORRECT OPTION
The heuristic principle that expresses to always keep the user informed about what is	
going on through appropriate feedback within reasonable is	Μ
Consistency and standard	0
Help and documentation	0
Error prevention	0
Visibility of system status	CORRECT OPTION
While evaluating a website by conforming to the principles of user-interface	
elements, dialog boxes, menus, navigation structure, the web designer applies the	
technique of	М
Telephonic	0
Heuristic Focus group	0 CORRECT OPTION
Walkthroughs	CORRECT OPTION 0
Walktinoughs	0
is in the method needed to apply the criteria:	
Data can be collected in database for analysis	
2. Present result clearly	
3. Responses are usually received quickly	М
Interview	0
Questionnaire	CORRECT OPTION
Observation	0
Research	0
objects hold other objects.	Μ
Frame	0
Container	CORRECT OPTION
Docker	0

Document

The motor activity required by a person to identify an element is referred to as	
and the signal to perform an action as	Μ
Click,tick	0
Click, pick	0
Pick, click	CORRECT OPTION
Select, tick	0
interface tries to interact with people the same way people interact with each	
other.	Μ
Menu Indirect manipulation	0
Indirect manipulation	0 CORRECT OPTION
Anthropomorphic Form fill	
	0
The method by which the user and a computer system communicate with one another	
is called as	Μ
Direct Manipulation	0
Interaction Styles	CORRECT OPTION
Printed Pages	0
Indirect manipulation	0
A GUI designer must have between different user requirements.	М
Visibility and simplicity	0
Speed and Cost	0
Clarity and trade-offs	CORRECT OPTION
Time and cost	0
Objects can be composed of-	М
Actions	0
Identifiers	0
Sub-objects	CORRECT OPTION
Modifiers	0
Arrange elements to guide the eye in an obvious, logical, rhythmic, and efficient	
manner is Principal of UI design	M
Unity	0
Economy	0
Proportion	
Sequntiality	CORRECT OPTION
Which will be appropriate statistical graphics used show relationships among individual	
data points in a	
two-dimensional array	Μ
Bar graph	0
Flowchart	0
Pie chart	0
Scatterplots	CORRECT OPTION

Eye movements between items will be Very Long Longer Shorter Average	M 0 CORRECT OPTION 0
Overall is a measure of the percentage of character positions on the entire screen containing data Design Symmetry Balance Density	M 0 0 CORRECT OPTION
Screen navigation and flow encourages natural movement sequences. Encourage unnatural movement sequences Discourage natural movement sequences Discourage unnatural movement sequences	M CORRECT OPTION 0 0 0
In estimating proportion, if a scale is not included on the graph, andwere found to be best. Pie charts, Segmented bars Segmented bars, bar graph Pie charts, Line graph Line graph, segmented bars	M CORRECT OPTION 0 0 0
To represent proper information on screen, screen or window density levels can not be more than 33 percent 30 percent 50 percent	M O CORRECT OPTION 0

40 percent

0

Examination 2020 under cluster ___ (Lead College: _____

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: ____

Curriculum Scheme: Rev2019/2016/2012 (Keep the required) Examination: BE Semester VIII (Keep the Required)

Course Code: ILO8028 and Course Name: DBM

Time: 2 hour

Max. Marks: 80

NOTE to the Question Paper Setter: (Following information has to be deleted before submitting the paper to Semester Coordinator)

Please save this file with file name as per the sample format given below:

File Name: Date of Examination_Scheme_Program_Semester_Subject Code_Answer Key Set Number For example:

Answer Key for QP set number 1 of Engineering Mathematics-I of First Year Semester I for Rev2019 scheme and scheduled on 7/01/2021 has to have the file name as

0701_R19_FE_I_FEC101_AK1

Answer Key for QP set number 1 of first core course of Mechanical Engineering Semester V for Rev2016 scheme and scheduled on 23/12/2020 has to have the file name as

2312_R16_Mech_V_MEC501_AK1

Answer Key for QP set number 3 of Department Level Optional Course of Computer Engineering Semester VI for Rev2012 scheme and scheduled on 3/01/2021 has to have the file name as

0301_R12_Comp_VI_CSDLO6021_AK3

Question Number	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	А
Q2.	С
Q3.	С
Q4	А
Q5	С
Q6	С
Q7	С
Q8.	А
Q9.	В
Q10.	D
Q11.	А
Q12.	В

Q13.	D
Q14.	D
Q15.	D
Q16.	С
Q17.	А
Q18.	В
Q19.	В
Q20.	В

Examination 2020 under cluster ____ (Lead College: _____

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: _____ Curriculum Scheme: Rev2019/2016/2012 (Keep the required) Examination: BE Semester VIII (Keep the Required) Course Code: ILO8028 and Course Name: DBM

Time: 2 hour

Max. Marks: 80

NOTE to the Question Paper Setter: (To be deleted before submitting the paper to Semester Coordinator)

- The question paper will be of total 80 Marks and Two hours duration. Out of which 40 marks will be of 20 MCQs carrying two marks each covering all the modules of the syllabus. Remaining two questions carrying 20 marks each (Total 40 marks) will be of subjective/descriptive in nature of 5 or 10 marks as per the requirement of the subject/course and covering all the modules of the syllabus.
- 2. Referring to setting up MCQs
 - a. 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.
 - b. Among 20 MCQs (based on complete syllabus), 8 questions can be under the 'Simple' category, 6 questions can be under the 'Moderate' category, and the remaining 6 questions can be under the 'Difficult' category.
 - c. Please do not reveal answer on this Question Paper.
 - d. Use another template provided to enter the correct answers.
- 3. Referring to setting up subjective/descriptive questions
 - a. Internal options should be provided in the subjective questions i.e. in case of 5 marks question 3 or 6 questions to be asked, out of which students will solve any two or four respectively. In case of 10 marks questions, 2 or 3 questions to be asked out of which students will solve any one or two respectively.
 - b. The sub questions in Q2 and Q3 have to be set on multiple modules. The paper setter has to make sure that the maximum syllabus is covered while setting up the questions for Q2 and Q3.
 - c. Weightage of the questions has to be decided as per the requirement of the subject. 10 marks questions will only be asked on design orientated subjects or application orientated subjects.
 - *d.* Paper setters shall select any one option, while setting up the questions, suggested in the template for Q2 and Q3
- 4. 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 Engineering Mathematics-I of First Year Semester I for Rev2019 scheme and scheduled on 7/01/2021 has to have the file name as

0701_R19_FE_I_FEC101_QP1

QP set number 1 of first core course of Mechanical Engineering Semester V for Rev2016 scheme and scheduled on 23/12/2020 has to have the file name as

2312_R16_Mech_V_MEC501_QP1

QP set number 3 of Department Level Optional Course of Computer Engineering Semester VI for Rev2012 scheme and scheduled on 3/01/2021 has to have the file name as

0301_R12_Comp_VI_CSDLO6021_QP3

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	In Network Security CIA stands for:
Option A:	Confidentiality, Integrity and Availability
Option B:	Central Investigation Agency
Option C:	Confidentiality, Intelligence and Accountability
Option D:	Cryptographic Intelligent Algorithm
2.	Which one of the following is not a higher –layer SSL protocol?
Option A:	Alert Protocol
Option B:	Handshake Protocol
Option D:	Alarm Protocol
Option D:	Change Cipher Spec Protocol
Option D.	
3.	A packet filter firewall filters at
Option A:	Physical layer
Option B:	Data link layer
Option C:	Network layer or Transport layer
Option D:	Application layer
4.	Mission statement and vision is the next of which Strategic Drosses
4. Option A:	Mission statement and vision is the part of which Strategic Process.
Option A: Option B:	Formulation of Strategy Implementation of Strategy
Option C:	Evaluation of Strategy
Option D:	Internal Analysis Strengths weakness
Option D.	
5.	Which of the following is the first step in strategic planning?
Option A:	set objectives and goals
Option B:	develop the business portfolio
Option C:	define the company mission
Option D:	plan marketing strategies
6.	To fulfill the need of customer , the ability to change the product is called as
Option A:	Accessibility
Option B:	Personalization
Option C:	Customization
Option D:	Dependability
7.	Competitive driver of e-business is
Option A:	Reduced sales costs
Option B:	Reduced service costs
Option C:	Avoiding losing market share to business
Option D:	To obtain supplies more rapidly
8.	The most realistic relationship between e-business and e-commerce is
Option A:	E-commerce is subset of e-business
Option B:	E-commerce is nothing but e-business
Option C:	E-business is subset of e-commerce
Option D:	No relationship exists between e-commerce and e-business

9.	Which of following parameter is not associated with e-commerce security	
	environment?	
Option A:	Confidentiality	
Option B:	Availability	
Option C:	Message Integrity	
Option D:	Non repudiation	
option D.		
10.	What is at the heart of any ERP system?	
Option A:	Information	
Option B:	Employees	
Option C:	Customers	
Option D:	Database	
11.	Web ERP is suitable for	
Option A:	Both small and big organizations	
Option B:	Only big organizations	
Option C:	Medium scale organizations	
Option D:	Only small organizations	
12.	maintains reports of warehouse supplies.	
Option A:	ERP financial module	
Option B:	ERP Inventory software module	
Option C:	ERP Resource module	
Option D:	ERP verification module	
13.	Which type deals with auction?	
Option A:	B2B	
Option B:	B2C	
Option C:	C2B	
Option D:	C2C	
14.	Amazon belongs to	
Option A:	B2B	
Option B:	C2B	
Option C:	C2C	
Option D:	B2C	
15.	What is the percentage of customers who visit a Web site and actually buy	
	something called?	
Option A:	Affiliate programs	
Option B:	Click- through	
Option C:	Spam	
Option D:	Conversion rate	
16.	Data in bytes size is called Big Data.	
Option A:	Tera	
Option B:	Giga	
Option C:	Peta	
Option D:	Meta	

17.	The Android software is based on Java and runs in a?
Option A:	Dalvik virtual machine
Option B:	Quadrangle virtual machine
Option C:	Qualcomm virtual machine
Option D:	Snapdragon virtual machine
18.	What is NOT a benefit of BYOD?
Option A:	Reduced costs.
Option B:	Viruses and security issues.
Option C:	Familiarity.
Option D:	Ownership.
19.	What does VNC stand for:
Option A:	Various Network computers
Option B:	Virtual Network Computing
Option C:	Virtual Network Communication
Option D:	Various Network Communication
20.	IPSec provides security at:
Option A:	Physical Layer
Option B:	Network Layer
Option C:	Transport Layer
Option D:	Session Layer

Q2		
(20 Marks Each)		
А	Solve any Two 5 marks ea	ach
i.	Difference between Physical economy and Digital economy	
ii.	Explain Digital Signature	
iii.	Types of E-Commerce	
В	Solve any One 10 marks ea	ach
i.	Explain ERP	
ii.	Explain Analysis of Company's Internal and External environment	

Q3.		
(20 Marks Each)		
A	Solve any Two	5 marks each
i.	Write short note on Market research and Advertisement	
ii.	Write short note on Firewall	
iii.	Explain process of Digital Transformation	
В	Solve any One	10 marks each
i.	Explain IOT	
ii.	Explain Business Plan Preparation	

Examination 2020 under cluster 08 (Lead College: PHCET)

Examinations Commencing from 23rd December 2020 to 6th January 2021

Program: **B.E. All Branches**

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ILOC 8026 and Course Name: Research Methodology

