**Examinations Commencing from 23<sup>rd</sup> December 2020 to 6<sup>th</sup> January 2021 and from 7<sup>th</sup> January 2021 to 20<sup>th</sup> 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

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

1. *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**

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| 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 C: | Alarm Protocol |
| Option D: | Change Cipher Spec Protocol |
| | |
| 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 part of which Strategic Process. |
| Option A: | Formulation of Strategy |
| Option B: | Implementation of Strategy |
| Option C: | Evaluation of Strategy |
| Option D: | Internal Analysis Strengths weakness |
| | |
| 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 |
| | |
| 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) | |
|---|---|
| A | **Solve any Two**                                           **5 marks each** |
| i. | Difference between Physical economy and Digital economy |
| ii. | Explain Digital Signature |
| iii. | Types of E-Commerce |
| B | **Solve any One each**                                        **10 marks** |
| 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 |
| B | **Solve any One**                                            **10 marks** |

| | |
|---|---|
| | **each** |
| i. | Explain IOT |
| ii. | Explain Business Plan Preparation |

## University of Mumbai
### 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

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| 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 |

| | |
|---|---|
| Option D: | Causal research |
| | |
| 7. | The process not needed in experimental researches is |
| Option A: | Reference collection |
| Option B: | Controlling |
| Option C: | Observation |
| Option D: | Manipulation and replication |
| | |
| 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 C: | Tool for data collection |
| Option D: | Data analysis technique |
| | |
| 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. | Research ethics do not include |
| Option A: | Integrity |
| Option B: | Honesty |
| Option C: | Subjectivity |
| Option D: | Objectivity |
| | |
| 20. | Failure to acknowledge the borrowed material is called |
| Option A: | Acknowledgement |
| Option B: | Index |
| Option C: | Bibliography |
| Option D: | Plagiarism |

| **Q2.** | **Solve any Four out of Six**            **5 marks each** |
|---|---|
| A | What are the problems faced by Researcher |
| B | Give the Characteristics of Research Explain in detail |
| C | 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 II errors |
| F | What are the differences between observation and interviewing as methods of data collection? |

| Q3. | Solve any Four out of Six                                                                 5 marks each |
|------|---------------------------------------------------------------------------------------------------------|
| A    | Define Hypothesis with example                                                                          |
| B    | Explain Ex post facto Research with example                                                             |
| C    | What do you mean by Sampling ? What are the types of Sampling                                           |
| D    | Enumerate the different methods of collecting data giving one example each                              |
| E    | 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                                      |

**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 |
| | |
| 7. | A leader should be able to ____ |
| Option A: | Take selfish decisions |
| Option B: | Explain organisational goals |
| Option C: | Sack the employees |
| Option D: | Fire the employees |
| | |
| 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 |
| | |
| 13. | Development is not related to |
| Option A: | Technical aspects |
| Option B: | Conceptual |
| Option C: | Human skills |
| Option D: | Termination |
| | |
| 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 C: | Conflicts |
| Option D: | Increase in Pay |

| | |
|---|---|
| 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 |
| | |
| 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          10 marks each (20 Marks)

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)

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

**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. | A _____extinguishes all rights of the IP holder. |
| Option A: | Grant |
| Option B: | Sale |
| Option C: | Deal |
| Option D: | Infringement |
| | |
| 5. | The industrial design is protected for _____years |
| 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. | What is included in biological resources? |
| Option A: | Animals |
| 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 |
| | |
| 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 |
| | |
| 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 |
| | |
| 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** |
|---|---|---|
| A | Describe different types of Intellectual Property. | |
| B | What are the impacts of IP Rights? | |
| C | 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 Six** | **5 marks each** |
|---|---|---|
| A | Explain the contents of complete specification for patent application. | |
| B | Discuss the major steps involved to register a patent. | |
| C | Write a short note on rights and liabilities of patentees. | |
| D | Write a short note on US Scenario of Patent Rules | |
| E | List and explain types of claims. | |
| F | Describe non-patentable inventions with example. | |

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 C: | Project Officer |
| Option D: | Project Stakeholder |
| | |
| 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 C: | $ 20,000 profit |
| Option D: | $40,000 loss |
| | |

| 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. |
| | |
| 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 C: | Longest path in terms of time |
| Option D: | Path with the largest amount of slack time |
| | |
| 15. | A schedule activity may begin 10 days before the predecessor activity finishes. This is an example of: |
| Option A: | Finish-to-Start |
| Option B: | Start-to-Finish |
| Option C: | Start-to-Start |
| Option D: | Finish-to-Finish |
| | |
| 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 ofthe work performed and the cumulative actual cost is known as |
| Option A: | Cost performance index |
| Option B: | Cost variance |
| Option C: | Budgeted costs |
| Option D: | Cost quality index |
| | |
| 19. | Which of the following does NOT generate changes to the Project documents: |
| Option A: | Define Activities |
| Option B: | Sequence Activities |
| Option C: | Estimate Activity Resources |
| Option D: | Estimate Activity Durations |
| | |
| 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 C: | There is no schedule variance |
| Option D: | There is no cost variance |

| Q2 | Solve any Two Questions out of three.                                    5 marks each |
|----|--------------------------------------------------------------------------------------|
| A  | I.  Compare AOA and AON |
|    | II.  Compare internal risk and external risk. |
|    | III.  State the limitations of Gantt chart |
|    | |
| B  | **Solve any One**                                                       **10 marks each** |
|    | I.  What is Work breakdown structure. Draw and explain the WBS for hospital management system. |
|    | II.  What is project crashing. Explain with the help of suitable example. |

| Q3 | Solve any Two Questions out of Three 5 marks each |
|----|--------------------------------------------------|
| A  | 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. |
|    | |
| B  | **Solve any One**                                                       **10 marks each** |
|    | I.  Explain the terms qualitative risk and quantative risk. List and explain the risk response strategies. |
|    | II.  What are the knowledge areas and process groups in Project Management as per PMI? |

**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: ILO8022                                    Course Name: Finance 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. | _____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 financial statements, it is termed as |
| Option A: | Accounting ratio |
| Option B: | Financial ratio |
| Option C: | Costing ratio |
| Option D: | leverage Ratio |
| | |
| 8. | 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: | Costing ratio |
| Option D: | leverage Ratio |
| | |
| 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. |
| | |
| 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 |
| | |
| 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 liability? |
| Option A: | Equity Shares |
| Option B: | Interest payable |
| Option C: | Accrued Expenses |
| Option D: | Accounts Payable |
| | |
| 14. | The XYZ purchases a new equipment. The selected data is given below: Cost of equipment: Rs 25,000, Useful life of equipment: 5 years, Tax rate: 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 |
| | |
| 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 |
| | |
| 18. | What assumptions have to consider to approach the Net operating income to valuation? |
| Option A: | that debt and equity levels remain unchanged. |
| Option B: | that interest expense and taxes are included in the calculation |
| Option C: | that dividends increase at a constant rate. |
| 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 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. | 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 |
|---|---|---|
| A | What functions are performed by the Reserve Bank of India? | |
| B | A 12 - payment annuity of Rs.20,000 will begin 8 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 |
| E | 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 Six                                      5 marks each |
|---|---|
| A | State and illustrate different financial instruments |
| B | What are the risk associated with business and how are they measured? |
| C | 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. |

