QP Code: 1773QP

Seat No.	

Total No. of Pages: 2

January - February (Winter) Examination - 2023

Subject Name: B.Tech. CBCS_86161_Discrete Mathematical Structures_23.01.2023_10.30 AM To 01.00 PM

Subject Code: 86161

Day and Date: Monday, 23-01-2023
Time: 10:30 am to 01:00 pm

Total Marks: 70

Instructions.:

1) All questions are compulsory
2) Figures to the right indicate full marks
3) Assume suitable data wherever necessary and mention it boldly

---

Q.1. a) Let A and B multisets as A = {3.a,2.b,1.c} and B = {2.a,3.b,4.d} Find(8 Marks) [15]
i) A∪B ii)A∩B
iii) A-B iv) A+B
b) Write the following Boolean expression in an equivalent product-of-sum in three variables x1,x2,x3:(7 marks)
i)
x1*x2

Q.2. a) What is the lower bound, upper bound, greatest lower bound, and least upper bound with example? (8Marks) [15]
b) Let (Z,*) be an algebraic system, where Z is the set of integers and operation * is defined by (n*m) = Maximum of (n,m). Show that (Z, *) is a semigroup. (7 Marks)

Q.3. a) Obtain PCNF and PDNF of the following without constructing a truth table:(8 Marks) [15]
i)¬(P → R) ˄ (Q<=>
P)
b) Show the following equivalence: (7 Marks)
i) (~ P ˄(~ Q ˄ R))˅(Q˄R) ˅(P˄R) <=>
R

Q.4. a) Define preorder, inorder and postorder traversal with examples. (8 Marks) [15]

OR

b) Define:(8 marks)
i) Path ii) Reachability iii)
Connectedness

a) Let X = {1,2,3,4,6,9} and the relation ≤ be such that x ≤ y if x divides y. Draw the Hasse diagram of (X, ≤). (7 Marks)

OR

b) Explain PERT and related techniques with an example. (8 Marks)

Q.5. Solve any 10 MCQs (1 Mark each) [10]

A. Which of the following is a subset of set {1, 2, 3, 4}?

a) {1, 2} b){1, 2, 3}
c) {1} d)All of the mentioned

B. The intersection of the sets {1, 2, 8, 9, 10, and 5} and {1, 2, 6, 10, 12, 15} is the...

a) {1, 2, 10} b) {5, 6, 12, 15}
c) {2, 5, 10, 9} d) {1, 6, 12, 9, 8}

C. The symbolization for conjunction is...

a) p ^ q b) p & q
c) p v q d) ~ p

D. Which of the following statement is a proposition_____.

a) Close the door b) God bless you
c) What is the time now? d) India is a country

E. Canonical forms for a boolean expression have _____ types.

a) Three types b) Two types
c) Four types d) Five types

F. A graph is a collection of:

a) Row and columns b) Vertices and edges
c) Equations d) None of these

G. A connected Graph T without any cycle is called:

a) Free graph b) No cycle
c) Non-cycle graph d) Circular graph

H. Boolean algebra deals with how many discrete values.

a) only four b)only five
c) only three d) only two

I. Which of the following function is also referred to as an injective function?

a)Many-to-one b)Onto
c) One-to-One d)None of the mentioned

J. The function (gof) is _____ if the functions f and g are onto function?

a)Into function b) one-to-one function
c)onto function d)one-to-many function

K. In the group G = {2, 4, 6, 8) under multiplication modulo 10, the identity element is....

a) 6 b)8
c)4 d)2

L. What's the name of this law a*a=a a⊕a= a.

a) Identity b) Inverse element
c) associative d)Idempotent law

QP Code: 1949QP

Seat No.	

Total No. of Pages: 2

January - February (Winter) Examination - 2023

Subject Name: B.Tech. CBCS_86162_Data Structures using C_25.01.2023_10.30 AM To 01.00 PM

Subject Code: 86162

Day and Date: Wednesday, 25-01-2023

Time: 10:30 am to 01:00 pm

Total Marks: 70

Instructions.:

1) All questions are compulsory
2) Figures to the right indicate full marks

Q.1. a) What is array? Describe its types with example ? (8 Marks) [15]

b) What is structure? Explain the C syntax of structure declaration with example .(7 Marks)

Q.2. a) Write note on (8 Marks) [15]