Time: 2 hours

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Т

Max. Marks: 80

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

Examination 2020 under cluster 08 (Lead College: PHCET)

Examinations Commencing from 23rd December 2020 to 6th January 2021

Program: **B.E. All Branches**

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ILOC 8026 and Course Name: Research Methodology

Time: 2 hours

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks	
1.	are statements/assumptions made -about the likely outcomes of the problem-	
	which may or may not be true.	
Option A:	Hypotheses	
Option B:	Analytical models	
Option C:	Research questions	
Option D:	Marketing research problems	
2.	Characteristic of research is	
Option A:	Empirical	
Option B:	Hypothetical	
Option C:	Theoretical	
Option D:	Unethical	
3.	Attributes of objects, events or things which can be measured are called	
Option A:	Qualitative measure	
Option B:	Data	
Option C:	Variables	
Option D:	Invariables	
4.	Inductive logic proceeds from	
Option A:	General to General	
Option B:	Specific to General	
Option C:	General to Specific	
Option D:	Specific to Specific	
5.	This is not the purpose of review of researches done in related fields of study	
Option A:	to know what knowledge already exists	
Option B:	to know gaps in knowledge that exists	
Option C:	to avoid the replication of knowledge that exists	
Option D:	to list the studies in their own research work	
6.	A company wants to know what are the problems are faced by employees in the	
	night shift duties. The company is intending to undertake	
Option A:	Pure research	
Option B:	Applied research	
Option C:	Basic research	

Ortion Di	Coursel assessment
Option D:	Causal research
7	The process not needed in experimental researches is
7.	The process not needed in experimental researches is Reference collection
Option A:	
Option B:	Controlling Observation
Option C:	Manipulation and replication
Option D:	
8.	Fundamental Research is otherwise called
Option A:	Action Research
Option B:	Survey
Option C:	Pilot study
Option D:	Pure Research
9.	Which of the following tasks is not a part of research design?
Option A:	Design the exploratory, descriptive, and/or causal phases of the research.
Option B:	Construct and pretest a study instrument.
Option C:	Formulate the sampling plan
Option D:	Develop hypotheses
-	
10.	Research design is a blue print, outline and
Option A:	Plan
Option B:	System
Option C:	Strategy
Option D:	Guide
11.	Which technique is generally followed when the population is finite?
Option A:	Area sampling technique
Option B:	Purposive sampling technique
Option C:	Systematic sampling technique
Option D:	Random sampling technique
12.	In an experiment, the group that does not receive the intervention is called
Option A:	The experimental group
Option B:	The participant group
Option C:	The control group
Option D:	The treatment group
13.	Questionnaire is a
Option A:	Research method
Option B:	Measurement technique
Option D:	Tool for data collection
Option D:	Data analysis technique
option D.	
14.	A Type 1 error occurs in a situation where:
Option A:	The null hypothesis is accepted when it is in fact true
Option B:	The null hypothesis is rejected when it is in fact false
Option C:	The null hypothesis is rejected when it is in fact true
Option D:	The null hypothesis is accepted when it is in fact false
-	

15.	Which of the following is not a data-collection method?
Option A:	Research questions
Option B:	Unstructured interviewing
Option C:	Postal survey questionnaires
Option D:	Participant observation
16.	When a hypothesis is stated negatively it is called
Option A:	Relational Hypothesis
Option B:	Situational Hypothesis
Option C:	Null Hypothesis
Option D:	Casual Hypothesis
17.	Which of the following statement is wrong regarding inductive generalizations?
Option A:	They are based on observed facts and realistic foundation
Option B:	is scientific in character and some of the important theorems of the physical and
	social sciences have been developed through this method
Option C:	It is helpful in finding out the material truth
Option D:	It is easy, cost effective and time saving method
18.	Developing a researchable question would not involve
Option A:	Considering the time and resources available to you
Option B:	Bearing in mind your technical expertise in the area of research
Option C:	Deciding what statistical software to use
Option D:	Assessing the work involved
19.	Llassonah athias do not include
	Research ethics do not include
Option A:	Integrity
Option A: Option B:	Integrity Honesty
Option A: Option B: Option C:	Integrity Honesty Subjectivity
Option A: Option B:	Integrity Honesty
Option A: Option B: Option C: Option D:	Integrity Honesty Subjectivity Objectivity
Option A: Option B: Option C: Option D: 20.	Integrity Honesty Subjectivity Objectivity Failure to acknowledge the borrowed material is called
Option A: Option B: Option C: Option D: 20. Option A:	Integrity Honesty Subjectivity Objectivity Failure to acknowledge the borrowed material is called Acknowledgement
Option A: Option B: Option C: Option D: 20. Option A: Option B:	Integrity Honesty Subjectivity Objectivity Failure to acknowledge the borrowed material is called Acknowledgement Index
Option A: Option B: Option C: Option D: 20. Option A:	Integrity Honesty Subjectivity Objectivity Failure to acknowledge the borrowed material is called Acknowledgement

Q2.	Solve any Four out of Six5 man	rks each
А	What are the problems faced by Researcher	
В	Give the Characteristics of Research Explain in detail	
С	Explain Qualitative & Quantitative Research	
D	What is a Research Design? Explain its Necessity	
E What are the Characteristics of good hypothesis ? Explain type I & type errors		& type II
F	What are the differences between observation and interviewing as of data collection?	methods

Q3.	Solve any Four out of Six5 marks each	
А	Define Hypothesis with example	
В	Explain Ex post facto Research with example	
С	What do you mean by Sampling ? What are the types of Sampling	
D	Enumerate the different methods of collecting data giving one example each	
Е	State the sources of research problem. How a problem is identified? Enumerate the criteria for the selection of a problem	
F	"Ethics in research is the need of the hour" Justify the statement	

Examination 2020 under cluster __ (Lead College: APSIT)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: ALL

Curriculum Scheme: Rev2016 Examination: FE/SE/TE/BE Semester VIII Course Code: ILO8024 and Course Name: HUMAN RESOURCE MANAGEMENT

Time: 2 hour

Max. Marks: 80

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

Examination 2020 under cluster (Lead College: APSIT)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: ALL

Curriculum Scheme: Rev2016

Examination: FE/SE/TE/BE Semester VIII

Course Code: ILO8024 and Course Name: HUMAN RESOURCE MANAGEMENT

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks. 2 marks each (40 Marks)
1.	Human resource management excludes
Option A:	Motivation
Option B:	Selling
Option C:	Rewards and compensation
Option D:	Recruitment
2.	Human resource Planning is choosing the
Option A:	Right product
Option B:	Right person
Option C:	Right producers
Option D:	Right human behaviour
3.	Maslow's theory of human needs include
Option A:	Responsibility
Option B:	Self-actualization
Option C:	Self-management
Option D:	Empowerment
•	•
4.	represent basic convictions that "a specific mode of conduct or end state
	of existence is personally or socially preferable to an opposite or converse mode of
	conduct or end-state of existence."
Option A:	Values
Option B:	Attitude
Option C:	Motivation
Option D:	Ethics
5.	is a process by which we organize and interpret sensory impressions
	in order to give meaning to our environment
Option A:	Decision making
Option B:	Negotiation
Option C:	Perception
Option D:	Conflict negotiation
6.	Which one of the below mentioned functions is the part of the organizational level?
Option A:	Organisational Culture
Option B:	Group Structure
Option C:	Team

Option D:	Group Norms	
Option D.	Gloup Nothis	
7.	A leader should be able to	
Option A:	Take selfish decisions	
Option B:		
Option C:	Explain organisational goals Sack the employees	
Option D:	Fire the employees	
Option D.		
8.	Group rules are for of the members.	
Option A:	Harassment	
Option B:	Behaviour	
Option C:	Punishment	
Option D:	Sacking	
9.	What is the first step in the appraisal process?	
Option A:	Giving feedback	
Option B:	Defining the job	
Option C:	Administering the appraisal tool	
Option D:	Making plans to provide training	
-		
10.	Power that is based on fear called as	
Option A:	Reward Power	
Option B:	Information Power	
Option C:	Coercive Power	
Option D:	Legitimate Power	
11.	Human Resource Planning is done based on	
Option A:	Market Condition	
Option B:	Financial Condition	
Option C:	Organisational Plan	
Option D:	External Environment	
12.	Which is the least expensive method for recruitments?	
Option A:	Walk - ins, write - ins and talk - ins	
Option B:	Campus placements	
Option C:	Employment exchanges	
Option D:	Consultants	
12	Development is not related to	
13.	Development is not related to Technical aspects	
Option A:	*	
Option B: Option C:	Conceptual Human skills	
Option D:	Termination	
Option D.		
14.	Which one from the following options is challenge in diversity at workplace?	
Option A:	Increase in Productivity	
Option B:	High Performance team building	
Option D:	Conflicts	
Option D:	Increase in Pay	
-ruon D,		
L	1	

15.	Which of this is a step in training process	
Option A:	Use of evaluation models	
Option B:	Obstacles in the system	
Option C:	KSA deficiency	
Option D:	Provide proper feedback	
16.	Which among the following will not be included in Business Process Reengineering?	
Option A:	To set the vision & business goals	
Option B:	To dissuade employees from using technology	
Option C:	Establish a competent team	
Option D:	Redesign the process	
17.	Which one is generation Z?	
Option A:	Born Between 2001-2020	
Option B:	Born Between 1965-1981	
Option C:	Born Between 1941-1964	
Option D:	Born Between 1982-2000	
18.	Which conflict occurs within an individual?	
Option A:	Interpersonal	
Option B:	Intra-personal	
Option C:	Intra-Group	
Option D:	Inter Group	
19.	As per the factories Act "CHILD" means a person who has not completed	
	years of age	
Option A:	15	
Option B:	16	
Option C:	17	
Option D:	18	
2.2		
20.	Shops and Establishment Act applies to all	
Option A:	Cultivate Shops, Restaurants, Hotels, Theatres, Amusement parks etc.	
Option B:	Only Shops	
Option C:	Only Hotels	
Option D:	Only Theatres	

Q. 2 Solve any Two Questions out of Three

10 marks each (20 Marks)

- A) Explain the appraisal process and the methods of appraisal (10)
- B) Explain the recruitment process and the external sources of recruitment in detail. (10)
- C) Explain evolution and functions of HRM (10)

Q. 3 Solve any Two out of Three

A) Explain organizational behavior and its determinants. (10)

B) Define the term 'training and development'. Explain the importance and various inputs required for a training and development program. (10)

10 marks each (20 Marks)

C)

i) Write short note on TQM. (5)ii) Define Ethics and explain characteristics of ethics (5)

Examination 2020 under cluster ___ (Lead College: _____)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: ALL

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ILO8027 and Course Name: IPR and Patenting

Time: 2-hour

Max. Marks: 80

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

University of Mumbai Examination 2020 under cluster __ (Lead College: _____) Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021 to 20th January 2021 Program: ALL Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ILO8027 and Course Name: IPR and Patenting

Time: 2-hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	A is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
Option A:	Logo
Option B:	Geographical Indication (GI)
Option C:	Trademark
Option D:	Patents & Copyrights
2.	A company wishes to ensure that no one else can use their logo should file rights for a
Option A:	Patents
Option B:	Copyrights
Option C:	Trade mark
Option D:	Industrial design
3.	A vocalist who wishes to assign the rights to reproduce a video he has made of his concert should go for filing a
Option A:	Patents
Option B:	Copyrights
Option C:	Trade mark
Option D:	Industrial design
4.	Aextinguishes all rights of the IP holder.
Option A:	Grant
Option B:	Sale
Option C:	Deal
Option D:	Infringement
5.	The industrial design is protected foryears
Option A:	15
Option B:	10
Option C:	5
Option D:	20

6.	Patent right is not
Option A:	Limited period right
Option B:	Territorial right
Option C:	Absolute right
Option D:	Natural right
7.	PCT stands for
Option A:	Patent Certification Treaty
Option B:	Patent Cooperation Trade
Option C:	Patent Cooperation Treaty
Option D:	Patent Copyright Treaty
8.	E-commerce thing that needs to be considered with respect to IP is
Option A:	traditional knowledge
Option B:	Media
Option C:	Logo
Option D:	Photos
9.	TKRC is
Option A:	Traditional Knowledge Resource Classification
Option B:	Total Knowledge Resource Classification
Option C:	Traditional Knowledge Resource Contents
Option D:	True Knowledge Resource Contents
10.	W/hat is included in high signl manuface?
	What is included in biological resources? Animals
Option A:	
Option B:	human genetic material
Option C:	softwares with Genetic algorithms
Option D:	Designs
11.	What protects the intellectual property created by inventors?
Option A:	Copyright
Option B:	geographical indications
Option C:	Patents
Option D:	registered designs
option 21	
12.	Is a patent granted in India valid in any other country?
Option A:	Yes
Option B:	only in signatory countries to TRIPS
Option C:	No
Option D:	only to neighboring countries
13.	Which of the following is not patentable according to Indian Patent Act 1970?