# University of Mumbai
## 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. | 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 |
|---|---|---|
| A | Discuss challenges faced by MSMEs. | |
| B | Explain the various forms of business ownership. | |
| C | 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. | |
| E | 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 |
|---|---|---|
| A | Discuss various funding schemes for women entrepreneurs | |
| B | Explain marketing schemes for MSMEs | |
| C | What do you mean by MSME? | |
| D | Explain the importance of business plan for new business. | |
| E | What are the various sources of a finance for new business & explain the importance of capital to entrepreneurship. | |
| F | Explain supply chain management. | |

# 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. | 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 $NO_2$ |
| Option C: | Increasing the emission of HCL and Phosphate |
| Option D: | Decreasing the emission of HCL and Phosphate |
| | |
| 7. | To maintain ecological balance and regulate the population size of different animals, this is useful |
| Option A: | Sun chain |
| 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 C: | Steppes |
| Option D: | Prairies |
| | |
| 9. | Among the ecosystem mentioned below , where one can find maximum biodiversity |
| Option A: | Mangroves |
| Option B: | Desert |
| Option C: | Coral Reefs |
| Option D: | Alpine meadows |
| | |
| 10. | Which 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 |
| | |
| 11. | Which of the following model satisfies four conditions - Consistently satisfactory, Sustainable economic performance, Ethical actions and Behaviour. |
| Option A: | Spiral Model |
| Option B: | Corporate Citizenship Model |
| Option C: | Corporate Civil Model |
| Option D: | Spiral Model |
| | |
| 12. | Supplying socially harmless products, Adopt fair pricing and Provide good service after sales are responsibilities towards - |
| Option A: | Consumer |
| Option B: | Seller |
| Option C: | Dealer |
| Option D: | Manufacturer |
| | |
| 13. | Which is not a decided component amongst the following to maintain public |

| | health and safety to ensure quality of total environment ? |
|---|---|
| Option A: | Water |
| Option B: | Air |
| Option C: | Junk food |
| Option D: | Radiation |
| | |
| 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 |
| 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)** |
|---|---|
| A | What are different environmental issues relevant to India |
| B | State the various carrier opportunities in Environmental Management |
| C | 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)** |
| A | Explain what is meant by hazardous waste and how it can be dealt with. |
| B | Explain the role of environment management and total quality management to achieve total quality environmental management |
| C | Explain some of the common sources of water pollutants and their effects on humans, plants and animals. |

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

Program: **Institute Level Elective**

Curriculum Scheme: Rev2016

Examination: BE Semester VIII

Course Code: ILO8025 and Course Name: PE and CSR

Time: 2 hour                                                                                      Max. Marks: 80

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1. *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**

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| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|---|---|
|  |  |
| 1. | The inclusive term used to refer to any net benefits produced by an action. |
| Option A: | ethic of virtue |
| Option B: | ethic of care |
| Option C: | Utilitarianism |
| Option D: | Utility |
|  |  |
| 2. | The market for automobiles is an example of? |
| Option A: | Monopolistic competition. |
| Option B: | Duopoly. |
| Option C: | Differentiated oligopoly. |
| Option D: | Pure oligopoly. |
|  |  |
| 3. | Rights that all human beings everywhere possess to an equal extent simply by virtue of being human beings is, |
| Option A: | Right |
| Option B: | Legal right |
| Option C: | Moral rights or human rights |
| Option D: | Characteristic of Rights |
|  |  |
| 4. | The gradual breakdown of ozone gas in the stratosphere above us caused by the release of chlorofluorocarbons (CFCs) into the air. |

| | |
|---|---|
| Option A: | ozone depletion |
| Option B: | Global warming |
| Option C: | Pollution |
| Option D: | Greenhouse gases |
| | |
| 5. | Which following statement is explain about Negative Rights? |
| Option A: | Duties of others have to not interfere in certain activities of the person who holds the right. |
| Option B: | Duties of other agents (it is not always clear who) to provide the holder of the right with whatever he or she needs to freely pursue his or her interests. |
| Option C: | Provide a basis for justifying one's actions and for invoking the protection or aid of others |
| Option D: | Are correlated with duties others have toward the person with the right |
| | |
| 6. | The undesirable and unintended contamination of the environment by human activity such as manufacturing, waste disposal, burning fossil fuels, etc. is called as ? |
| Option A: | Pollution |
| Option B: | Resource depletion |
| Option C: | Greenhouse gases |
| Option D: | Global warming |
| | |
| 7. | Discrimination that is not consciously or deliberately sought, but is brought about by stereotypes or as an unintended outcome is called as.. |
| Option A: | Intentional |
| Option B: | Institutional |
| Option C: | Individual |
| Option D: | Unintentional |
| | |
| 8. | Perfectly competitive markets encourage firms to use resources efficiently to keep costs? |
| Option A: | Low |
| Option B: | Moderate |
| Option C: | Zero |
| Option D: | High |
| | |
| 9. | Which of the following is not a category of Sustainability? |
| Option A: | Environmental Sustainability |
| Option B: | Natural Sustainability |
| Option C: | Social Sustainability |
| Option D: | Economic Sustainability |
| | |
| 10. | Which of the following is a characteristic of monopolistic competition? |
| Option A: | Few sellers. |
| Option B: | All of the above are characteristics of monopolistic competition. |
| Option C: | A differentiated product. |
| Option D: | Easy entry into and exit from the industry. |
| | |
| 11. | Business people have the skills to solve? |
| Option A: | All Economic Problems |
| Option B: | All Social Problem |
| Option C: | Some Social Problem |

| | |
|---|---|
| Option D: | All Technical Problem |
| | |
| 12. | Which of the following is Problem associated with Contractual Theory? |
| Option A: | Sellers cannot remove all their duties to buyers by getting them to agree to disclaimers of responsibility. |
| Option B: | Safety should not be provided through the market. |
| Option C: | Assumes consumer and seller meet as equals, but seller has more knowledge even then consumer must not rely on the seller. |
| Option D: | Assumes makers of products deal directly with consumers but they do not; however manufacturer's advertisements do form a kind of direct promise to consumers. |
| | |
| 13. | The Globalization do not facilitate to |
| Option A: | Removal of control on movement of capital across borders |
| Option B: | Barriers to trade and investment |
| Option C: | Improvements in communication |
| Option D: | Immigration control |
| | |
| 14. | What should be Market Approach to Consumer Protection? |
| Option A: | Claims safety is a commodity that should be mandated by government. |
| Option B: | In a market, sellers will provide safety if consumers demand it. |
| Option C: | In a market, the price of safety and the amount sellers provide will not be determined by the costs of providing it and the value consumers place on it |
| Option D: | Safety should not be provided through the market. |
| | |
| 15. | Which of the following is not a Indicator of Discrimination? |
| Option A: | Proportion of rich and poor at all economic levels. |
| Option B: | Proportions of minorities and women at lowest economic levels |
| Option C: | Average benefits minorities and women receive compared to others |
| Option D: | Proportions of minorities and women at highest economic levels. |
| | |
| 16. | Privacy with respect to a person's physical activities is called as? |
| Option A: | individual privacy |
| Option B: | personal privacy |
| Option C: | physical privacy |
| Option D: | psychological privacy |
| | |
| 17. | What is Triple Bottom Line (TBL) ? |
| Option A: | An accounting tool that looks at the impact on people, planet and profits |
| Option B: | A management strategy which states all the attention should be on profits |
| Option C: | An accounting tool that looks at cost, profit and loss. |
| Option D: | A management strategy which focuses on corporate social responsibility |
| | |
| 18. | Which of the following general principle is not followed by corporation while practicing CSR: |
| Option A: | Companies should support the inclusion of the principles of the India Global Compact |
| Option B: | Companies should indulge in free marker practices, rejecting any illegal or fraudulent practice and implement effective mechanisms |
| Option C: | Mangers are not responsible to follow and encourage ethical business practices among employees |