1) Different Looping constructs used in C 2) Structure of C program

b) Explain function call, function definition and function prototype with example (7 Marks)

Q.3. a) Explain binary search algorithm with example (8 Marks) [15]

b) Describe process of sorting in insertion sort algorithm (7 Marks)

Q.4. a) Explain structure of B Tree (8 Marks) [15]

OR

b) Write a C program to implement operations on queue (7 Marks)

a) What are merits and demerits of linked list over array. (8 Marks)

OR

b) Define pointer. Explain array of pointers and pointer to an array? (7 Marks)

Q.5. [10]

Solve any 10 MCQs (Each 1 Marks)

A. The condition_____ indicate the queue is empty.
a) Front=Null b) Null=Front c) Front=Rear= -1 d) Rear=Null

B. How are String represented in memory in C?
a) array of characters b)the object of some class
c)same as other primitive data type d)None of these

C. Which of the following is not a valid C variable name?
a) int number b) float Rate c) int variable_count d) int $main

D. How is an array initialized in C language?
a) int a[2]={3,5,6} b) int a={1,2,3} c) int a(3)={1,2,3} d) int a()={1,2,3}

E. When new data are to be inserted into a data structure, but there is not available space; this situation is usually called ....
a) Underflow b) overflow c) houseful d) saturated

F. The process of inserting an element in the stack is called?
a) Enqueue b) Insert c) Push d) Pop

G. Which of the following is not the type of queue?
a) Ordinary queue b) Special queue c) Priority queue d) Circular queue

H. The best case time complexity of quick sort is .....
a) O(n) b) O(logn) c) O(n^2) d) O(n logn)

I. A list which displays the relationship of adjacency between elements is said to be
a) linear b) non linear c) linked list d) trees

J. A binary tree whose every node has either zero or two children is called .....
a) Complete binary tree b) Binary search tree c) Extended binary tree d) Data Structure

K. What is the worst case complexity of bubble sort?
a) O(nlogn) b) O(logn) c) O(n) d) O(n^2)

L. A terminal node in a binary tree is called_____
a) Root b) Leaf c) Child d) Branch

SB – 69

Seat No.	

Total No. of Pages : 3

Final Year B.Tech. (Computer Science and Engineering) (Part-IV) (Semester - VII) (CBCS) Examination, January - 2023

SOFTWARE TESTING AND QUALITY ASSURANCE

Sub. Code : 83860

Day and Date : Saturday, 14 - 01- 2023 **Total Marks : 70**

Time : 10.30 a.m. to 01.00 p.m.

Instruction :
1) **All questions are compulsory.**
2) **Figures to the right indicate full marks.**
3) **Assume suitable data if necessary.**

Q1) Solve MCQs. (1 Mark Each) **[14]**

a) Which objective is most difficult to achieve?
   i) Execute every statement of a program at least once
   ii) Execute every branch statement of a program at least once
   iii) Execute every path of a program at least once
   iv) Execute every condition of a branch statement of a program at least once

b) Software should have
   i) Program + operating system + compiler
   ii) Set of programs + operating system
   iii) Programs + documentation + operating procedures
   iv) None of the above

c) One fault may lead to
   i) One failure ii) Many failures
   iii) No failure iv) All of the above

d) In walkthroughs, who presents the document to the members?
   i) Author ii) Moderator
   iii) Customer iv) Developer

e) Which is not a characteristic of a good SRS?
   i) Correct ii) Complete
   iii) Consistent iv) Brief

P.T.O.

f) Peer reviews are also known as?
   i) Inspections ii) Walkthroughs
   iii) Informal reviews iv) Formal reviews

g) Which is not an accepted strategy for data validity?
   i) Accept only known valid data
   ii) Reject known bad data
   iii) Sanitize all data
   iv) Reject non-effective data

h) Which test cases are easy to identify?
   i) Fault revealing ii) Modification revealing
   iii) Modification traversing iv) Bug revealing

i) Risk should include
   i) Probability of occurrence of a problem
   ii) Impact of that problem
   iii) Test cases
   iv) (i) and (ii) both

j) Which of the following testing technique can be used in order to determine the validation test?
   i) Black-box Testing ii) White-box Testing
   iii) Yellow- box Testing iv) All of the above

k) Automated test data generation is used to generate
   i) Test data ii) Test cases
   iii) Test suite iv) All of the above

l) Which one is not a load testing metric?
   i) Number of concurrent users ii) Wait Time
   iii) Total links on a page iv) Throughput

m) Form based testing does not check
   i) Data validations ii) Hyperlinks on each page
   iii) Mandatory fields iv) Navigation amongst fields

n) Compatibility matrix is created in
   i) Security testing ii) Database testing
   iii) Performance testing iv) Browser testing

Q2) Solve any 2 of the following (7 Marks Each) **[14]**

a) What are the limitations of testing? Discuss with the help of examples.

b) What is the purpose of preparing a checklist? Discuss with the help of a checklist?

c) What is regression testing? Discuss various categories of selective re-test problem.