Option A:	Pin	
Option B:	Chair	
Option C:	washing machine	
Option D:	a new method of horticulture	
1		
14.	Where is the Japan Patent Office located?	
Option A:	Tokyo	
Option B:	Kyoto	
Option C:	Osaka	
Option D:	Nara	
15.	means a person who in law represents the estate of a deceased person;	
Option A:	Person	
Option B:	Patentee	
Option C:	legal representative	
Option D:	person interested	
16.	means an application for patent made in accordance with the Patent	
	Cooperation Treaty.	
Option A:	patent of addition	
Option B:	Patent	
Option C:	international application	
Option D:	new invention	
17.	means trespass on an intellectual property.	
Option A:	Enforcement	
Option B:	Licensing	
Option C:	Infringement	
Option D:	Assignment	
- F · · · ·		
18.	IPC in patenting means	
Option A:	Indian Patent Classification	
Option B:	International Panel Code	
Option C:	International Patent Classification	
Option D:	International Postal Code	
19.	In compulsory license, the right of the licensee is	
Option A:	Exclusive license	
Option B:	Non-exclusive	
Option C:	Assignable	
Option D:	non-assignable	
20.	The Indian Patent Act was established in	
Option A:	1790	

Option B:	1947
Option C:	1970
Option D:	2020

Q2.	Solve any Four out of Six 5 marks each
А	Describe different types of Intellectual Property.
В	What are the impacts of IP Rights?
С	Enumerate the procedure to register the copyright.
D	Explain Paris Convention Treaty.
E	What are challenges to Intellectual Property in Traditional Knowledge?
F	Explain in brief about Intellectual Property and Digital Economy.

Q3.	Solve any Four out of Six5 mar	ks each
А	Explain the contents of complete specification for patent application	on.
В	Discuss the major steps involved to register a patent.	
С	Write a short note on rights and liabilities of patentees.	
D	Write a short note on US Scenario of Patent Rules	
Е	List and explain types of claims.	
F	Describe non-patentable inventions with example.	

ANSWER KEY

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

Program: BE (ALL BRANCHES) Curriculum Scheme: Rev2020 Examination: BESemesterVIII Course Code:ILOC8021and Course Name: Project Management

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Which of the following is the most important element of Project Management
	Plan that is useful in Planning process:
Option A:	Risk Management activities
Option B:	Quality Assurance activities
Option C:	Activity Resource requirements
Option D:	Budget Control activities
2.	CPM is an acronym for
Option A:	Control Path Method
Option B:	Critical Path Method
Option C:	Cohesion Path Method
Option D:	Control Path Model
3.	A Project with a total funding of \$100,000 finished with a BAC value of \$95,000.
	What term can BEST describe the difference of \$5,000?
Option A:	Cost Variance
Option B:	Management Overhead
Option C:	Management Contingency Reserve
Option D:	Schedule Variance
4.	Activity Definition is typically performed by which of the following:
Option A:	Project Manager who created the WBS
Option B:	Project Team Members responsible for the work package
Option D:	Project Officer
Option D:	Project Stakeholder
option D.	
5.	Expected risks in a project is represented in a tabular form by
Option A:	Risk Table
Option B:	Assessment Table
Option C:	Time Table
Option D:	Round Table
6.	A project has a 60% chance of a \$100,000 profit and a 40 percent of a \$100,000 loss. The Expected Monetary Value for the project is:
Option A:	\$100,000 profit
Option B:	\$60,000 loss
Option D:	\$ 20,000 profit
Option D:	\$40,000 loss
Option D.	

7.	The time taken to break even or pay back the initial investment is called as
Option A:	Back period.
Option B:	Payback period.
Option C:	Cash back period.
Option D:	Rate of Return.
- 1	
8.	The expenditure and income taken place in a project is indicated by
Option A:	Cash flow forecast.
Option B:	Cost analysis.
Option C:	Fund flow.
Option D:	Technical forecast.
9.	The method which is carried out to calculate the earliest dates on which each
	activity may be started and completed is
Option A:	Backward pass
Option B:	Forward pass
Option C:	No pass.
Option D:	Increasing pass.
10.	The shortest time in which we could expect to complete the activity, barring outright miracles is called as
Option A:	Optimistic Time
Option B:	Pessimistic Time
Option C:	Most Likely Time
Option D:	Shortest Time
-	
11.	Which of these is not one of the constraints of a project?
Option A:	Scope
Option B:	Team
Option C:	Resources
Option D:	Budget
12.	Which is not one of the stages of Project Management Lifecycle?
Option A:	Definition and Conceptualization
Option B:	Management and Measurement
Option C:	Planning and Budgeting
Option D:	Execution and Control
13.	Activities A, B, and C are the immediate predecessors for Y activity. If the
	earliest finish times for the three activities are 12, 15, and 10, then the earliest
	start time for Y will be
Option A:	10
Option B:	15
Option C:	12
Option D:	100
14.	The critical path is referred to as the
Option A:	Most direct path from the beginning node to the ending node

Option B:	Shortest path in terms of time	
Option D:	Longest path in terms of time	
Option D:	Path with the largest amount of slack time	
Option D.		
15.	A schedule activity may begin 10 days before the predecessor activity finishes.	
15.	This is an example of:	
Option A:	Finish-to-Start	
Option B:	Start-to-Finish	
Option D:	Start-to-Start	
Option D:	Finish-to-Finish	
Option D.		
16.	Resource requirement in project becomes constant while the project is in its what progress stage	
Option A:	40 to 55%	
Option B:	55 to 70%	
Option C:	70 to 80%	
Option D:	80 to 95%	
17.	What limits the options of the project team?	
Option A:	Constraints	
Option B:	Assumptions	
Option C:	Technology	
Option D:	Deliverables	
18.	The difference between the cumulative earned value of the work performed and	
Ontion A:	the cumulative actual cost is known as Cost performance index	
Option A: Option B:	Cost variance	
Option C:	Budgeted costs	
Option D:	Cost quality index	
Option D.		
19.	Which of the following does NOT generate changes to the Project documents:	
Option A:	Define Activities	
Option B:	Sequence Activities	
Option D:	Estimate Activity Resources	
Option D:	Estimate Activity Durations	
option D.		
20.	If the Earned Value is equal to Actual Cost, it means	
Option A:	Project is on budget and on schedule	
Option B:	Schedule variance index is 1	
Option D:	There is no schedule variance	
Option D:	There is no cost variance	
Option D.		

Q2	Solve	e any Two Questions out of three.	5 marks each
А	I.	Compare AOA and AON	
	II.	Compare internal risk and external risk.	
	III.	State the limitations of Gantt chart	
В	Solve	e any One	10 marks each
	I.	What is Work breakdown structure. Draw an	nd explain the WBS for hospital
		management system.	
	II.	What is project crashing. Explain with the h	elp of suitable example.

Q3	Solve any Two Questions out of Three 5 marks each
А	I. List and explain the phases of project life
	II. Why leveling of resources is preferred to large fluctuations, justify ?
	III. List the steps involved in terminating a project.
В	Solve any One 10 marks each
В	Solve any One10 marks eachI.Explain the terms qualitative risk and quantative risk. List and explain the
В	
В	I. Explain the terms qualitative risk and quantative risk. List and explain the

Examination 2020 under cluster ____ (Lead College: ______)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: All

Curriculum Scheme: Rev2016

Examination: BE Course Code: ILO8022 Time: 2 hour Semester VIII Course Name: Finance management Max. Marks: 80

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

University of Mumbai Examination 2020 under cluster __ (Lead College: ____) Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021 to 20th January 2021

Program: All

Curriculum Scheme: Rev2016

Examination: BE Course Code: ILO8022 Time: 2 hour Semester VIII Course Name: Finance management Max. Marks: 80

01	Choose the correct option for following questions. All the Questions are
Q1.	compulsory and carry equal marks
1.	are a long-term promissory notes with maturities ranging
	from 5 to 30 years.
Option A:	Notes
Option B:	Shares
Option C:	Bonds
Option D:	Commercial Papers
2.	Which of the following is not the Financial Services in Indian Financial System?
Option A:	Local Bankers
Option B:	Investment Banking
Option C:	Credit Rating
Option D:	Asset Management
3.	The regulator for Primary and secondary market is
Option A:	IRDA
Option B:	SEBI
Option C:	RBI
Option D:	CRISIL
4.	With a well-diversified portfolio, an investor can reduce
Option A:	Unsystematic risk
Option B:	systematic risk
Option C:	Market Risk
Option D:	finance risk
5.	A statistical measure of the degree to which two variables (e.g., securities'
	returns) move together.
Option A:	Certainty equivalent
Option B:	Covariance
Option C:	Variance
Option D:	Coefficient of variation
6.	How you can turn a portfolio having two risky securities into risk less if
Option A:	The securities are completely negatively correlated
Option B:	The securities are completely positively correlated
Option C:	If the correlation ranges between zero and one

- • -	
Option D:	If the correlation ranges between zero and two
7.	When the concept of ratio is defined in respected to the items shown in the
1.	When the concept of ratio is defined in respected to the items shown in the financial statements, it is termed as
Option A:	Accounting ratio
Option B:	Financial ratio
Option C:	
Option D:	Costing ratio leverage Ratio
Option D.	
8.	When the concept of ratio is defined in respected to the items shown in the
0.	financial statements, it is termed as
Option A:	Accounting ratio
Option B:	Financial ratio
Option C:	Costing ratio
Option D:	leverage Ratio
F	
9.	What is the value of the firm usually based on
Option A:	The value of debt and equity.
Option B:	The value of equity.
Option C:	The value of debt.
Option D:	The value of assets plus liabilities.
1	
10.	The assets that can be converted into cash within a short period (i.e.1 year or less)
	are known as
Option A:	Current assets
Option B:	Fixed assets
Option C:	Intangible assets
Option D:	Investments
11.	The assets that can be converted into cash within a short period (i.e.1 year or less)
	are known as
Option A:	Current assets
Option B:	Fixed assets
Option C:	Intangible assets
Option D:	Investments
10	
12.	The use of NPV rule in investment decisions require information about –
Option A:	Profit
Option B:	Risk
Option C:	Time value of money
Option D:	Cash flows
13.	Which among the following is not a current lightlity?
	Which among the following is not a current liability? Equity Shares
Option A: Option B:	Interest payable
.	
Option C: Option D:	Accounts Payable
Option D:	Accounts Payable
14.	The XYZ purchases a new equipment. The selected data is given below: Cost of
14.	equipment: Rs 25,000, Useful life of equipment: 5 years, Tax rate: 30%. If
	1 equipment. No 23,000, Obviui me of equipment. 5 years, Tax Tate. $30%$. If