| | |
|---|---|
| Option D: | Companies should encourage and facilitate communication and dialogue with its shareholders, investors, employees, Customers and suppliers |
| | |
| 19. | Distributing the benefits and burdens fairly among people is called as, |
| Option A: | Rule-utilitarianism |
| Option B: | Rights |
| Option C: | Justice |
| Option D: | Utilitarianism |
| | |
| 20. | The moral argument for CSR is.. |
| Option A: | The corporation is a creation of society and should therefore serve its needs. |
| Option B: | The corporation is a legal creation and therefore cannot be a moral agent |
| Option C: | Only Large corporations have the power or resources to address society's problems |
| Option D: | Business decisions will have social and environmental consequences which will be addressed by government. |

| **Q2** | **Solve any Two Questions out of Three**        **10 marks each** |
|---|---|
| A | How Ethics is an integral part of Business, Explain with Example |
| B | What are the Ethics of pollution control. |
| C | How can the rights of a consumer be defined in a due care theory? Explain with suitable example |

| **Q3** | **Solve any Two Questions out of Three**        **10 marks each** |
|---|---|
| A | Explain in detail Corporate Social Responsibility and Small and Medium Enterprises (SMEs) in India. |
| B | Why incorporate CSR into PPP for sustainable development? |
| C | What is TBL? How it is work? |

## University of Mumbai
### Examination 2020 under cluster 7 (Lead College: SSJCOE)
**Examinations Commencing from 23rd December 2020 to 6th January 2021**
Program: **Information Technology**
Curriculum Scheme: Rev-2016

Examination: BE                                                 Semester VIII

Course Code: ITC801 and Course Name: Big Data Analytics

Time: 2-hour                                                 Max. Marks: 80

====================================================================

| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|-----|----------------------------------------------------------------------------------------------------------|
|  | Introduction-3Hrs-(6%)-1Q, Hadoop, NoSQL-10Hrs-(20%)-4Q, MapReduce-9Hrs-(18%)-4Q, DSMS-7Hrs-(14%)-3Q, PCY, SON, CURE, Classification-10Hrs-(20%)-4Q, Page Rank, Social Networking, Recommendation-11Hrs-(22%)-4Q |
| 1. | Match the following:<br> 1. Structured      A. XML<br> 2. Semi-Structured   B. Video<br> 3. Unstructured     C. RDBMS Tables |
| Option A: | 1-C, 2-B, 3-A |
| Option B: | 1-C, 2-A, 3-B |
| Option C: | 1-A, 2-B, 3-C |
| Option D: | 1-B, 2-A, 3-C |
|  |  |
| 2. | Which component of Hadoop ecosystem provides high level scripting language? |
| Option A: | Oozie |
| Option B: | Zookeeper |
| Option C: | Mahout |
| Option D: | Pig |
|  |  |
| 3. | Command used to check the status of all daemons running in HDFS is |
| Option A: | jps |
| Option B: | fsck |
| Option C: | distcp |
| Option D: | chmod |
|  |  |
| 4. | Select the option that is not valid in NoSQL database? |
| Option A: | SQL databases make use of a fixed schema, whereas NoSQL datastores do not make use of a fixed schema |
| Option B: | NoSQL refers to "Not Only SQL" |
| Option C: | MapReduce scans the entire dataset for any query, whereas NoSQL has the ability to fetch a single record without scanning the entire dataset |
| Option D: | The query language used for querying NoSQL datastores adds a layer of abstraction on top of MapReduce. They convert the query into a series of MapReduce jobs. |
|  |  |
| 5. | Which of the following is not a valid NoSQL database? |
| Option A: | HBase |
| Option B: | MongoDB |

| | |
|---|---|
| Option C: | Cassandra |
| Option D: | Postgre SQL |
| | |
| 6. | In a MapReduce program, aggregation of values associated to each key is performed by which function? |
| Option A: | Driver |
| Option B: | Mapper |
| Option C: | Reducer |
| Option D: | Partitioner |
| | |
| 7. | Which of the following is an optional component of a Hadoop MapReduce program? |
| Option A: | A Java class with a main that configures and submits the job |
| Option B: | A class that extends the Hadoop Reducer class (The "Combiner") |
| Option C: | A class that extends the Hadoop Mapper class (The "Mapper") |
| Option D: | A class that extends the Hadoop Reducer class (The "Reducer") |
| | |
| 8. | The MapReduce framework of Hadoop generates how many map tasks for each Input Split generated by the Input Format for the job? |
| Option A: | One |
| Option B: | Two |
| Option C: | Three |
| Option D: | Four |
| | |
| 9. | A client wants to read two blocks a and b from the four available DataNodes namely, DataNode 1, DataNode 2, DataNode 3 and DataNode 4. The distribution of blocks among the DataNodes is given below. The distances between the DataNodes and the client are 2, 8, 6 and 4 respectively. "DataNode 1" goes down because of some technical issues and its replication is yet to happen. Select the DataNodes from which the client will read the blocks a and b respectively. <br> DataNode 1: block d, block b, block a <br> DataNode 2: block a, block c, block b <br> DataNode 3: block b, block d, block c <br> DataNode 4: block c, block a, block d |
| Option A: | DataNode 4, DataNode 3 |
| Option B: | DataNode 3, DataNode 2 |
| Option C: | DataNode 2, DataNode 4 |
| Option D: | DataNode 2, DataNode 3 |
| | |
| 10. | Which of the following is a characteristic of stream processing? |
| Option A: | The system processes the data items instantly as they arrive. |
| Option B: | The data items come in at a regulated rate. |
| Option C: | The stream data is typically used to build complex models. |
| Option D: | Systems process all the data items entering into operation together. |
| | |
| 11. | In DSMS, Standing Queries are stored at |
| Option A: | Limited working storage |
| Option B: | Archival storage |
| Option C: | Distributed file system |
| Option D: | Stream processor |
| | |