Q3) Solve any 2 of the following (7 Marks Each) : **[14]**

a) What are logical bugs? How are they different from syntax bugs?

b) Design a checklist for user documentation verification?

c) What are various strategies for data validity? Discuss with the help of an example?

Q4) Solve any 2 of the following (7 Marks Each) : **[14]**

a) Describe Java Testing Tools in details.

b) What are the Seven Steps for Testing Process.

c) Explain the significance of virus and firewall testing.

Q5) Solve any 2 of the following (7 Marks Each) **[14]**

a) List and explain some Automation and Testing Tools.

b) Describe Verification Testing, Validation Testing.

c) List the advantages of automated test data generation over manual test data generation.

Q2) Solve any two of following: (7 Marks each)

a) What are parallel systems? Explain parallel database architectures in detail with diagrams.

b) What is stored procedure in PL/SQL? Give its advantages. Explain in detail, syntax to create stored procedure in PL/SQL.

c) What is NoSQL? Explain types of NoSQL databases in detail.

Q3) Solve any two of following: (7 Marks each)

a) Explain two phase commit (2PC) protocol in brief. Also explain how 2PC protocol handles failure of a participating site and failu[illegible]of a coordinator.

b) Describe oracle sequence. Explain sequence in Oracle with syntax and example.

c) What is CouchDB? Give difference between MongoDB and CouchDB.

Q4) Solve any two of following: (7 Marks each)

a) Explain data-information in decision making cycle.

b) What is FireBase?

c) Differentiate Univariate analysis & Bivariate analysis.

Q5) Solve any two of following: (7 Marks each)

a) What are the desired DBA skills?

b) What is Business Intelligence? Explain in brief.

c) What is mathematical model? Explain different classes of model.

✈ ✈ ✈

Total No. of Pages : 4

Seat No.

Final Year B.Tech. (Computer Science & Engineering) (Part - IV) (Semester - VII) (CBCS) Examination, January - 2023

ADVANCED DATABASE SYSTEMS

Sub. Code : 83858

Day and Date : Wednesday, 11 - 01 - 2023 **Total Marks : 70**

Time : 10.30 a.m. to 1.00 p.m.

Instructions : **1)** **All questions are compulsory.**

2) **Assume suitable data whenever necessary.**

Q1) Solve all MCQ's of following: (1 marks each)

a) When a participating site S_1 decides to commit the transaction T upon receiving the <prepare T> message from the coordinator, it sends _____ message to the coordinator site.

i) <prepare T> ii) <commit T>

iii) <ready T> iv) <abort T>

b) A heterogeneous distributed database is which of the following?

i) The same DBMS is used at each location and data are not distributed across all nodes.

ii) The same DBMS is used at each location and data are distributed across all nodes.

iii) A different DBMS is used at each location and data are not distributed across all nodes.

iv) A different DBMS is used to each location and data are distributed across all nodes.

c) Which of the following parallel database architecture is mainly used by distributed database system?

i) Shared Memory ii) Shared Disk

iii) Shared Nothing iv) Hierarchical

P.T.O.

d) _____ refers to the execution of a single query in parallel on multiple processors and disks.

i) Interquery parallelism ii) Intraquery parallelism

iii) Interdependent parallelism iv) None of the above

e) A semijoin is which of the following?

i) Only the joining attributes are sent from one site to another and then all of the rows are returned.

ii) All of the attributes are sent from one site to another and then only the required rows are returned.

iii) Only the joining attributes are sent from one site to another and then only the required rows are returned.

iv) None of the above

f) What is the difference between PL/SQL Function and PL/SQL Procedure?

i) PL/SQL function may or may not return the value whereas PL/SQL Procedure must have to return the value.