-	
	equipment is depreciated using straight line method, what is the depreciation tax
	benefit associated with the new equipment?
Option A:	Rs 35000
Option B:	Rs 1500
Option C:	Rs 7500
Option D:	Rs 5000
15.	Gross Working Capital is the capital invested in
Option A:	Total Assets
Option B:	Total Assets minus Total Liabilities
Option C:	Total Current Assets
Option D:	Current Assets minus Current Liabilities
I	
16.	In approach, the capital structure decision is relevant to the
	valuation of the firm.
Option A:	Net income
Option B:	Net operating income
Option C:	Traditional
Option D:	Miller and Modigliani
17.	Under the lease agreement, the lessee gets the right to
Option A:	Share profits earned by the lessor
Option B:	Participate in the management of the organization
Option C:	Use the asset for a specified period
Option D:	Sell the assets
Option D.	
18.	What assumptions have to consider to approach the Net operating income to
10.	valuation?
Option A:	that debt and equity levels remain unchanged.
Option B:	that interest expense and taxes are included in the calculation
Option D:	that dividends increase at a constant rate.
Option D:	
Option D.	that ko remains constant regardless of changes in leverage.
19.	If a firm has low fixed costs relative to all other firms in the same industry, a
19.	
Ontion A.	large change in sales volume (either up or down) would have:
Option A:	a smaller change in EBIT for the firm versus the other firms.
Option B:	no effect in any way on the firms as volume does not effect fixed costs.
Option C:	a decreasing effect on the cyclical nature of the business.
Option D:	a larger change in EBIT for the firm versus the other firms.
20	
20.	Which of the following are theories for dividend relevance?
Option A:	Walter's Model
Option B:	MM Approach
Option C:	Game theory
Option D:	Market Value theory

Q2	Solve any Four out of Six	5 marks each
А	What functions are performed by the Reserve Bank of India?	
В	A 12 - payment annuity of Rs.20,000 will begin 8 y	years hence. (The first payment

	occurs at the end of 8 years). What is the present value of this annuity if the	
	discount rate is 14 percent?	
C	What are the Sources of Short Term Financing?	
D	Examine critically "Debentures" as a source of Corporate Finance	
Е	How to calculate discounted payback period for a project? (assume suitable data)	
F	Discuss traditional approach of capital structure design	

Q3	Solve any Four out of Six5 marks each	
A	State and illustrate different financial instruments	
В	What are the risk associated with business and how are they measured?	
С	What is the importance of Financial Ratio Analysis?	
D	Discuss factor affecting working capital needs of an entity	
E	Discuss Modigliani-Miller (MM) approach for capital structure	
F	Explain the Factors determining Dividend Policy.	

Examination 2020 under cluster 8 (Lead College: PHCET)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: All Branch

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ILO8023 and Course Name: Entrepreneurship Development and Management Time: 2 hour Max. Marks: 80

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

Examination 2020 under cluster 8 (Lead College: PHCET)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: All Branch

Curriculum Scheme: Rev 2016

Examination: BE Semester VIII

Course Code: ILO8023 and Course Name: Entrepreneurship Development and Management Time: 2 hour Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	MUDRA stands for
Option A:	Metropolitan and Urban Development Regulatory Authority
Option B:	A scheme under Ministry of AYUSH
Option C:	Micro Units Development and Refinance Agency
Option D:	Macro Units Development and Refinance Agency
2.	What is Mahila Vikas Nidhi?
Option A:	It offers developmental assistance for pursuit of income generating activities to women
Option B:	housing scheme for women
Option C:	subsidized gas cylinder
Option D:	Subsidy scheme for women
3.	Enterprise is classified as medium if
Option A:	Annual turnover not more than 15cr
Option B:	Annual turnover not more than 250cr
Option C:	Annual turnover not more than 25cr
Option D:	Annual turnover not more than 50cr
4.	What is CVY?
Option A:	Coir Vikas Yojana
Option B:	Cottage Vikas Yojana
Option C:	Cotton Vikas Yojana
Option D:	Communication Vikas Yojana
5.	What is purpose of National Manufacturing Competitiveness Programme
Option A:	to support the SMEs to get loan
Option B:	to support the SMEs to get market
Option C:	to support the SMEs to get land
Option D:	to support the SMEs in their endeavor to become competitive
6.	IPR stands for
Option A:	Intellectual Property Rights
Option B:	Individual Property Rights
Option C:	Indian Property Rights

Option D:	Institutional property rights
_	
7.	One of the disadvantages of a franchise business for a franchisee is,
Option A:	Lack of market availability
Option B:	Lack of independence.
Option C:	Lack of training
Option D:	Lack of brand identity.
8.	In PESTEL analysis, 'P' stands for:
Option A:	political
Option B:	population
Option C:	people
Option D:	profit
9.	Question Marks in BCG matrix represents,
Option A:	High Growth, Low Market Share
Option B:	Low Growth, Low Market Share
Option C:	Low Growth, High Market Share
Option D:	High Growth, High Market Share
10	
10.	A good Business plan
Option A:	Predict the future.
Option B:	Predict the demand.
Option C:	Can attract the investors.
Option D:	Guarantee profit.
11.	When the companies mutually agreed to become partners in fairly & friendly way to run
	the business, then it is called as,
Option A:	collaboration
Option B:	franchise
Option C:	acquisition
Option D:	merger
12.	Document that can convince the reader that the business can produce enough revenue to make a satisfactory profit and therefore attractive as an investment opportunity is
	called as,
Option A:	Future plan
Option B:	Profit-loss statement
Option C:	Balance statement
Option D:	Business plan
13.	Which of the following is NOT the example of PPP project?
Option A:	Mumbai Metro
Option B:	Sister Nivedita Bridge in Kolkata
Option C:	Underground car parking system in Kolkata
Option D:	Ola Travelling system
14.	Which of the following questions are NOT answered by a business plan?
Option A:	Where am I now?
Option B:	Where am I going?
Option C:	How will I get there?

Option D:	Why should I do this business?
15.	Who is appointed as a chairperson of the Mission Directorate (Executive
	Committee) level of National Skill Development Mission.
Option A:	Secretary, MSDE
Option B:	Minister, MSDE
Option C:	Secretary, Shiksha Manatralaya
Option D:	Minister, Shiksha Mantralaya
16.	Which one of the following is NOT the category of clients in MUDRA
	Bank?
Option A:	Shishu
Option B:	Kishor
Option C:	Tarun
Option D:	Vruddha
17.	What is the process of one company taking over by the other called?
Option A:	Merger
Option B:	Acquisition
Option C:	Going public
Option D:	Write off
18.	What is Vertical Merger?
Option A:	takes a company a step closer towards monopoly by eliminating a
	competitor
Option B:	combination of two entities at different stages of the industrial or
	production process
Option C:	the shareholders of one entity receives cash instead of shares in the
	merged entity
Option D:	merger between two entities in unrelated industries
19.	refers to the successful selling of a product or service in a
	specific market.
Option A:	Market penetration
Option B:	Advertisement
Option C:	outreach
Option D:	consolidation
20.	What is NOT an IPO
Option A:	An initial public offering (IPO) refers to the process of offering shares of a
	private corporation to the public in a new stock issuance.
Option B:	Initial public offering or stock market launch is a type of public offering in
	which shares of a company are sold to institutional investors and usually
	also retail investors.
Option C:	An initial public offering (IPO) refers to the process of offering shares of a
	private corporation to the public in a new stock issuance.
Option D:	IPO is transferring company to charitable trust

Q2	Solve any Four out of Six.5 marks each
А	Discuss challenges faced by MSMEs.
В	Explain the various forms of business ownership.
С	Explain new product development process.
D	 Explain MSME with respect to following points: 1) The industries that come under MSME, 2) Definitions of micro, small and medium enterprises In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006, 3) benefits of MSME registration.
Е	Explain PMEGP with respect to the following points: 1) It's objectives, 2) Eligibility criteria for PMEGP, 3) It's features
F	Explain the small business life cycle in detail.

Q3.	Solve any Four out of Six.5 marks each
А	Discuss various funding schemes for women entrepreneurs
В	Explain marketing schemes for MSMEs
С	What do you mean by MSME?
D	Explain the importance of business plan for new business.
Е	What are the various sources of a finance for new business & explain the importance of capital to entrepreneurship.
F	Explain supply chain management.

University of Mumbai Examination 2020 under cluster __ (Lead College: _____)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021 to 20th January 2021

Program:ALL Curriculum Scheme: Revised 2016 Examination: BE Semester VIII Course Code: _ILO8029 and Course Name: Environmental management

Max. Marks: 80

Time: 2 hour

Correct Option Ouestion (Enter either 'A' or 'B' Number <u>or 'C' or '</u>D') D Q1. Q2. D Q3. Α 04 В С Q5 В Q6 **Q**7 С Q8. А С Q9. Q10. D Q11. B Q12. A С Q13. Q14. A Q15. D Q16. А D Q17. С Q18. Q19. С Q20. А

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Examination 2020 under cluster __(Lead College: _____)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: ALL

Curriculum Scheme: Rev2016

Examination: BESemester: VIII

Course Code: ILO8029and Course Name: Environmental management

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1	
1.	Abiotic environment does not include
Option A:	Soil
Option B:	Water
Option C:	Air
Option D:	Plant
2.	A relatively dense layer of band which is found in the thermosphere is known as?
Option A:	Troposphere
Option B:	Mesosphere
Option C:	Stratosphere
Option D:	Ionosphere
3.	The word environment is derived from French word
Option A:	Environner
Option B:	Environnering
Option C:	E-Environner
Option D:	Envo
4.	Sunder LalBahuguna is famous for
Option A:	Narmada BachaoAndolan
Option B:	TehriBachoAndolan
Option C:	Ganga BachoAndolan
Option D:	Jungle BachoAndolan
5.	Which of the following conceptual components of the environment are effective transporters of matter?
Option A:	Hydrosphere and lithosphere
Option B:	Atmosphere and lithosphere
Option C:	Atmosphere and hydrosphere
Option D:	Lithosphere and biosphere
6.	Acid rain can be prevented by