| 12. | In DGIM the size of bucket must be |
|---|---|
| Option A: | Fixed |
| Option B: | Incremental by 1 |
| Option C: | Mod 2 |
| Option D: | Power of 2 |
| | |
| 13. | Which technique is used to filter unnecessary itemset in PCY algorithm |
| Option A: | Association Rule |
| Option B: | Hashing Technique |
| Option C: | Data Mining |
| Option D: | Market Basket |
| | |
| 14. | How do you calculate Confidence (A -> B)? |
| Option A: | Support (A ∩ B) / Support (A) |
| Option B: | Support (A ∩ B) / Support (B) |
| Option C: | Support (A ∪ B) / Support (A) |
| Option D: | Support (A ∪ B) / Support (B) |
| | |
| 15. | Impact of a Dead end on Page Rank algorithm is |
| Option A: | Rank of none of the pages is affected |
| Option B: | Rank of all pages becomes 0 |
| Option C: | Few pages get very high page rank and the rest get 0 |
| Option D: | Few pages get 0 and rest are unaffected |
| | |
| 16. | An algorithm that divides the entire file of baskets into segments small enough so that all frequent itemset for the segment can be found in main memory is: |
| Option A: | PCY Algorithm |
| Option B: | Randomized Algorithm |
| Option C: | DGIM Algorithm |
| Option D: | SON Algorithm |
| | |
| 17. | Which of the following factors have an impact on the Google PageRank? |
| Option A: | The total number of inbound links to a page of a web site |
| Option B: | The subject matter of the website |
| Option C: | The count of number of times a word repeats on a website |
| Option D: | The number of outbound links from the page |
| | |
| 18. | The concept which explains the advantage of on-line vendors over conventional, brick-and mortar vendors is called |
| Option A: | Long Tail |
| Option B: | Tailing |
| Option C: | Short Tail |
| Option D: | Zero Tail |
| | |
| 19. | Which one of the following is used to normalize the utility matrix? |
| Option A: | Subtract average rating of a user from each rating of that user. |
| Option B: | Add average rating of a user to each rating of that user. |
| Option C: | For each user, consider their average rating only |
| Option D: | For each user, consider the median of his/her ratings |
| | |

| | |
|---|---|
| 20. | Friends relationship of Facebook can be best modeled on Social Web using |
| Option A: | Directed Acyclic Graph |
| Option B: | Linked List |
| Option C: | Directed Graph |
| Option D: | Undirected Graph |

| Q2. (20 Marks Each) | Solve any Four out of Six 5 marks each |
|---|---|
| A | Compare traditional approach with big data approach. |
| B | Explain Read Operation in HDFS. |
| C | State and explain CAP Theorem. |
| D | Explain the concept of Bloom Filter with an example. |
| E | What is DGIM? State the rules used in DGIM Algorithm. |
| F | Write a short note on Collaborative Filtering. |

| Q3. (20 Marks Each) | Solve any two out of three 10 marks each |
|---|---|
| A | What is Hadoop? Describe HDFS architecture in detail. |
| B | Explain PageRank Algorithm with a suitable example |
| C | Explain CURE Algorithm with Initialization and Completion Phase. |

**University of Mumbai**
Examination 2020 under cluster 7
**Examinations Commencing from 23ʳᵈ December 2020 to 6ᵗʰ January 2021 and from 7ᵗʰ January 2021 to 20ᵗʰ January 2021**
Program: Information Technology
Curriculum Scheme: Rev2016
Examination: BE Semester VIII
Course Code: ITC802 and Course Name: **Internet of Everything**
Time: 2 hour                                                                                  Max. Marks: 80

==================================================================

| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|---|---|
| | |
| 1. | M2M is a term introduced by |
| Option A: | IOT service provider |
| Option B: | Fog Computing service provider |
| Option C: | Telecommunication service provider |
| Option D: | Internet service provider |
| | |
| 2. | Bluetooth 5.0 promises: |
| Option A: | 4x Speed, 2x Range, 2x Data |
| Option B: | 6x Speed, 3x Range, 3x Data |
| Option C: | 2x Speed, 4x Range, 8x Data |
| Option D: | 3x Speed, 4x Range, 8x Data |
| | |
| 3. | RFID uses |
| Option A: | Electromagnetic Signal |
| Option B: | Microwave Signal |
| Option C: | Radio Frequency Signal |
| Option D: | Gamma-Ray signal |
| | |
| 4. | Which of the following statements concerning bar codes is true? |
| Option A: | The EAN bar code is a subset of the UPC bar coding system |
| Option B: | The UPC barcode is a subset of the EAN bar coding system |
| Option C: | The EAN barcodes and UPC barcodes are mutually exclusive |
| Option D: | The EAN barcodes and UPC barcodes have some overlaps |
| | |
| 5. | Anti-Collision Protocol are a critical part of _____ system |
| Option A: | ALOHA |
| Option B: | RFID |
| Option C: | Binary Tree |
| Option D: | MBQTP |
| | |
| 6. | A shopper goes into a supermarket and purchases two identical boxes of cereals which have barcodes on them. These two barcodes on the two boxes would be |
| Option A: | There would be minor differences |
| Option B: | There may or may not be differences |
| Option C: | The last line in the bar code would be different. |

| | |
|---|---|
| Option D: | Exactly identical |
| | |
| 7. | Select the incorrect statement: |
| Option A: | QT protocol, tags involve complex hardware requirements |
| Option B: | Last Input First Output stack (LIFO) is used in QT protocol |
| Option C: | Slotted Aloha has maximal throughput 1/e |
| Option D: | Tree-based protocols are deterministic |
| | |
| 8. | In Slotted Aloha |
| Option A: | Tag Cost is least |
| Option B: | Tag Cost is medium |
| Option C: | Tag Cost is most |
| Option D: | Tag is not required |
| | |
| 9. | In slotted ALOHA, a maximum of _____ transponders can be put into circulation |
| Option A: | 64 |
| Option B: | 128 |
| Option C: | 256 |
| Option D: | 1024 |
| | |
| 10. | _____ applications come under Industrial IoT. |
| Option A: | Health and fitness monitoring |
| Option B: | Machine diagnosis and prognosis |
| Option C: | Smart irrigation |
| Option D: | Smart vending machine |
| | |
| 11. | MQTT topics are |
| Option A: | Simple floating point |
| Option B: | Simple integer |
| Option C: | Simple symbol |
| Option D: | Simple string |
| | |
| 12. | _____ HTTP method lists all the resources in a collection. |
| Option A: | POST |
| Option B: | GET |
| Option C: | DELETE |
| Option D: | PUT |
| | |
| 13. | Functions of Brokers in MQTT |
| Option A: | Classify sensor data into topics |
| Option B: | Classify topics into sensor data |
| Option C: | Classify sensors |
| Option D: | Classify different topics |

| | |
|---|---|
| 14. | Triangulation, scene analysis and proximity techniques are based on: |
| Option A: | RRS |
| Option B: | RRP |
| Option C: | RRR |
| Option D: | RAR |
| | |
| 15. | _____ localization algorithm works according to the last known or estimated location by using velocity or acceleration. |
| Option A: | Scene Analysis |
| Option B: | Dead Reckoning |
| Option C: | Proximity |
| Option D: | Hybrid Algorithm |
| | |
| 16. | Mobility supported at the link layer is also called as _____ |
| Option A: | Mobility link layer |
| Option B: | Mobile link layer |
| Option C: | Mobility layer |
| Option D: | Mobile layer |
| | |
| 17. | The similarity in signal space in Scene Analysis or fingerprinting method can be based either on: |
| Option A: | Differential schemes |
| Option B: | Derivative based schemes |
| Option C: | Deterministic or probabilistic schemes |
| Option D: | Deterministic and probabilistic schemes |
| | |
| 18. | Hadoop works on _____ |
| Option A: | Relational Database Management System |
| Option B: | Distributed file system |
| Option C: | Network file system |
| Option D: | Java Message Service System |
| | |
| 19. | Hadoop is written in |
| Option A: | Perl |
| Option B: | Java |
| Option C: | Python |
| Option D: | Octave |
| | |
| 20. | Select the true statement |
| Option A: | Map Task in MapReduce is performed using the Mapper() function |

| | |
|---|---|
| Option B: | The size of data block is generally 64KB |
| Option C: | Reduce Task in MapReduce is performed using the Map() function |
| Option D: | MapReduce tries to place the data and the job |