ii) PL/SQL Procedure may or may not return the value whereas PL/SQL Function must have to return the value.

iii) PL/SQL Function may or may not return the function whereas PL/SQL Procedure must have to return the function.

iv) None of the above

g) How many types of PL/SQL Cursor are there?

i) 1 ii) 2

iii) 3 iv) 4

h) _____ is a popular, open-source, sorted ordered column-family store that is modeled on the ideas proposed by Google's Bigtable.

i) HBase ii) Hypertable

iii) Cloudata iv) None of the above

i) _____ has properties of both Google Bigtable and Amazon Dynamo.

i) Voldemort ii) Cassendra

iii) Riak iv) None of the above

j) What kind of database MongoDB is?

i) Graph Oriented ii) Document Oriented

iii) Key Value Pair iv) Column Based

k) _id in MongoDB is a _____ bytes hexadecimal number which assures the uniqueness of every document.

i) 12 ii) 13

iii) 14 iv) None of the above

l) Poor data administration can lead to which of the following?

i) A single definition of the same data entity & Missing data elements

ii) Familarity with existing data

iii) All (i), (ii), (iv)

iv) Missing data elements

m) Point out the wrong statement.

i) BI is a category of database software that provides an interface to help users quickly and interactively scrutinize the results in a variety of dimensions of the data & Data is factual information for analysis

ii) BI is a category of database software that provides an interface to help users quickly and interactively scrutinize the results in a variety of dimensions of the data

iii) Customer relationship management (CRM) entails all aspects of interaction that a company has with its customer

iv) None of the mentioned

n) Which of the following does not form part of BI Stack in SQL Server?

i) OIBEE ii) OSSIS

iii) OBSAS iv) OBIEE

SB-03

Seat No.	

Total No. of Pages : 3

Final Year B.Tech. (Part - I) (Computer Science and Engineering)
(Semester - VII) (CBCS) Examination, January-2023
ADVANCED COMPUTER ARCHITECTURE
Sub. Code : 83856

Day and Date : Friday, 6 - 01 - 2023 **Total Marks : 70**

Time : 10.30 a.m. to 1.00 p.m.

Instructions :
1) **All questions are compulsory.**
2) **Figures to the right indicate full marks.**
3) **Assume Suitable data wherever necessary.**

Q1) Rewrite the sentence with correct answer. **[14]**

a) Which of the following is the technique used to improve energy efficiency in modern microprocessors?
   i) Do nothing well
   ii) Dynamic Voltage-Frequency Scaling (DVFS)
   iii) Overclocking
   iv) All of the above

b) Which of the following equation is correct?
   i) MTBF = MTTF – MTTR ii) MTBF = MTTF + MTTR
   iii) MTTF = MTBF + MTTR iv) MTTF = MTBF – MTTR

c) Which of the following equation is correct?
   i) Module availability = MTTF/ (MTTF + MTTR)
   ii) Module availability = MTBF/ (MTTF + MTTR)
   iii) Module availability = MTBF/ (MTTF – MTTR)
   iv) Module availability = MTTF/ (MTTF – MTTR)

d) S access memory configuration is suitable for
   i) Sequential address words ii) Non - sequential address words
   iii) Both (i) and (ii) iv) None of the above

e) The reciprocal of the clock period is called
   i) Throughput ii) Efficiency
   iii) Frequency iv) None of the above

P.T.O.

f) Ideally, nonpipelined processor with k stages can process n tasks in _____ clock periods
   i) k*(n-1) ii) k*(n+1)
   iii) n*(k-1) iv) n*k

g) Which type of cache miss occur even if you had an infinite sized cache?
   i) Compulsory ii) Capacity
   iii) Conflict iv) None of the above

h) To reduce the Hit time and Power, the first level caches should be ____.
   i) Small ii) Large
   iii) - iv) -

i) In associative memory, which registered is used to hold the current match patterns in the associative memory?
   i) Masking register ii) Temporary register
   iii) Indicator register iv) Comparand register

j) In the Bit parallel organization, the comparison operation is performed
   i) All words at a time
   ii) One word at a time
   iii) One bit slice at a time
   iv) All bit slices which are not masked off at a time

k) In GPU computational structure, _____ is assigned to the multithreaded SIMD Processor.
   i) Grid ii) Thread Blocks
   iii) Threads iv) All of the above

l) In GPU memory structure, local memory is shared by
   i) All threads in multithreaded SIMD Processor
   ii) All threads in a Thread Block
   iii) All Grids
   iv) None of the above

m) Distributed shared memory multiprocessors are sometimes called _____.
   i) Cache only memory access
   ii) Uniform memory access
   iii) Nonuniform memory access
   iv) All of the above

n) _____ defines the behavior of reads and writes with respect to accesses to other memory locations.
   i) Coherence ii) Consistency
   iii) Serialization iv) Realization