Option A:	Increasing the emission of SO ₂ and NO ₂
Option B:	Decreasing the emission of SO_2 and NO_2
-	Increasing the emission of HCL and Phosphate
Option C: Option D:	Decreasing the emission of HCL and Phosphate
Option D:	Decreasing the emission of HCL and Phosphate
7	To maintain each sized holenes and received the normalitien size of different
7.	To maintain ecological balance and regulate the population size of different
Outing As	animals, this is useful Sun chain
Option A:	
Option B:	Wind chain
Option C:	Food chain
Option D:	Grass chain
8.	The tropical grasslands in Africa with tall grasses scattered with shrubs or stunted
	trees are called
Option A:	Savanas
Option B:	Pampas
Option D:	Steppes
Option D:	Prairies
9.	Among the ecosystem mentioned below , where one can find maximum
).	biodiversity
Option A:	Mangroves
Option B:	Desert
Option D:	Coral Reefs
Option D:	Alpine meadows
Option D.	Aprile meadows
10.	Which of the following helped in the saving of trees?
10.	when of the following helped in the saving of trees.
Option A:	Pouring of water
Option B:	Developing of chemical manuals
Option C:	Use of modern agriculture
Option D:	Development of iron and steel
Option D.	
11.	Which of the following model satisfies four conditions - Consistently satisfactory,
11.	Sustainable economic performance, Ethical actions and Behaviour.
	Sustainable économie performance, Edinear actions and Denaviour.
Option A:	Spiral Model
Option B:	Corporate Citizenship Model
Option D:	Corporate Civil Model
Option D:	Spiral Model
option D.	
12.	Supplying socially harmless products, Adopt fair pricing and Provide good
12.	supprying sociary naminess products, Adopt fair pricing and Provide good service after sales are responsibilities towards -
Option A:	Consumer
Option B:	Seller
Option D:	Dealer
Option D:	Manufacturer
Option D.	
13.	Which is not a decided component amongst the following to maintain public
15.	minen is not a decided component amongst the following to manuall public

	health and safety to ensure quality of total environment?
Option A:	Water
Option B:	Air
Option C:	Junk food
Option D:	Radiation
option D.	
14.	CER stands for -
Option A:	Corporate Environmental Responsibility
Option B:	Complete Environmental Responsibility
Option C:	Corporate Energy Responsibility
Option D:	Corporate Environmental Response
15.	The term 'Municipal Solid Waste' is used to describe which kind of solid waste?
Option A:	Non toxic
Option B:	Toxic
Option C:	Non hazardous
Option D:	Hazardous
16.	ISO – 14001 gives stress on
10.	
Option A:	Plan – Do -check -Act
Option B:	Environmental protection
Option C:	Prevention rather than detection
Option D:	Proceed-Do-correct-Act
17.	What is not covered in the ISO-14000 ?
Option A:	Adoption of environmental safety guideline
Option B:	Energy audit in Industry
Option C:	Adoption of clean environment
Option D:	Adoption of environmental management system in industry or organization
18.	Name the Ministry which deals with environment related issues
Option A:	Ministry of Water Resources
Option B:	Ministry of Forest
Option C:	Ministry of Environment, Forests and Climate change (MoEFCC)
Option D:	Ministry of Agriculture
-	-
19.	Under Act, Rules relative to various aspects of management of hazardous chemicals, wastes. have been notified.
Option A:	Water Act (1974)
Option B:	Air Act (1981)
Option C:	Environment Protection Act (1986)
Option D:	Biodiversity Act (2002)
•	

20.	of the Constitution of India directs the State to protect and improve the environment and safeguard wildlife and forests.
Option A:	Article 51A
Option B:	Article 58A
Option C:	Article 1A
Option D:	Article 48A

Q2	Solve any Four out of Six (Total 20Marks)
А	What are different environmental issues relevant to India
В	State the various carrier opportunities in Environmental Management
С	Describe any TWO types of Ecosystems
D	What is relationship between Food chain and Food Web
E	What is an EMS certification all about.
F	Give a brief account of Air (P and CP Act)
Q3.	Solve any Two Questions out of Three(Total 20 Marks)
А	Explain what is meant by hazardous waste and how it can be dealt with.
В	Explain the role of environment management and total quality management
	to achieve total quality environmental management
С	Explain some of the common sources of water pollutants and their effects on
	humans, plants and animals.

	Ι	· · · · · · · · · · · · · · · · · · ·
	Online Examination, University of Mumbai	
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Department:	Computer	
Revision:	R2016	
Semester:	8	
Subject:	Distributed Computing (CSC802)	
Date of Examination:	2020-10-10	
Q. 1	Distributed System is appearing to user assystem.	Μ
Option 1	Multiple dependent	0
Option 2	Tightly coupled	0
Option 3	Multiple independent	0
Option 4	Single coherent	CORRECT OPTION
Q. 2	Which of the following is the model of middleware?	М
Option 1	RPC	CORRECT OPTION
Option 2	Object request interface	0
Option 3	Embedded middleware	0
Option 4	Firmware	0
Option 4	rinnware	0
Q. 3	Positioning the middleware in distributed systems is	М
Option 1	In between the Network OS and distributed applications	CORRECT OPTION
Option 2	Below the kernel	0
Option 3	In between the kernel and network OS	0
Option 4	Above the distributed applications	0
. .		
Q. 4	is important abstraction to construct distributed application.	М
Option 1	Process	0
Option 2	Function	0
Option 3	Program	0
Option 4	Middleware	CORRECT OPTION
	In Distributed system ,Communication is by at the fundamental level.	
Q. 5		Μ
Option 1	Shared memory	0
Option 2	Stack	0
Option 3	Message passing	CORRECT OPTION
Option 4	Variables	0
Q. 6	Which data type is not accepted by RPC ?	Μ
Option 1	Queue	0
Option 2	Class	0
Option 3	Union	CORRECT OPTION
Option 4	Structure	0
	In solution, before a client stub sends an RPC message, it makes a log entry	
	telling what it is about to do. The log is kept on disk or some other medium that survives	
Q. 7	crashes. After a reboot, the log is checked and the orphan is explicitly killed off.	М
Option 1	Gentle Re-incarnation	0
Option 2	Extermination	CORRECT OPTION
Option 3	Expiration	0
Option 4	Re-incarnation	0
		Ŭ
Q. 8	Which communication model uses the queuing model?	М
Q. 8 Option 1	MPI	0
Option 2	MOM	CORRECT OPTION
		CONNECT OF HON

Option 3	RMI	0
Option 4	RPC	0
Q. 9	Which classification of middleware provides computation power services to clients?	М
Option 1	MOM	0
Option 2	Grid-based Middleware	CORRECT OPTION
Option 3	Peer to Peer Middleware	0
Option 4	Message passing	0
Option 4		0
	The process of packing and unpacking parameters are respectively known as	
Q. 10		Μ
Option 1	Marshalling and Unmarshalling	CORRECT OPTION
Option 2	Decapsulation and Encapsulation	0
Option 3	Unmarshalling and Marshalling	0
Option 4	Encapsulation and Decapsulation	0
	Suppose a user wants to do a fibonacci program Using RPC. The first step a client has to	
Q. 11	follow is	Μ
Option 1	Calls the server stub	0
Option 2	Calls the Client stub	CORRECT OPTION
Option 3	Calls the Local OS	0
Option 4	Calls the Remote OS	0
Q. 12	Which object, acts as a gateway for the server side object in RMI?	M
Option 1	Remote OS	0
Option 2	Skeleton	CORRECT OPTION
Option 3	Local OS	0
Option 4	Stub	0
Q. 13	Which of the following is not message ordering technique?	М
Option 1	Causal	0
Option 2	Consistent	0
Option 3	Free	CORRECT OPTION
Option 4	Absolute	0
		-
	Process state, private state, stack pointer and instruction pointer is kept in which	
Q. 14	segment of execution unit of code migration	Μ
Option 1	Code Segment	0
Option 2	Data segment	0
Option 3	Execution segment	CORRECT OPTION
Option 4	Process segment	0
	Which of the following is not the desirable feature of a good global scheduling algorithm	
Q. 15	?	Μ
Option 1	Flexible and scalable	0
Option 2	Ability to make only static scheduling decisions	0
Option 3	Flexible and not scalable	CORRECT OPTION
Option 4	No a priory knowledge of process is required.	0
Q. 16	Benefits of Load Balancing	М
Option 1	High cost ,Low gain	0
Option 2	Higher responce time	0
Option 3	Small jobs has to suffer long starvation.	0
Option 4	Small jobs do not suffer from long starvation.	CORRECT OPTION
Q. 17	The following statement "Please take my load" is an example of which policy?	Μ
Option 1	Receiver initiated	0
Option 2	Load estimation	0
Option 3	Sender Initiated	CORRECT OPTION

Option 4	Load predication	0
0.18	In a system there are eight tasks and four nodes, how task assignment will take place 2	N 4
Q. 18 Option 1	In a system there are eight tasks and four nodes, how task assignment will take place ? It is always comulsory to assign 2 tasks to each node	M 0
Option 2	Inter process communication cost does not matter for allocation of task to nodes .	0
Option 3	Randomly it will select any task and it will be assigned to any node. It will calculate interprocess communication cost and execution cost of tasks on nodes.	0
Option 4	Tasks will be assigned to the node with less interprocess communication cost and execution cost.	CORRECT OPTION
	A request such as asking for first 1024 bytes of a file has no side effects and can be	
	executed as often as necessary without any harm being done. A request that has this	
Q. 19	property is said to be	М
Option 1	Idempotent	CORRECT OPTION
Option 2	Expiration	0
Option 3	Orphan	0
Option 4	Extermination	0
	While is the ideal consistency model, it is impossible to implement in a	
Q. 20	distributed system.	М
Option 1	FIFO consistency	0
Option 2	Strict consistency	CORRECT OPTION
Option 3	sequential consistency	0
Option 4	causal consistency	0
	When any data is modified at one location and accessed the same data from other	
Q. 21	location at same time, returns old value. Why?	М
Option 1	Accessing data is not permitted from anywhere	0
Option 2	Modification not permitted	0
Option 3	Access not permitted	0
Option 4	The other data location is not updated	CORRECT OPTION
	"A write operation by a process on a data item x following a previous read operation on	
	x by a same process, is guaranteed to take place on same or more recent value of x that	
Q. 22	was read", above statement defines which consistency model	M
Option 1	Writes follow Reads	CORRECT OPTION
Option 2	Monotonic Writes	0
Option 3	Monotonic Reads Read Your Writes	0 0
Option 4	Read Four Writes	0
	When a system has entered an erroneous state, instead of moving back to a previously	
	check pointed state, bring the system in a correct new state from which it can continue	
Q. 23	to execute is called as	M
Option 1	Horizontal recovery	
Option 2	Forward recovery	CORRECT OPTION
Option 3	Backward recovery	0
Option 4	Vertical recovery	0
	A write operation is always completed before a successive read operation by the same	
Q. 24	process, no matter where that read operation takes place. This consistency model is	Μ
Q. 24 Option 1	Read after writes	0
Option 2	Write after reads	0
Option 3	Read your writes	CORRECT OPTION
Option 4	Write your reads	ORRECT OPTION 0
	white your redus	0

	When server crashes : one philosophy wait until server reboots and to	y the operation
Q. 25	again. This Technique is called	М
Option 1	Exactly once semantic	0
Option 2	Never issued a request	0
Option 3	Atleast once semantic	CORRECT OPTION
Option 4	Atmost once semantic	0