**Please use either of the 3 option given below while setting up the subjective/descriptive questions**

**Option 3 (Subjective/Descriptive Questions)**

| Q2. | *Please delete the instruction shown in front of every sub question* |
|---|---|
| A | **Solve any Two**                                        **5 marks each** |
| i. | Explain CoAP with example. |
| ii. | Draw labelled RFID architecture and list applications. |
| iii. | List and give different steps in the Predictive analytics process? |
| B | **Solve any One**                                  **10 marks each** |
| i. | Explain any one IOT application along with the required sensors and the IOT platform. Also suggest the type of communication protocol with the justification. |
| ii. | List the conventional-Measurement algorithms that can be used for localization of the mobile object. Discuss any 3 techniques in detail. |

| Q3. | *Please delete the instruction shown in front of every sub question* |
|---|---|
| A | **Solve any Two**                                        **5 marks each** |
| i. | List the different RFID applications and limitations of RFID. |
| ii. | Give different steps involved in slotted aloha protocol? |
| iii. | Explain how the spout and bolt work in Apache Storm. |
| B | **Solve any One**                                  **10 marks each** |
| i. | What do you mean by Resource in the REST framework?What are the tools used for creating RESTFull web services? |
| ii. | Discuss the RFID enabled handoff management process in Localization and Mobility management. |

**University of Mumbai**

**Examination 2020 under cluster 7 (Lead College: SSJCOE)**

Program: **Information Technology**

Curriculum Scheme: Rev 2016

Examination: BE                                                    Semester: VIII

Course Code: ITDLO8045          Course Name: Enterprise Resource Planning

Time: 2 hour                                                    Max. Marks: 80

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| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
| --- | --- |
| | |
| 1. | Which is not the drawback of Non-Integrated system. |
| Option A: | Data duplication |
| Option B: | Data inconsistency |
| Option C: | lack of integration |
| Option D: | better decisions improving performance |
| | |
| 2. | An enterprise can make better business decisions with the help of ------ . |
| Option A: | Data Mining |
| Option B: | Business Intelligence |
| Option C: | OLAP |
| Option D: | Product Life Cycle management |
| | |
| 3. | ----- helps to meet needs of customer, product and service. |
| Option A: | Customer Relationship Management |
| Option B: | Supply Chain Management |
| Option C: | Enterprise Resource Planning |
| Option D: | Product Life Cycle Management |
| | |
| 4. | Multidisciplinary fields such as technical, business, legal, financial are included in ---- . |
| Option A: | e-Commerce |
| Option B: | e-Business |
| Option C: | e-Bill |
| Option D: | e-mail |
| | |
| 5. | ---- identifies all components used in the production, quantity required and order in which the components are assembled. |
| Option A: | Manufacturing Resource Planning |
| Option B: | Distribution Requirement Planning |
| Option C: | Material Requirement Planning |
| Option D: | Bill of Material |
| | |
| 6. | Identify the subsystem of Plant Maintenance module of an ERP system |
| Option A: | Inventory Management |
| Option B: | Preventive Maintenance Control |
| Option C: | Cost Management |

| | |
|---|---|
| Option D: | Project management |
| | |
| 7. | ERP Inventory software module maintains reports of ----- . |
| Option A: | Sales |
| Option B: | No of customers |
| Option C: | warehouse supplies |
| Option D: | No of suppliers |
| | |
| 8. | This serves as a central pool of financial data for reporting and other accounting areas. |
| Option A: | Market management module |
| Option B: | Investment management |
| Option C: | General Ledger |
| Option D: | Asset Accounting |
| | |
| 9. | This is not an quantifiable benefit of an ERP system. |
| Option A: | Reduced Manpower |
| Option B: | Better product design |
| Option C: | Reduced Material Cost |
| Option D: | Improved Sales |
| | |
| 10. | ----- are very helpful in the implementation process of ERP implementation. |
| Option A: | consultants |
| Option B: | employees |
| Option C: | vendors |
| Option D: | end-users |
| | |
| 11. | Executive committee is headed by ---- ._____. |
| Option A: | End users |
| Option B: | vendors |
| Option C: | CIO/CEO |
| Option D: | consultant |
| | |
| 12. | --- is superficial study of the package, considering the weaknesses and strengths of each package. |
| Option A: | Gap-Analysis |
| Option B: | Reengineering |
| Option C: | Configuration |
| Option D: | Pre-evaluation Screening |
| | |
| 13. | Breaking the system will be done in ____ |
| Option A: | Going Live |
| Option B: | Configuration |
| Option C: | Testing |
| Option D: | Reengineering |
| | |
| 14. | Installation of all modules will happen at once in ____ strategy. |
| Option A: | Top-down |

| | |
|---|---|
| Option B: | Bottom-up |
| Option C: | Big-Bang |
| Option D: | Sequential |
| | |
| 15. | Failure or success of the projects depends on ___ a broader way. |
| Option A: | Package Evaluation |
| Option B: | Gap Analysis |
| Option C: | Pre-evaluation Screening |
| Option D: | Resources |
| | |
| 16. | Online banking, online shopping, online ticket booking are examples of ---- . |
| Option A: | e-Business |
| Option B: | e-Bill |
| Option C: | e-Commerce |
| Option D: | e-Way |
| | |
| 17. | Payment of electricity bill & taxes are the examples of --- e-commerce models. |
| Option A: | B2B |
| Option B: | B2C |
| Option C: | C2C |
| Option D: | C2G |
| | |
| 18. | ---- is required to align business strategies, processes, and applications quickly, correctly, and all at once. |
| Option A: | Involved Management |
| Option B: | String Leadership |
| Option C: | Dedicated Team |
| Option D: | Good application |
| | |
| 19. | This strategy is the path to consumer loyalty. |
| Option A: | Customer relationship management |
| Option B: | supply chain management |
| Option C: | relationship selling |
| Option D: | Customer care |
| | |
| 20. | This is not an ERP implementation methodology phase. |
| Option A: | Project preparation phase |
| Option B: | Pilot Phase |
| Option C: | Assessment Phase |
| Option D: | Planning phase |

| Q2<br>(20 Marks) | Solve any Four out of Six                                5 marks each |
|---|---|
| A | Categorize the risks of Enterprise Resource Planning. |
| B | Explain the factors responsible for the growth of E-Commerce. |
| C | Write a short note on the Plant Maintenance module of ERP. |
| D | Discuss the tangible/indirect benefits to an organization due to ERP implementation. |
| E | Explain the following stages of ERP Implementation in brief.<br>    i)    Pre-evaluation screening ii) Package Evaluation |
| F | Describe the chain of e-Procurement. |

| Q3.<br>(20 Marks) | Solve any Two Questions out of Three                      10 marks each |
|---|---|
| A | Summarize Data Warehouse with respect to its primary goals, major components and advantages to an enterprise. |
| B | Explain the following terms<br>    i)    Just-in-Time            ii) Bill of Material |
| C | With example , explain the types of e-Commerce models. |

## University of Mumbai
### Examination 2020 under cluster 7(Lead College: SSJCOE)
**Examinations Commencing from 23<sup>rd</sup> December 2020 to 6<sup>th</sup> January 2021**