Q2) Solve any 2 of the following questions. (7 Marks Each)

a) Explain the Flynn's classification of computer architectures with neat diagrams. [7]

b) Explain the basic structure of linear pipeline processor. [7]

c) What is Miss rate? Explain three categories of cache misses in three Cs Model. [7]

Q3) Solve any Two of the following questions. (7 Marks Each)

a) Define the two states of service with respect to an SLA. Explain the two main measures of dependability. [7]

b) Explain Ramamoorthy and Li's classification of pipeline processor according to pipeline configurations and control strategies. [7]

c) List and explain six basic cache optimizations in short. [7]

Q4) Solve any two of the following questions. (7 Marks Each)

a) Explain the three special vector instructions with example [7]
   i) Compare
   ii) Compress
   iii) Merge

b) Explain the architectural configuration of SIMD array processors. [7]

c) Explain the basic architecture of a distributed-memory multiprocessor. [7]

Q5) Solve any two of the following questions. (7 Marks Each)

a) State the three types of pipelined vector processing methods and explain the vertical vector processing method with example. [7]

b) Explain the programming in GPU with CUDA. [7]

c) What are the challenges of parallel processing? [7]

♦ ♦ ♦

SB – 68

Seat No.	

Total No. of Pages : 3

B.Tech. (Computer Science and Engineering) (Part-IV)
(Semester - VII) (CBCS) Examination, January - 2023
ARTIFICIAL INTELLIGENCE
Sub. Code : 83859

Day and Date : Saturday, 14 - 01- 2023 **Total Marks : 70**

Time : 10.30 a.m. to 01.00 p.m.

Instructions : 1) **All questions are compulsory.**
2) **Assume suitable data if necessary.**
3) **Figures to the right indicate full marks.**

Q1) Solve MCQs. (1 Marks Each) [14]

a) Who is known as the "Father of AI"?
i) Fisher Ada ii) AlanTuring
iii) John McCarthy iv) Allen Newell

b) _____ is an applicationl/applications of Artificial Intelligence.
i) Expert Systems ii) Gaming
iii) Vision Systems iv) All of the above

c) Software that performs assigned tasks on the users bchalf are categorized as intelligent agents.
i) TRUE ii) FALSE

d) One kind of goal-based agent called a _____
i) problem-solving agent ii) problem defining agent
iii) goal defining agent iv) clearing agent

e) *GPS* solved many simple problems, but *GPS* could not solve _____
i) any real-world problems ii) any computational problem
iii) any classification problems iv) none of the above

f) To build a system to solve a particular problem, we need to :
i) Define the problem ii) Analyse the problem
iii) Isolate the agent iv) Option i & ii

P.T.O.

g) What is used for probability theory sentences?
   i) Conditional logic
   ii) Logic
   iii) Extension of propositional logic
   iv) None of the mentioned

h) With probability in AI, what is the basic element of a language?
   i) Literal ii) Variable
   iii) Random variable iv) All of the mentioned

i) Machine Learning is a field of science that deals with getting computer programing knowledge through experience and predicting the output.
   i) True ii) False

j) The output of ML is target value defined in the _____
   i) available data ii) training data
   iii) test data iv) predicted data

k) A _____describes a class of problems where an agent operates in an environment and must *learn* to operate using feedback.
   i) Supervised Learning ii) Reinforcement Learning
   iii) Unsupervised Learning iv) Machine Learning

l) In _____ an agent executes a **sequence of trials or runs** (continue until the agent reaches the terminal state)
   i) Direct Utility Estimation
   ii) Adaptive Dynamic Programming(ADP)
   iii) Temporal Difference Learning (TD)
   iv) Active Learning

m) From in built libraries of Python take one out.
   i) NumPy, ii) SciPy,
   iii) Matplotlib and nltk, iv) SimplerAJ

n) Python is an open source programming language.
   i) True ii) False.