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	Online Examination, University of Mumbai	
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Department:	Computer	
Revision:	R2016	
Semester:	8	
Subject:	Adhoc Wireless Network (DLO8013)	
Date of Examination:	2020-10-13	
Q. 1	Path loss is a function of	Μ
Option 1	Transmission Environment	0
Option 2	Propagation Distance	CORRECT OPTION
Option 3	Radio Frequency	0
Option 4	Isotropic antennas	0
Q. 2	The Random walk mobility model is a mobility pattern.	Μ
Option 1	Continue travelling	0
Option 2	Reactive	0
Option 3	Memoryless	CORRECT OPTION
Option 4	Proactive	0
		-
	creates movements which are dependent on node's current speed and	
Q. 3	direction.	М
Option 1	Reference Point Group Mobility Model	0
Option 2	Gauss-Markov Mobility Model	CORRECT OPTION
Option 3	Random Direction Model	0
	Random Walk Model	0
Option 4	Random wark woder	0
	is the node is within the range of a node that is transmitting and it cannot	
0.4	is the node is within the range of a node that is transmitting, and it cannot	
Q. 4	transmit to any node.	Μ
Option 1	Corresponding Node	0
Option 2	Exposed terminal	CORRECT OPTION
Option 3	Hidden terminal	0
Option 4	Mobile Node	0
	In the backoff mechanism, each time a collision is detected, the nodes	
Q. 5	double its maximum back off window.	Μ
Option 1	Collision avoidance	0
Option 2	Packet transmission	0
Option 3	Random period	0
Option 4	Binary exponential	CORRECT OPTION
Q. 6	Distributed priority scheduling protocol is based on	Μ
Option 1	IEEE 802.16	0
Option 2	IEEE 802.11	CORRECT OPTION
Option 3	IEEE 802.3	0
Option 4	IEEE 802.15	0
Q. 7	There are Comparisons between Cellular network and Ad Hoc Wireless Networks ?	Μ
Option 1	Fixed infrastructure-based (MANET), and Infrastructureless (cellular network)	CORRECT OPTION
	High cost and time of deployment (cellular network) and Quick and cost-effective	
Option 2	deployment (MANET)	0
	· · · · · · · · · · · · · · · · · · ·	0
	Reuse of frequency spectrum through geographical channel reuse (cellular network) and	
Option 3	Dynamic frequency reuse based on carrier sense mechanism (MANET)	0
Option 4	Centralized routing (cellular network) and Distributed routing (MANET)	0
	כבות מוצבת דסתנווא (נכוותומו דובנאסרג) מות בוצנו ומתנפת דסתנווא (אואועבד)	0

	In Hidden terminal problem – two nodes that are outside each-other's range perform		
	simultaneous transmission to a node that is within the range of each of them, hence,		
Q. 8	there is a	М	
Option 1	Packet received	0)
Option 2	Packet transmission	0)
Option 3	Packet Collision	CORRECT OPTION	
Option 4	Packet Drop	0)
0.0	In MADCIL protocol CTC population information recording the	N.4	
Q. 9	In MARCH protocol CTS packet carries information regarding the	М	
Option 1	Bandwidth efficiency)
Option 2	Duration of the next data packets	CORRECT OPTION	
Option 3	Duration of collision	0	
Option 4	Throughput	0	
	In this protocol, a node that wins the contention to the channel can make use of the		
Q. 10	entire bandwidth.	Μ	
Option 1	Single-channel sender-initiated protocols	CORRECT OPTION	
Option 2	Multichannel sender-initiated protocols	0)
Option 3	Receiver-initiated protocols	0)
Option 4	Receiving time	0)
Q. 11	In Soft Reservation Multiple Access with Priority Assignment	M	
Option 1	Uses a reservation and handshake mechanism	0	1
	Nodes use a collision-avoidance handshake mechanism and a soft reservation		
Option 2	mechanism	CORRECT OPTION	
Option 3	It receives no information	0	1
	Serves to inform other neighbouring potential sender nodes about the currently active		
Option 4	reservations	0	I
Q. 12	TORA uses which algorithm?	Μ	
Option 1	Congestion Control Algorithm	0	,
Option 2	Link Reversal Algorithm.	CORRECT OPTION	
Option 3	Cryptographic-Algorithm	0)
Option 4	Binary Exponential Back-off (BEB) Algorithm	0	
•	,		
	Which protocol is responsible for finding paths to the nodes which are not within the		
Q. 13	routing zone?	Μ	
Option 1	Zone routing protocol (ZRP)	0)
Option 2	Inter-zone routing protocol (IERP).	CORRECT OPTION	
Option 3	Hybrid routing protocol	0)
Option 4	Intra-zone routing protocol (IARP)	0)
	In DSDV, modification of the Bellman Ford algorithm where each node maintains		
Q. 14		Μ	
Option 1	Sequence number	0)
Option 2	Bandwidth	0)
Option 3	Route history	0)
Option 4	Shortest path to destination	CORRECT OPTION	
Q. 15	The main goal of routing protocol is to have	Μ	
Option 1	Partial distribution	0	
Option 2	Partial central coordination	0	
Option 3	Central coordination	0	1
Option 4	Full distribution	CORRECT OPTION	
	What are the challenges faced by routing protocol designed for ad hoc wireless		
Q. 16	Networks?	М	
Option 1	Proactive, routing topology	0)
Option 2	Routing topology, node constraints	0	
Option 3	Maintainability, error routes	0	
P		Ũ	

Option 4	Mobility of nodes, resource constraints, error-prone channel state.	CORRECT OPTION
Q. 17	Which protocol uses reactive approach?	М
Option 1	Dynamic source routing protocol (DSR)	CORRECT OPTION
Option 2	Wireless routing protocol(WRP)	0
Option 3	Destination sequenced distance-vector routing Protocol(DSDV)	0
Option 4	Temporally ordered routing algorithm (TORA)	0
Option 4		0
	In routing, we assume that there is one node (or more) in each autonomous	
Q. 18	system that acts on behave of the entire autonomous system.	М
Option 1	Path Vector	CORRECT OPTION
Option 2	multi-point	0
Option 3	distantance vector	0
Option 4	link state	0
Option 4		0
	How the number of proxy nodes in a TCP session is determined between source and	
Q. 19	destination node?	М
Option 1	Distortion	0
Option 2	Bandwidth	0
Option 3	Power Consumption	0
Option 4	length of the path	CORRECT OPTION
Option 4		CORRECT OPTION
	Which resource constraints affect the performance of a transport layer protocol for	
Q. 20	adhoc wireless networks.	М
Option 1	Congestion and Noise constraints	0
Option 2	Power and Noise constraints	0
Option 3	Power and Bandwidth constraints	CORRECT OPTION
Option 4	Congestion and Bandwidth constraints	0
Option 4	congestion and bandwidth constraints	0
Q. 21	In adhoc wireless network a path having multiple link, which traffic is referred to as the traffic at any given link (or path) due to the traffic through neighbouring links (or paths).	Μ
Option 1	Multi traffic	0
Option 2	Link traffic	0
Option 3	Induced traffic	CORRECT OPTION
Option 4	Slow traffic	0
	In TCP-F when TCP sender receives an route failure notification (RFN) packet, it goes into)
Q. 22	which state?	Μ
Option 1	Change	0
Option 2	Transmission	0
Option 3	Snooze	CORRECT OPTION
Option 4	Sleep	0
Q. 23	When TCP sender receives an RFN packet	Μ
Option 1	It changes from snooze state to connected state	0
Option 2	It goes into a state called snooze	CORRECT OPTION
Option 3	Transmission is not possible	0
Option 4	It increase bandwidth	0
Q. 24	Once the TCP-ELFN sender receives the ELFN packet, enters a state.	M
Option 1	Snooze	0
Option 2	Standby	CORRECT OPTION
Option 3	Previous sender	0
Option 4	Change	0
0.25	An unstroom intermediate node, upon detection of a noth break subjects	M
Q. 25 Option 1	An upstream intermediate node, upon detection of a path break, originates	М
Option 1	ERND packet	
Option 2	ERDN packet	CORRECT OPTION
Option 3	ENRDN packet	0

Option 4 EDRN packet

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	Online Exemple the units of Manufact	
	Online Examination, University of Mumbai	
Department:	Computer	
Revision:	R2016	
Semester:	8	
Subject:	Natural Language Processing (DLO8012)	
Date of Examination:	2020-10-13	
Q. 1	The Important hurdle of NLP	М
Option 1	Handling length of sentences	0
Option 2	Handling Ambiguity of Sentences	CORRECT OPTION
Option 3	Handling sense of sentences	0
Option 4	Handling Tokenization	0
Option 4		0
.		
Q. 2	What is the major difficulty in NLP?	М
Option 1	Handling POS-Tagging	0
Option 2	Handling Compositions	0
Option 3	Handling Ambiguity of Sentences	CORRECT OPTION
Option 4	Handling Tokenization	0
Q. 3	Contextual Reasoning is the part ofanalysis.	Μ
Option 1	Morphological	0
Option 2	Syntax	0
Option 3	Semantic	CORRECT OPTION
Option 4	Discourse	0
Option 4		0
Q. 4	Derivational morphemes can	М
Option 1	Alter the tense that the word is in, i.e past, present and future.	0
Option 1	Alter the tense that the word is in, i.e past, present and future.	0
Ontion 2	Change the meaning of the word, the word class and can add information to the word.	0
Option 2		0
Option 3	Change the meaning of the word and the spelling of the word.	0
Option 4	Change the meaning of the word, the spelling of the word and the words class.	CORRECT OPTION
Q. 5	Ability vs Abilities is an example of morphology	M
Option 1	Normalization	0
Option 2	Cliticization	0
Option 3	Derivational	CORRECT OPTION
Option 4	Inflectional	0
-		
Q. 6	Morphotactics is a model of	М
Option 1	How and which morphemes can be affixed to a stem.	CORRECT OPTION
Option 2	N-grams of affixes and stems.	0
Option 3	Spelling modifications that may occur during affixation.	0
		0
Option 4	All affixes in the English language.	0
	How many high and can be generated from given contenant. "Comes is said to work the	
o =	How many bi-grams can be generated from given sentence:- "Seema is going to market	
Q. 7	after one year"?	М
Option 1	8	0
Option 2	6	0
Option 3	7	CORRECT OPTION
Option 4	9	0
	Consider the following set of sentences. < s > I am standing < /s > < s > Who am I < /s > <	
	s > I would like to sit < /s >. The Bigram probabilities of P(< /S >/ standing) and	
Q. 8	P(standing/am)	М
Option 1	1 and ½	CORRECT OPTION
Option 2	2/3 and ½	0
P		0