Program: **Information Technology**

Curriculum Scheme: Rev-2016

Examination: BESemesterVIII

Course Code:  ITDL08042 and Course Name: IRS ( Information Retreival System)

Time: 2 hour                                                                                  Max. Marks: 80

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| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|---|---|
| | |
| 1. | Which are the three classic models in information retrieval system? |
| Option A: | Boolean model, Vector Space model, Deterministic model |
| Option B: | Deterministic model, Vector Space model, Probabilistic model |
| Option C: | Boolean model, Deterministic model, Probabilistic model |
| Option D: | Boolean model, Vector Space model, Probabilistic model |
| | |
| 2. | The first stage of the indexing process is typically known as _____ |
| Option A: | tokenization |
| Option B: | localization |
| Option C: | globalization |
| Option D: | gathering information |
| | |
| 3. | Any text can be characterized by using four attributes: |
| Option A: | syntax, structure, semantics, and style |
| Option B: | symbol, unioun, semantics and style |
| Option C: | symbol, structure, constants and style |
| Option D: | syntax, union, symbol and style |
| | |
| 4. | _____-based queries are popular, because they are intuitive and easy to express. |
| Option A: | Keyword |
| Option B: | Semantics |
| Option C: | Structure |
| Option D: | Style |
| | |
| 5. | A _____ is a set of syntactic features that must occur in a text segment. |
| Option A: | Structure |
| Option B: | Pattern |
| Option C: | Symbol |
| Option D: | Style |
| | |
| 6. | It is sequence of single-word queries. |
| Option A: | phrase |
| Option B: | query |

| | |
|---|---|
| Option C: | text |
| Option D: | proximity |
| | |
| 7. | boolean query operators are |
| Option A: | & |
| Option B: | + |
| Option C: | - |
| Option D: | AND, OR, NOT |
| | |
| 8. | Spelling correction only depends on_____factor. |
| Option A: | Query |
| Option B: | term |
| Option C: | indexpowerd |
| Option D: | Postings |
| | |
| 9. | One important consequence of using _____ is the possibility of performing direct searching on compressed text |
| Option A: | byte Huffman coding |
| Option B: | Huffman coding |
| Option C: | Adaptive dictionary methods |
| Option D: | Arithmetic coding |
| | |
| 10. | SMDL stands for _____ |
| Option A: | Standard Music Description Language |
| Option B: | Switched Multimegabit Data language |
| Option C: | scale massive data link |
| Option D: | standard multitaskng data language |
| | |
| 11. | Compression models can be adaptive, static, or _____ |
| Option A: | semi-static |
| Option B: | static |
| Option C: | semi-dynamic |
| Option D: | Dynamic |
| | |
| 12. | A Thesaurus stands for........ |
| Option A: | Objective of removing affixes and allowing the retrieval of document containing syntactical variations of query term |
| Option B: | Objective of filtering out words with very low descrimination value for retrieval purpose |
| Option C: | Objective of treating digits, hyphens, punctuation marks, and the case of letters |
| Option D: | Method of allowing the expansion of original query with related term |
| | |
| 13. | The purpose of meta search is ---------------- |
| Option A: | to return a list of sites based on the list of search terms you enter. |
| Option B: | to allow all users to change its content. |
| Option C: | to return a list of sites that have been reviewed by humans. |
| Option D: | *to searche a variety of other search engines.* |
| | |
| 14. | _____ is an aspect of a hyperlink which is not important for search engine optimization |
| Option A: | The visibility of the link text. |

| | |
|---|---|
| Option B: | The anchor text, especially the keywords in it. |
| Option C: | The place from which the link originates. |
| Option D: | The place to which the link leads. |
| | |
| 15. | In Multimedia Information retrieval , large gap between contents of a multimedia signal and its meaning is called as |
| Option A: | Suffix array |
| Option B: | Inverted files |
| Option C: | Semantic gap |
| Option D: | Suffix trees |
| | |
| 16. | In audio retrieval, small snippet of sound it called ? |
| Option A: | Fingerprinting |
| Option B: | Speech recognition |
| Option C: | Speaker identification |
| Option D: | Spoken document retrieval |
| | |
| 17. | Time interval between the arrival of the query and the generation of the answer is called _____ |
| Option A: | Query Latency |
| Option B: | Indexing time |
| Option C: | Query throughput |
| Option D: | Indexing space |
| | |
| 18. | Which visualization technique does connection between two or more views of the same data ? |
| Option A: | Brushing and linking |
| Option B: | Panning and zooming |
| Option C: | Color highlighting |
| Option D: | Magic lens |
| | |
| 19. | Which of the following is not a principle of Human -Computer Interaction? |
| Option A: | Offer informative feedback. |
| Option B: | Reduce working memory load. |
| Option C: | Provide alternative interfaces for novice and expert users. |
| Option D: | offers different type of sorting before search |
| | |
| 20. | Which visualization technique supports the analysis of large hierarchical structure data. ? |
| Option A: | Panning and zooming |
| Option B: | Tree views |
| Option C: | Focus + context |
| Option D: | Brushing and linking |

| Q2 | Solve any Four out of Six          5 marks each |
|---|---|
| A | *List out different components of information system and explain its types.* |
| B | Explain Classic Information Retrieval models. |
| C | Compare between Automatic local analysis and Automatic global analysis |

| | | |
|---|---|---|
| D | Write short note on pattern matching. | |
| E | Discuss about Meta searches. | |
| F | Explain interface support for the search process | |

| **Q3** | | **Solve any Two Questions out of Three 10 marks each** |
|---|---|---|
| | A | *Describe Boolean queries and vector queries and explain in detail.* |
| | B | Explain different types of Markup Language and compare |
| | C | *Write a short note Text compression* |

Examination: BE                                                    Semester VIII

Course Code: ITDLO8041_ and Course Name: UID

Time: 2 hour                                                    Max. Marks: 80

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| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|---|---|
| | |
| 1. | Out of the following options, which one is strictly considered not the principle of effective User-centered design? |
| Option A: | Organize technology around the user's goals, tasks and abilities. |
| Option B: | Organize technology around the way users process information and make decisions. |
| Option C: | Create the design without taking the input from the user. |
| Option D: | Keep the user in control and aware of the state of the system. |
| | |
| 2. | A good way to study User expectations is using…. |
| Option A: | Cognitive walkthrough |
| Option B: | Affinity Diagram |
| Option C: | Market Research |
| Option D: | Contextual Inquiry |
| | |
| 3. | A Prototype is important as it provides a …… |
| Option A: | Mini-Model of existing System |
| Option B: | Manifestation of a design that allows stakeholders to interact with it and to explore its suitability |
| Option C: | Working Model of existing System |
| Option D: | can be applied only to the newly created product |
| | |
| 4. | In UID, Waterfall model is basically a _____ model in which each step must be completed before the next step can be started |
| Option A: | Incremental |
| Option B: | Linear |
| Option C: | Iterative |
| Option D: | Analytical |
| | |
| 5. | In UID, User Evaluation is done based on |
| Option A: | Documents |
| Option B: | Research Results |
| Option C: | Feedback |