Q2) **Solve any 2 of the following (7 Marks Each)**

a) Explain problem solving by Search, Search Algorithm Terminologies, Properties of Search Algorithms

b) What are the types of blind search? What is blind search techniques

c) Explain Bayesian Networks

Q3) **Solve any 2 of the following (7 Marks Each)**

a) Classification of AI systems with respect to environment

b) What are the problem solving techniques in blind search strategies?

c) What are the steps in a MDP process?

Q4) **Solve any 2 of the following (7 Marks Each)**

a) Explain different Forms of machine Learning

b) What is the difference between passive and active reinforcement learning?

c) Explain important inbuilt libraries of Python matplotlib, nltk, SimpleAI with examples

Q5) **Solve any 2 of the following (7 Marks Each)**

a) What are Expert Systems? Explain Stages in the development of an Expert System

b) How does Q-learning work?

c) Write short Note on:
   i) Azure ML
   ii) Google AI

Q4) Solve any 2 of the following (7 Marks Each).

a) Explain Service Oriented Architecture (SOA).

b) Explain different levels present in cloud security.

c) Describe features of Google computing engine.

Q5) Solve any 2 of the following (7 Marks Each).

a) Explain Storage as a service.

b) Describe Host level cloud security.

c) What are the advantages of cloud foundry.

❄ ❄ ❄

Seat No.

Total No. of Pages : 4

B. Tech. (Computer Science and Engineering)

(Part - IV) (Semester - VII) (CBCS)

Examination, January - 2023

CLOUD COMPUTING

Sub. Code : 83857

Day and Date : Monday, 09 - 01 - 2023 **Total Marks: 70**

Time : 10.30 a.m. to 01.00 p.m.

Instructions: **1)** **All questions are compulsory.**

2) **Figures to the right indicate full marks.**

3) **Assume suitable data wherever necessary.**

Q1) Solve MCQs (1 Marks Each)

i) Which computing architecture allows the user to use computers from multiple administrative domains to reach a common goal is called as

a) Cluster Computing b) Neural Networks

c) Parallel Processing d) Grid Computing

ii) Cloud computing is a system _____ and it is unidirectional.

a) stateless b) stateful

c) fiable d) None of the above

iii) _____ allows you to leverage the seemingly infinite compute resources of cloud infrastructure.

a) laaS b) SaaS

c) CaaS d) PaaS

iv) The example of laaS service model.

a) Cloudera b) Azure

c) MIS d) All of above

P.T.O.

v) Which of these is not a major type of cloud computing usage?

a) Platform as a Service b) Software as a Service

c) Internet as a Service d) Infrastructure as a Service

vi) Which of the following is the most sophisticated and restrictive service model?

a) SaaS b) PaaS

c) laaS d) None of the above

vii) Which of the following provides development frameworks and control structures?

a) laaS b) SaaS

c) PaaS d) All the answers are true

viii) Which of the following has three delivery models: Infrastructure as a Service, Platform as a Service, and Software as a Service,

a) cloud provider b) cloud service

c) cloud enabler d) None of the Above

ix) _____ cloud supports the utmost scalability and effectiveness for a business.

a) public b) hybrid

c) private d) All of the Above

x) _____ and _____ become major issues when cloud vendors have different platforms.

a) Performance and efficiency b) Backup and recovery

c) Portability and integration d) Integration and backup

xi) In _____ concept the data are separated from the actual desktop and stored on a server in a data centre.

a) Backup b) Virtualisation

c) Media d) None of above

xii) Find risk of cloud computing?

a) No troubleshooting issues b) Full control over the data

c) Storing data without control d) No government intrusion

xiii) Find out disadvantage of cloud?

a) No worries about running out of storage

b) Easier to maintain a cloud network

c) immediate access to computing resources

d) Paying only for what you use

xiv) What is private cloud?

a) A standard cloud service offered via the Internet

b) A cloud architecture maintained within an enterprise data center.

c) A cloud service inaccessible to anyone but the cultural elite

d) None of above

Q2) Solve any 2 of the following. (7 Marks Each)

a. Differentiate between Grid computing, cluster computing and cloud computing.

b. Describe role of networks in cloud computing.

c. Describe Paravirtualization.

Q3) Solve any 2 of the following (7 Marks Each).

a) Explain Evaluation of cloud computing.

b) Describe how cloud computing works.

c) Explain virtualization of memory and i/O devices level.