Option 3 Option 4	0 and ½ 1 and 0	0 0
Q. 9 Option 1	Which of the following techniques can be used to convert the keyword into its base form? Euclidean distance	M 0
Option 2	Lemmatization	CORRECT OPTION
Option 3	Cosine Similarity	0
Option 4	N-grams	0
	In NLP, the process of removing words like "and", "is", "a", "an", "the" from a sentence	
Q. 10	is called as	М
Option 1	Stop word removal	CORRECT OPTION
Option 2	POS tagging	0
Option 3	Lemmatization	0
Option 4	Stemming	0
	Find the probability of P(snow purple) using maximum likelihood estimation without smoothing. Let us assume that CorpA is a corpus of English with approximately 560 million tokens.	
	Following are the counts of unigrams and bigrams from the corpus;	
Q. 11	snow = 30250 ; purple = 12321 ; purple snow = 0	М
Option 1	0.4073	0
Option 2	0	CORRECT OPTION
Option 3	12321	0
Option 4	30250	0
Q. 12	ENGTWOL model is part of.?	Μ
Option 1	Random Tagging	0
Option 2	Role-based Tagging	0
Option 3	Stochastic POS Tagging	
Option 4	Rule-based Tagging	CORRECT OPTION
Q. 13	How to resolve Lexical Amabiguity?	Μ
Option 1	Stemming	0
Option 2	POS Tagging	CORRECT OPTION
Option 3	Lemmatization	0
Option 4	Morphological Segmentation	0
Q. 14	Observation likelihoods measure in HMM includes	М
Option 1	The likelihood of a POS tag given the succeeding tag	0
Option 2	The likelihood of a POS tag given the preceding tag	0
Option 3	The likelihood of a POS tag given a word	0
Option 4	The likelihood of a word given a POS tag	CORRECT OPTION
	Consider the statement:" She promised to back the bill" which part of speech would be	
Q. 15	attached to word "back"?	Μ
Option 1	Adverb	0
Option 2	Adjective	0
Option 3	Noun	0
Option 4	Verb	CORRECT OPTION
Q. 16	"Flying planes can be dangerous" What type Ambiguity exists in above sentence?	М
Option 1	Syntax Level ambiguity	CORRECT OPTION
Option 2	Lexical ambiguity	0
Option 3	Referential ambiguity	0
Option 4	Semantic Ambiguity	0
Q. 17	Conditional Random Fields is used for	Μ

Outline 1	Reference resolution	0
Option 1		
Option 2	POS tagging	CORRECT OPTION
Option 3	Morphological Analysis	0
Option 4	Sentiment analysis	0
	While working with context extraction from a text data, you encountered two different sentences: "The tank is full of soldiers. The tank is full of nitrogen". Which of the following measures can be used to remove the problem of word sense disambiguation	
Q. 18	in the sentences? Co-reference resolution in which one resolute the meaning of ambiguous word with the	
Option 1	proper noun present in the previous sentence	0
	Compare the dictionary definition of an ambiguous word with the terms contained in its	
Option 2	neighborhood	CORRECT OPTION
Option 3	Measure probability of words	0
Option 4	Use dependency parsing of sentence to understand the meanings	0
Q. 19	Which of the following sense for the word "language" is NOT available in wordnet?	М
Option 1	A systematic means of communicating by the use of sounds or conventional symbol.	0
Option 2	Communication by word of mouth.	0
Option 3	The style of a piece of writing or speech.	CORRECT OPTION
Option 5		CORRECT OF HON
Ontion 1	The cognitive processes involved in producing and understanding linguistic	0
Option 4	communication.	0
Q. 20	Which of the following is an example of Hypernym lexical relations?	
Option 1	dog> animal	0
Option 2	fruit> banana	0
	nose> face	CORRECT OPTION
Option 3		
Option 4	write> right	0
	Many words have more than one meaning; we have to select the meaning which makes	
Q. 21	the most sense in context. This can be resolved by	М
Option 1	Fuzzy Logic	0
Option 2	Shallow Semantic Analysis	0
Option 3	Deep learning Word Sonso Disombiguation	
Option 4	Word Sense Disambiguation	CORRECT OPTION
Q. 22	In the sentence, "They bought a cute dog", "a cute dog" is an example of	Μ
Option 1	Verb phrase	0
Option 2	Noun phrase	CORRECT OPTION
Option 3	Prepositional phrase	0
Option 4	Adverbial phrase	0
Option 4		0
Q. 23	How many Noun Phrases are there in following sentence, "The cat slept in the kitchen".	
Option 1	1	CORRECT OPTION
Option 2	4	0
Option 3	3	0
Option 4	2	0
	-	0
Q. 24	What is hyponymy?	М
Option 1	The study of symbols	0
Option 2	The hidden and implied meanings within language.	0
Option 3	The hierarchical structure that exists between lexical items.	CORRECT OPTION
Option 4	The study of how sounds are created.	0
Q. 25	Which of the following pair represents Antonomy lexical relation?	
Option 1	(large, small)	CORRECT OPTION

Option 2	(knob, door)
Option 3	(beak,bird)
Option 4	(head,eye)

	Online Exemination, University of Mumbri	
	Online Examination, University of Mumbai	
_		
Department:	Information Technology	
Revision:	R2016	
Semester:	8	
Subject:	Project Management (ILO8021)	
Date of Examination:	2020-10-17	
	The project manager needs to be an expert who can motivate the	
Q. 1	workforce by training and promoting leadership among them.	М
Option 1	HRD	CORRECT OPTION
Option 2	communication	0
	decision	
Option 3		0
Option 4	problem solving	0
0.0		
Q. 2	A project organization is a structure that facilitates the coordination and	Μ
Option 1	selection of different processes	0
Option 2	maintaining portfolio	0
Option 3	combination of project activities	0
Option 4	implementation of project activities	CORRECT OPTION
	You are a new project manager who has never managed a project before. It would be	
	BEST in this situation to rely onduring planning in order to improve your	
Q. 3	chance of success.	Μ
Option 1	Historical information	CORRECT OPTION
Option 2	Your intuition and training	0
Option 3	Configuration management	0
Option 4	Stakeholder analysis	0
Option 4		0
0.4	Dreigets have a fixed hudget while exerctions have	N 4
Q. 4	Projects have a fixed budget, while operations have	М
Option 1	to coordinate the project	0
Option 2	to earn a profit to run the management	0
Option 3	to earn a profit to run the business	CORRECT OPTION
Option 4	to earn a profit to run the project	0
Q. 5	Which of the following statement is true about a Program?	Μ
Option 1	A program is a portfolio	0
Option 2	A Program is a part of a big project	0
Option 3	A Program is a group of unrelated projects	0
Option 4	A Program is a group of related projects	CORRECT OPTION
Q. 6	We need a model for assisting us in making project	М
Option 1	Analyzing decisions	0
Option 2	Data gathering decisions	0
Option 3	Model decisions	0
Option 4	Selection decisions	CORRECT OPTION
	When a firm chooses a project selection model, the following criteria, based on	
Q. 7	Souder(1973), are most important.	Μ
Q. 7 Option 1	scope, cost	0
	•	-
Option 2	Realism, capability, flexibility	CORRECT OPTION
Option 3	cost	0
Option 4	Quality,flexiblity	0
Q. 8	Develop project charter is part of which process group?	Μ
Option 1	Monitoring and Control	0
Option 2	Initiation	CORRECT OPTION
Option 3	Executing	0

Option 4	Planning	0
Q. 9	The size of the projects plotted on the array indicates the	Μ
Option 1	Resource needs	CORRECT OPTION
Option 2	Categories	0
•	-	
Option 3	Shape Criteria	0
Option 4	Criteria	0
0.10	Designed that do not have about up is any upgent for short in that much such as	N 4
Q. 10	Projects that do not have charters, is one reason for observing that most projects are	М
Option 1	Overcoming risks	
Option 2	Uncompleted	CORRECT OPTION
Option 3	Completed	0
Option 4	Succeeding	0
	Team members discuss and negotiate differences constructively. Identify stage of the	
Q. 11	team development and growth.	M
Option 1	storming	0
Option 2	performing	0
Option 3	Forming	0
Option 4	Norming	CORRECT OPTION
	When many activities are planned to start at the same time in project schedule, the	
Q. 12	project is likely to be following	Μ
Option 1	laddering approach	0
Option 2	Goldratt's Critical Chain	0
Option 3	Concurrent Engineering	CORRECT OPTION
Option 4	Research and Development Project	0
	When architect gives an estimate for home decoration based on carpet area of house it	
Q. 13	is budgeting based on	М
Option 1	Rule of Thumb	CORRECT OPTION
Option 2	Forecasting of resources	0
Option 3	Top down budgeting	0
Option 4	Bottoms up budgeting	0
Q. 14	Latest starting date for an activity is estimated using	Μ
Option 1	Backword Pass Method	CORRECT OPTION
Option 2	Crashing	0
Option 3	Forward Pass method	0
Option 4	Resource leveling	0
	When project team developing bottoms up budget tends to overstate estimates it is	
Q. 15	called	М
Option 1	Padding	CORRECT OPTION
Option 2	Bloating	0
Option 3	Balooning	0
Option 4	Pruning	0
	Reporting requirements, Customer-supplied resources, Liaison arrangement are	
Q. 16	mentioned in	М
Option 1	Overview	0
Option 2	Contractual aspects	CORRECT OPTION
Option 3	General approach	0
Option 4	Scope	0
		0
Q. 17	Process of comparing and reshaping top down and bottoms up budget leads to	Μ
Option 1	Cost baseline	0
Option 2	Negotiated budget	CORRECT OPTION
Option 3	Expenditure plan	ORRECT OPTION 0
Option 5		0

Option 4	Project Schedule	0
Q. 18	In activity schedule network slack time equals	М
Option 1	EST + Duration	0
Option 2	Zero	0
Option 3	LST-EST	CORRECT OPTION
Option 4	EFT-EST	0
	When a project is subdivided into hierarchical units of tasks, subtasks, work packages,	
Q. 19	etc., it is called as	Μ
Option 1	linear responsibility chart	0
Option 2	Work Breakdown Structure	CORRECT OPTION
Option 3	concurrent engineering	0
Option 4	Networking and Scheduling techniques	0
Q. 20	In CPM method crashing of activities on the critival path is done starting with	М
Option 1	Longest duration	0
Option 2	Shortest duration	0
Option 3	Highest cost slope	0
Option 4	Least cost slope	CORRECT OPTION
Q. 21	Goldratt's critical chain theory is related to-	Μ
Option 1	Planning and Managing projects	CORRECT OPTION
Option 2	Risk Mitigation and Monitoring	0
Option 3	Event Management	0
Option 4	Project Scheduling	0
Q. 22	Following can not be listed as Risk Management Tools & Techniques-	М
Option 1	Risk Register	0
Option 2	Probability and Impact Matrix.	0
Option 3	Critical Path Method	CORRECT OPTION
Option 4	SWOT.	0
Q. 23	Project Crashing can be achieved by -	Μ
Option 1	allocating more time	0
Option 2	allocating less time	0
Option 3	allocating least number of resources	0
Option 4	allocating more resources	CORRECT OPTION
Q. 24	This is NOT a common reason for crashing a project-	М
Option 1	Imposed deadlines	0
Option 2	Availabity of resources	CORRECT OPTION
Option 3	Pressures to move resources elsewhere.	0
Option 4	Time to market pressure	0
Q. 25	The process of allocating resources to the activities at the right time is-	Μ
Option 1	Resource planning	0
Option 2	Resource loading	CORRECT OPTION
Option 3	Resource levelling	0
Option 4	Resource allocating	0