| | |
|---|---|
| Option D: | Mathematical model |
| | |
| 6. | The Design Council of the UK proposed the double-diamond of design which has four phases. Their sequential steps are |
| Option A: | Define -> Discover -> Develop -> Deliver |
| Option B: | Discover -> Define -> Develop -> Deliver |
| Option C: | Discover -> Develop -> Define -> Deliver |
| Option D: | Define -> Develop -> Discover -> Deliver |
| | |
| 7. | Which of the prototyping methods will cost you more? |
| Option A: | low-fidelity prototype |
| Option B: | Mixed-fidelity prototype |
| Option C: | high-fidelity prototype |
| Option D: | Evolutionary prototyping |
| | |
| 8. | Out of the following which method _____ involves watching and listening to users |
| Option A: | Interaction |
| Option B: | Observation |
| Option C: | Qualitative research |
| Option D: | Evaluation |
| | |
| 9. | Flat list, Contextual, drop down, Pop-up are styles of _____ |
| Option A: | Menus |
| Option B: | Icons |
| Option C: | Windows |
| Option D: | Mobile Interface |
| | |
| 10. | Over use of sound effects and music can make user _____ |
| Option A: | Frustrated |
| Option B: | Annoyed |
| Option C: | Sad |
| Option D: | Happy |
| | |
| 11. | We study user interaction design to determine how we can make technology-led applications more usable for _____ |
| Option A: | Future Technology |
| Option B: | End-Users |
| Option C: | Software Developers |
| Option D: | Company/IT Industry |
| | |
| 12. | Which Interaction Type enable users to fly over them and zoom in and out of different parts? |
| Option A: | Responding |
| Option B: | Exploring |

| | |
|---|---|
| Option C: | Manipulating |
| Option D: | Conversing |
| | |
| 13. | According to the studies, which one of these would not be found in a good User interaction design? |
| Option A: | Icons that can have specific meanings |
| Option B: | A long command line to achieve a function |
| Option C: | Sounds that convey meanings |
| Option D: | Common shortcuts, like CTRL+Z for undo |
| | |
| 14. | In User Experience/Usability, which is not included? |
| Option A: | knowledge about Analytics |
| Option B: | Quality |
| Option C: | User interaction design |
| Option D: | Detailed Software Design |
| | |
| 15. | Interaction designer helps in bonding with… |
| Option A: | client and end user |
| Option B: | coder and manager |
| Option C: | Developer and client |
| Option D: | Coder and tester |
| | |
| 16. | Out of these, which one is not an interface style? |
| Option A: | Command line/command prompt |
| Option B: | Menus |
| Option C: | Natural Language |
| Option D: | Voice Recognition |
| | |
| 17. | Gaps between user and machines are filled with _____. |
| Option A: | Software Engineering |
| Option B: | User communication |
| Option C: | User Interaction Design |
| Option D: | Computer Interfaces |
| | |
| 18. | Operations like Selecting, dragging, opening, closing, zooming in and out using touch gestures on a smartphone are all examples of which type of interaction |
| Option A: | Instructing |
| Option B: | Manipulation |
| Option C: | Conversing |
| Option D: | Exploring |
| | |
| 19. | According to UID Theory, What is pilot study? |
| Option A: | study done before the main study |

| | |
|---|---|
| Option B: | done after main study |
| Option C: | done with main study |
| Option D: | done after feedback |
| | |
| 20. | Find the incorrect statement… |
| | |
| Option A: | Utility refers to the functionality of a system |
| Option B: | Usability is concerned with adding complexity to the system |
| Option C: | Usability is concerned with making systems easy to use |
| Option D: | Poorly designed computer system can be extremely annoying to users |

# Option 2

| Q2 | Solve any Two Questions out of Three  10 marks each |
|---|---|
| A | *What do you mean by Cognitive walkthrough, give example?* |
| B | *Comment on Interface metaphors.*<br>*a. 3D Video Games*<br>*b. Windows Environment*<br>*c. Web Browser* |
| C | *Explain any two empirical usability evaluation methods in detail?* |
| | |

| Q3 | Solve any Two Questions out of Three  10 marks each |
|---|---|
| A | *Explain conceptual models based on activities with example.* |
| B | *Explain the four main techniques for data gathering useful for user centered design?* |
| C | *Explain Usability Design Principles.* |

# University of Mumbai
## Examination 2020 under cluster 7(Lead College: SSJCOE)
**Examinations Commencing from 23rd December 2020 to 6th January 2021**
Program: **Information Technology**
Curriculum Scheme: Rev-2016

Examination: BESemesterVIII

Course Code: ITDLO8044 and Course Name: IT

Time: 2 hour                                                                 Max. Marks: 80

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| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|---|---|
|  |  |
| 1. | In General Voronoi diagram, robot traverses the unknown path, uses the path that is equidistant to: |
| Option A: | Farthest obstacle |
| Option B: | Closest obstacle |
| Option C: | Optimal path |
| Option D: | Safest path |
|  |  |
| 2. | In transformation matrix, approach vector is denoted as: |
| Option A: | X |
| Option B: | Y |
| Option C: | Z |
| Option D: | Major axis |
|  |  |
| 3. | Using Silhouette method robot can complete its task by using: |
| Option A: | Optimal path |
| Option B: | Longest path |
| Option C: | Multiple path |
| Option D: | Path without obstacles. |
|  |  |
| 4. | Industrial robot is called as: |
| Option A: | Cylindrical robot |
| Option B: | Spherical robot |
| Option C: | Gantry robot |
| Option D: | Articulated robot |
|  |  |
| 5. | Inverse kinematics never gives unique solution because: |
| Option A: | Different methods are not used to solve this. |
| Option B: | Number of variable and number of equations matches. |
| Option C: | For inverse of cosine angle , we always get two values |
| Option D: | We need to solve multiple equations. |
|  |  |
| 6. | Degrees of freedom is defined as: |
| Option A: | Number of directions in which robot can move. |
| Option B: | Number of minor axis of robot. |
| Option C: | Number of major axis of robot. |
| Option D: | Number of directions in which end effector can rotates. |

| | |
|---|---|
| 7. | Homogeneous transformation matrix is used so that: |
| Option A: | We can find rotational change of robot |
| Option B: | We can get translation change of robot |
| Option C: | We can get both |
| Option D: | We cannot get both. |
| | |
| 8. | In Jacobian we consider: |
| Option A: | Angular velocity |
| Option B: | Velocity |
| Option C: | Translation |
| Option D: | Angular translation |
| | |
| 9. | Hard automation is always : |
| Option A: | Simpler |
| Option B: | Complex |
| Option C: | Cheaper |
| Option D: | Maintenance free. |
| | |
| 10. | The jacobian results in a set of linear equations that relate the joint rates to the six vector formed from: |
| Option A: | Angular velocity |
| Option B: | Linear velocity |
| Option C: | Angular and linear |
| Option D: | Potential field |
| | |
| 11. | Each trapezoidal cell lies between two successive : |
| Option A: | Hexagonal point |
| Option B: | Triangular node |
| Option C: | Hexagonal vertex |
| Option D: | Polygon vertex |
| | |
| 12. | Which  SLAM combines images from robots or multiple users to generate 3D maps: |
| Option A: | Collaborative maps |
| Option B: | Audio visual SLAM |
| Option C: | Acoustic SLAM |
| Option D: | Perspective SLAM |
| | |
| 13. | Which of the following sensors determines the relation between robot and it environment: |
| Option A: | Internal |
| Option B: | External |
| Option C: | Positional |
| Option D: | Proximity |
| | |
| 14. | The smallest increment of motion detected by robot end effector is called as: |
| Option A: | Accuracy |