	Online Examination, University of Mumbai	
Department:	All	
Revision:	R2016	
Semester:	8 Environment Management (II 08020)	
Subject:	Environment Management (ILO8029)	
Date of Examination	n: 2020-10-17	
Q. 1	What is the main reason for the increase in water contamination incidents	М
Option 1	Increased flooding	CORRECT OPTION
Option 2	Management failure	0
Option 3	More chemicals	0
Option 4	Operator mistakes	0
Q. 2	The largest reservoir of nitrogen an our planet is:	м
Option 1	Ocean	0
Option 2	Atmosphere	CORRECT OPTION
Option 3	Biosphere	0
Option 4	Fossil fuels	0
Q. 3	Which of the following rivers is called the world's most polluted river?	М
Option 1	Ganga River	CORRECT OPTION
Option 2	Chenab River	0
Option 3	Cauvery River	0
Option 4	Yamuna River	0
Q. 4	Which of the following statements are true about CNG -Compressed natural gas?	м
Option 1	It is a clean fuel	CORRECT OPTION
Option 2	It is a harmful fuel	0
Option 3	It is a polluting fuel	0
Option 4	It is moist fuel	0
Q. 5	Which of the following salts are the main causes of temporary hardness?	Μ
Option 1	Calcium sulphate	0
Option 2	Magnesium sulphate	0
Option 3	Magnesium chloride	0
Option 4	Magnesium carbonate	CORRECT OPTION
Q. 6	What is the pH value of rain in industrial areas?	Μ
Option 1	4 to 5	CORRECT OPTION
Option 2	3 to 7	0
Option 3	4 to 8	0
Option 4	2 to 4	0
Q. 7	The study of living organisms with the environment is known as	Μ
Option 1	Ecosystem	0
Option 2	Environment	0
Option 3	Community	0
Option 4	Ecology	CORRECT OPTION
Q. 8	A relatively dense layer of band which is found in the thermosphere is known as?	M
Option 1	Troposphere	0
Option 2	Mesosphere	0
Option 3	Stratosphere	0
Option 4	Ionosphere	CORRECT OPTION
Q. 9	Vegetation of tropical deciduous forest falls under which of the following categories?	м

Option 2	Megatherm Microtherm		0
Option 3 Option 4	Hekistotherm		0
Option 4	HERISTOHETH		0
Q. 10	In the production of wave energy which form of energy is used?	Μ	
Option 1	Potential energy		0
Option 2	Kinetic energy	CORRECT OPTION	
Option 3	Solar energy		0
Option 4	Wind energy		0
Q. 11	Energy in the form of heat and light is obtained by	Лм	
Option 1	Biomass	1	0
Option 2	Fossil fuels		0
Option 3	Sun	CORRECT OPTION	U
Option 4	Wind	CONNECT OF HON	0
Option 4			U
Q. 12	Which of the following is not an objective of sustainable development?	м	
Option 1	Continue to implement the family planning program.	_	0
	Maintain a dynamic balance of arable land (not less than 123 million hectares) and		
Option 2	implement an agricultural development strategy		0
	Maintain a dynamic balance of water resources by reducing water consumption for every		
Option 3	unit of gross development product growth and agricultural value added		0
Option 4	To bring about a gradual and sometime catastrophic transformation of environment	CORRECT OPTION	
Q. 13	The atmospheric emission of NO2 and SO2 cause	М	
Option 1	Normal Rain		0
Option 2	Heavy Wind Flow		0
Option 3	Acid Rain	CORRECT OPTION	
Option 4	heavy Rainfall		0
·	· · ·	-	
Q. 14	What does Liming of Soil mean	М	
Option 1	Excessive growth of lemon trees in acid rain regions		0
Option 2	Erosion of calcium carbonate(lime) zones in soil		0
Option 3	additing lime water in acid rain prone areas		0
Option 4	Application of magnesium and calcium rich substances to soil	CORRECT OPTION	
a			
Q. 15	Acids in the rain react with the calcium compounds in the stones to create	M	
Option 1	Gypsum	CORRECT OPTION	
Option 2	Calcium carbonate	4	0
Option 3	Calcium	4	0
Option 4	Calcium hydroxide		0
Q. 16	Maximum depletion of Ozone occurs on	Лм	
Option 1	Equator		0
•	North Pole	-	
Option 2	South Pole		0
Option 3	Tropics	CORRECT OPTION	0
Option 4	Tropics		0
	Which of the following devices can be used to measure ozone in the stratosphere	7	
Q. 17	from the ground?	м	
Option 1	Photometer		0
Option 2	Spectrometer	4	0
	Spectrophotometer		U
Option 3		CORRECT OPTION	0
Option 4	Spectro ozonometer		0
	What is the color coding of the bag used in hospitals to dispose off human	7	
Q. 18	anatomical wastes such as body parts	м	
Option 1	Blue	1	0
Option 2	Yellow	CORRECT OPTION	J
Option 3	Green		0
		I	5

Option 4	Red		0
Q 19	Why plastics are difficult to recycle	м	
Option 1	as it is hard material		0
Option 2	it is very adhesive in nature		0
Option 3	as it has different types of polymer resins	CORRECT OPTION	
Option 4	due to different sizes of plastics		0
			•
Q 20	The following is an example of Terrestrial Biome	М	
Option 1	Rivers		0
Option 2	Streams		0
Option 3	Tropical rain forest	CORRECT OPTION	
Option 4	vapours		0
Q 21	Which is renewble exhaustible natural energy resource	М	
Option 1	Lithosphere		0
Option 2	Mesosphere		0
Option 3	Biosphere	CORRECT OPTION	
Option 4	Ionosphere		0
Q 22	Which is renewble exhaustible natural energy resource	М	
Option 1	Biomass	CORRECT OPTION	
Option 2	Kerosene		0
Option 3	Petroleum		0
Option 4	coal		0
0 00			
Q 23	The process of vernalization is practised in	Μ	•
Option 1	Hot countries	CODDECT ODTION	0
Option 2	cold countries	CORRECT OPTION	0
Option 3	sub trophical countries		0 0
Option 4	Trophical countries		0
Q 24	Which is not charactristics of a population	М	
Option 1	Mortality		0
Option 2	Startification	CORRECT OPTION	
Option 3	Nationality		0
Option 4	Sex ratio		0
			-
Q 25	dB is the abbreviation used for the quantitative expression of	Μ	
Option 1	Density of bacteria in a medium		0
Option 2	A Particular Pollutant	CORRECT OPTION	
Option 3	Dominant Bacillus in a culture		0
Option 4	A pesticide		0

Examination 2020 under cluster _4_ (Lead College: _PCE_)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: Computer Engineering

Curriculum Scheme: Rev 2016

Examination: BE Semester: VIII

Course Code: CSC801 and Course Name: Human Machine Interaction

Time: 2 hour

Max. Marks: 80

Q.1.

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

Q.2.

A. Explain the seven stages of action and three levels of processing.

Ans:-

Seven stages of action diagram ..2 marks

Seven stages of action diagram ...3 marks

Three level of processing diagram 2 marks

Three level of processing explanation 3 marks

B. Explain the goal directed design process in brief.

Ans: Explanation of following phases

1. Research:

- 2. Modelling:
- 3. Requirements Definition
- 4. Framework Definition
- 5. Refinement:
- 6. Development Support

C. Differentiate between GUI and Web UI.

Ans:- Any 10 points of differentiation (1 mark for 1 point)

Q.3.

A. What is statistical graphics? Explain different types of statistical graphics.

Ans: Any 5 types along with diagram(2 marks for each type)

B.What is Mobile 2.0? Explain the principles of Mobile 2.0.

Ans: Any 5 principles (2 marks for each type)

C. List and explain various types of windows.

Ans: Any 5 types along with diagram(2 marks for each type)

Examination 2020 under cluster _4_ (Lead College: _PCE_)

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021

to 20th January 2021

Program: Computer Engineering

Curriculum Scheme: Rev 2016

Examination: BE Semester: VIII

Course Code: CSC801 and Course Name: Human Machine Interaction

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Conveying the rules by leaving visual clues is called as
Option A:	Feedback
Option B:	Constraints
Option C:	Mapping
Option D:	Affordances
2.	Mental Model deals with
Option A:	Partial Understanding
Option B:	Full Understanding
Option C:	Consistency
Option D:	Stability
3.	The study of mental illness of human beings is called
Option A:	Psychology
Option B:	Psychotherapy
Option C:	Psychopathology
Option D:	Pathology
4.	When you move the mouse towards the right pointer it will move towards right.
	This is the example of
Option A:	Feedback
Option B:	Constraints
Option C:	Mapping
Option D:	Affordances
5.	Which of the following does not belongs to phases of Goal directed design
	process
Option A:	Research
Option B:	Modelling
Option C:	Refinement
Option D:	Recognition
6.	Which of the following are the two main functions of GUI?
Option A:	Pointing and Selecting
Option B:	Selecting and Executing

Option C:	Selecting and Editing
Option D:	Pointing and Editing
Option D.	
7.	Collection of techniques and mechanisms to interact with tools is called as
Option A:	Action
Option B:	Graphics
Option C:	Icon
Option D:	Graphical User Interface
1	
8.	What is full form of WYSIWYG
Option A:	What you see is what you get
Option B:	What you see is what you gain
Option C:	What you see is what you give
Option D:	What you sent is what you get
9.	Maximum Users are the users
Option A:	Beginner
Option B:	Intermediate
Option C:	Experts
Option D:	Toppers
10.	mainly focuses on market survey, conducting user interviews and
	user observations.
Option A:	Research Phase
Option B:	Modelling Phase
Option C:	Support Phase
Option D:	Framework Phase
11.	is considered as axial duration
-	is considered as axial duplication.
Option A: Option B:	Symmetry Balance
Option C:	Consistency
Option D:	Regularity
Option D.	Regularity
12.	Principle of
12.	perceived as one group.
Option A:	Proximity
Option B:	Similarity
Option C:	Closure
Option D:	Continuity
13.	The base layer of mobile ecosystem is
Option A:	Operators
Option B:	Networks
Option C:	Devices
Option D:	Platforms
14.	Which of the following is not an element of mobile design?
Option A:	Color
Option B:	Graphics
i	

Option C:	Message
Option D:	Topology
15.	Theis the portion of the screen where the user performs a task.
Option A:	Command area
Option B:	Work area
Option C:	Spit box
Option D:	Size grip
16.	is the first window which appears on screen when
	activity is started.
Option A:	Message Box
Option B:	Dialog Box
Option C:	Secondary Window
Option D:	Primary Window
17.	Abar is used to organize and provides access to actions.
Option A:	Status
Option B:	Scroll
Option C:	Menu
Option D:	Tool
18.	is a graphical representation of a program or file, that when
	clicked on, will be run or opened.
Option A:	Icon
Option B:	Color
Option C:	Message
Option D:	Text
19.	Generally, all windows must have a title located in a position at the top.
Option A:	Bottom
Option B:	Right aligned
Option C:	Centered
Option D:	Left aligned
20.	Color schemes haveimpact on human machine interaction.
Option A:	High
Option B:	Low
Option C:	No
Option D:	Zero

Q2. (20 Marks)	Solve any Two Questions out of Three	10 marks each
А	Explain the seven stages of action and three levels of prod	cessing.
В	Explain the goal directed design process in brief.	
С	Differentiate between GUI and Web UI.	

Option 2

Q3. (20 Marks)	Solve any Two Questions out of Three	10 marks each
A	What is statistical graphics? Explain different types of sta	tistical graphics.
В	What is Mobile 2.0? Explain the principles of Mobile 2.0.	
С	List and explain various types of windows.	

In the question paper **R2016_Sem VIII_COMP_CSDLO8013_AWN the question 23 is to be replaced** with the question given below it.

Question 23) When TCP sender receives an RFN packet

- Option 1: It changes from snooze state to connected state
- Option 2: It goes into a state called snooze
- Option 3: Transmission is not possible
- Option 4: It increase bandwidth

Answer: Option 2: It goes into a state called snooze

Question) In Adhoc TCP when an intermediate node finds that the network is partitioned, then the TCP sender state is changed to which state where it avoids unnecessary retransmissions.

Option 1: Dynamic state Option 2: Transient state Option 3: Unstable state Option 4: Persist state

Answer: Option 4: Persist state