| | |
|---|---|
| Option B: | Efficiency |
| Option C: | Resolution |
| Option D: | Precision |
| | |
| 15. | In robotics rotary joints are called as : |
| Option A: | Revolutary |
| Option B: | Prismatic |
| Option C: | Cylindrical |
| Option D: | Spherical |
| | |
| 16. | The performance of a complete planner is assessed by its computational: |
| Option A: | Completeness |
| Option B: | Simplicity |
| Option C: | Complexity |
| Option D: | Probability |
| | |
| 17. | The main objective of industrial robot is : |
| Option A: | To increase the productivity |
| Option B: | To reduce the cost |
| Option C: | To increase the time |
| Option D: | To increase complexity. |
| | |
| 18. | The amount of weight carried by the robot manipulator at reduced speed: |
| Option A: | Output |
| Option B: | Payload |
| Option C: | Gross output |
| Option D: | Précised output |
| | |
| 19. | Path planning is effectively is effectively an extension of localization that it requires the determination of the robot's current position and a position of a goal location , both : |
| Option A: | Within different frames. |
| Option B: | With different knot points |
| Option C: | Within the same frame of reference/coordinates. |
| Option D: | With same knot points |
| | |
| 20. | Which of the following is safest and fastest algorithm to find obstacle free path: |
| Option A: | Trapezoidal |
| Option B: | Exact cell |
| Option C: | Potential field |
| Option D: | Cell decomposition |

| **Q2.** (20 Marks) | **Solve any Two Questions out of Three 10 marks each** |
|---|---|
| A | Explain any one method of robot localization. |
| B | Derive and explain DK of 3 axis robot. |
| C | Explain any one wave front planning algorithm. |

| Q3. (20 Marks) | Solve any Two Questions out of Three 10 marks each |
| --- | --- |
| A | Explain Jacobian matrix. |
| B | Compare between Bug1 and Tangent algorithm. |
| C | Explain IK analysis of 2- axis robot. |

Examination: BE                                                      Semester VIII

Course Code: ITDLO8043 and Course Name: Knowledge Management

Time: 2 hour                                                      Max. Marks: 80

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| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
|---|---|
| | |
| 1. | What is the first step in knowledge management? |
| Option A: | Gather |
| Option B: | Classify |
| Option C: | Analyze |
| Option D: | Share |
| | |
| 2. | Expertise can be categorized as distinct categories EXCEPT |
| Option A: | Associational |
| Option B: | Motor Skills |
| Option C: | Typewriting |
| Option D: | Theoretical |
| | |
| 3. | KM for organization does not |
| Option A: | Helps drive strategy |
| Option B: | Oppose business strategy |
| Option C: | Solves problem quickly |
| Option D: | Diffuses best practices |
| | |
| 4. | What the user sees and works with in terms of accessing and working with the knowledge? |
| Option A: | User Interface |
| Option B: | Application layer |
| Option C: | Collaborative layer |
| Option D: | Authentication layer |
| | |
| 5. | Which of the following knowledge is about topics such as restaurant, coins, and hurricanes, was used to understand the concepts explained in the chapter? |
| Option A: | Declarative Knowledge |
| Option B: | Procedural Knowledge |
| Option C: | General knowledge |
| Option D: | Specific knowledge |
| | |
| 6. | Which of the following is a global memory structure, a database or a repository that stores all partial problem solutions? |
| Option A: | Delphi Method |

| | |
|---|---|
| Option B: | Knowledge source |
| Option C: | Blackboard |
| Option D: | Procedure |
| | |
| 7. | Which of the following are the organizations related to law, accountancy, consultancy, design, research and development, education and training under one title? |
| Option A: | Information industries |
| Option B: | Knowledge industries |
| Option C: | Art industries |
| Option D: | Ethics industries |
| | |
| 8. | Artificial intelligence and _____technologies play an important role in the processes of knowledge discovery, capture, sharing, and application, |
| Option A: | Machine Learning |
| Option B: | Organizational Learning |
| Option C: | Data Abstraction |
| Option D: | Data Gathering |
| | |
| 9. | Ways of knowledge in organizational artefacts does not include |
| Option A: | Best Practices |
| Option B: | Technologies |
| Option C: | Knowledge Repositories |
| Option D: | Transactions |
| | |
| 10. | Which one is not the driving forces of Knowledge Management? |
| Option A: | Increasing domain complexity |
| Option B: | Accelerating Market Volatility |
| Option C: | Intensified speed of responsiveness |
| Option D: | Domain Analysis |
| | |
| 11. | Business intelligence concentrates on data access, _____, and presentation |
| Option A: | Analysis |
| Option B: | Diagnosis |
| Option C: | Corrective Action |
| Option D: | Preventive Action |
| | |
| 12. | KM processes are Capture, Sharing, Application and_____ |
| Option A: | Invention |
| Option B: | Discovery |
| Option C: | Recovery |
| Option D: | Control |
| | |
| 13. | ___are explicit boundaries that show exactly where an important ethical line lies |
| Option A: | landmark |
| Option B: | Fences |
| Option C: | transparency |
| Option D: | prevention |
| | |
| 14. | During an organization's early experiences with knowledge management_____ |

| | should be preferred |
|---|---|
| Option A: | Qualitative measures |
| Option B: | Quantitative measures |
| Option C: | Ethical Measures |
| Option D: | transparency |
| | |
| 15. | Assessment of value of knowledge is one way of attributing a _____ measure of benefits resulting from knowledge, which is often _____ |
| Option A: | Tangible, Intangible |
| Option B: | Intangible, Tangible |
| Option C: | Tangible, Tangible |
| Option D: | Intangible, Intangible |
| | |
| 16. | KM can improve organizational processes along which dimension. |
| Option A: | Value added products |
| Option B: | Inherently knowledge-based products |
| Option C: | Employee adaptability |
| Option D: | degree of innovation |
| | |
| 17. | An expert writing a book is _____his/her knowledge in that area |
| Option A: | Internalizing |
| Option B: | Externalizing |
| Option C: | Socializing |
| Option D: | Economy of scale |
| | |
| 18. | An organization may choose not to patent an invention but instead keep it as a _____ |
| Option A: | Patents |
| Option B: | Copyright |
| Option C: | nondisclosure agreement |
| Option D: | Trade secret |
| | |
| 19. | A good gap analysis should address the |
| Option A: | Community of Practice |
| Option B: | Complex Knowledge |
| Option C: | Competitive Intelligence |
| Option D: | Conduct a risk analysis |
| | |
| 20. | Preparing a report on lessons learned from a project is example of ? |
| Option A: | externalization |
| Option B: | internalization |
| Option C: | socialization |
| Option D: | Innovation |

| Q2 | Solve any 2 | 10 marks each |
|---|---|---|
| A | Explain the importance of knowledge in creation and utilization of information | |
| B | What is intellectual capital? What are the three types of intellectual capital? and how do they relate to different knowledge locations? | |
| C | Briefly enumerate the ways in which knowledge can impact an organization | |
| **Q3.** | **Solve any 2** | **10 marks each** |
| A | What are some of the limitations of knowledge application systems? | |
| B | Describe the four steps in the CBR process | |
| C | Describe the two techniques for knowledge elicitation via the use of stories | |