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Roll. No: 406

B.Tech 4th Semester Examination-May, 2019

OBJECT ORIENTED PROGRAMMING USING 'C++'

Paper Code: CSE-204

Time : 2:30 Hours **Max Marks: 90**

Note *: Question No. 1 is compulsory. Attempt remaining four question from all section, selecting atleast one question from each section.

Q-1 Explain the followings. 3*6=18

a) Abstraction.
b) Exception handling.
c) "this" pointer.

SECTION-A

Q-2 (a) Explain inline function & friend function with an example. 09

(b) Write the basic concepts of OOPS. 09

Q-3 Write C++ program to list out the prime numbers between the given two limits. 18

SECTION-B

Q-4. Explain with example various types of constructors? 18

Q-5 Distinguish between. 2*9=18

(i) Early binding and Late binding

(ii) Encapsulation and abstraction

SECTION-C

Q-6 What is the diamond problem in Multiple inheritance .Explain with suitable example. 18

Q-7 a) Write a C++ program to find maximum of two numbers using inline function. 2*9=18

b) Explain function overloading in C++ with suitable example.

SECTION-D

Q.8 a) Write a C++ program to create user define exception. 09

b) How are opening and closing of files handled in C++? 09

Q-9 Explain the following. 3*6=18

a) Virtual function

b) Operator overloading

c) Templates

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BTECH 4th SEM (ME & MAE/CSE/ECE/EEE)

Examination April-May 2019

Principle of Economics & Management

Paper No. MGT-301

Time: 2 Hrs 30 Mnts

Max Marks: 90

Attempt any five questions in all. Select at least one question from each section. Question no.1 is compulsory. All questions carry equal marks.

Q-1. Objective types question. Choose the correct answer (2*9=18

1- Which one of the following is not one of the basic economic questions?

a) What to produce

b) Who to produce for

c) How to produce

d) How to minimize economic growth

2- Human wants are:

a) Always fixed

b) Limited

c) Unlimited

d) Likely to decrease over time

3-The basic economic problems will not be solved by:

a) Market forces

b) Government intervention

c) A mixture of government intervention and the free market

d) The creation of unlimited resources

4-Law of variable proportion is valid when:

(a) Only one input is fixed and all other inputs are kept variable

(b) All factors are kept constant

(c) All inputs are varied in the same proportion

(d) None of these

5- Total utility will be a maximum when:

a) marginal utility equals average utility

b) marginal utility is positive

c) marginal utility is zero

d) marginal utility is negative

e) marginal utility equals total utility6-In management process, the most misinterpreted word is

(A) Organizing

(B) Delegating

(C) Controlling

(D) Planning

7- Price elasticity of demand refers to shifts in the demand curve for a product.

a) True

b) False

8-The Recruitment and Selection process aimed at right kind of people

(A) At right place.

(B) At right time

(C) To do right things

(D) all of the above

What do you call a style of leadership that takes account of others' views, opinions and ideas?

a) Laissez-faire

b) People-oriented

c) Democratic

d) Autocratic

UNIT-I

2. What do you understand by economics? Give any definition of economics. Explain the central economics problems of economy.

3. What do you understand by production possibility curve? Explain the production possibility schedule and curve with example.

UNIT-II

4. What do you mean by demand? State and explain the law of demand with an example.

5. State and explain the law of supply with example. Explain the role of demand and supply in price determination.

UNIT-III

6. What do you understand by management? Explain the nature and scope of management.

7. Define planning. Explain process of planning in Indian organisations.

UNIT-IV

8. What do you understand by leadership? Explain the various types of leadership.

9. Define the recruitment. Explain the process of recruitment in Indian organisations

Roll No: 406

Code: 432 /19A

B. Tech (CSE) IVth Semester Examination, May-2019

Introduction to Database Systems

(CSE-202)

Time: 2.30 Hours

Max. Marks: 90

* First question is compulsory. Attempt five question in all by selecting at least one question from each section.

9x2=18

Q-1 Attempt the following objective questions.

1. Which one of the following is used to define the structure of the relation, deleting relations and relating schemas?
a) DML(Data Manipulation Langauge)
b) DDL(Data Definition Langauge)
c) Query
d) Relational Schema

2. Which of the following is a fundamental operation in relational algebra?
a) Set intersection
b) Natural join
c) Assignment
d) None of the mentioned

3. Which is a join condition contains an equality operator:
a) Equijoins
b) Cartesian
c) Natural
d) Left

4. An _____ is a set of entities of the same type that share the same properties, or attributes.
a) Entity set
b) Attribute set
c) Relation set
d) Entity model

5. The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is
a) Single valued
b) Multi valued
c) Composite
d) Derived

6. Tables in second normal form (2NF):
a) Eliminate all hidden dependencies
b) Eliminate the possibility of a insertion anomalies
c) Have a composite key
d) Have all non key fields depend on the whole primary key

7. For any pincode, there is only one city and state. Also, for given street, city and state, there is just one pincode. In normalization terms, empdt1 is a relation in
a) 1 NF only
b) 2 NF and hence also in 1 NF
c) 3NF and hence also in 2NF and 1NF
d) BCNF and hence also in 3NF, 2NF and 1NF

8. Which of the following schemas does define a view or views of the database for particular users?
a) Internal schema
b) Conceptual schema
c) Physical schema
d) External schema

9. Identify the characteristics of transactions
a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

SECTION-A

Q-2 What is the importance of a data model in database designing? Compare the advantages of relational model with respect to ER model. 18

Q-3 Discuss the prime responsibilities of a database administrator. Also mention the key role of DBA in designing a database schema with suitable example. 18

SECTION –B

Q-4 Suggest some methods to simplify the file management system in a database. Which one is better for data storage and data retrieval in between direct and index sequential method and why? 18

Q-5(a) Discuss some important operators used in relational algebra with a suitable example. 09

(b) Define the use of outer join and inner join by using a query on a table dataset of your choice. 09

SECTION –C

Q- 6 Consider the following relational schema of a company. 18

- Employee_Details (EMP-ID: integer, FULL-NAME: string, Manager_ID: integer, D.O.J: real)
- Employee_Salary (EMP-ID: integer, PROJEC: string, Salary: integer)

Table - EmployeeDetails

EmpId	FullName	ManagerId	DateOfJoining
121	John Snow	321	01/31/2014
321	Walter White	986	01/30/2015
421	Kuldeep Rana	876	27/11/2016

Table - EmployeeSalary

EmpId	Project	Salary
121	P1	8000
321	P2	1000
421	P1	12000

Write the following Queries:

a) Write a SQL query to fetch the count of employees working in project 'P1'.
b) Write a SQL query to fetch project-wise count of employees sorted by project's count in descending order.
c) Write a query to fetch employee names and salary records. Return employee details even if the salary record is not present for the employee.
d) Write a SQL query to fetch all employee records from Employee_Details table who have a salary record in Employee_Salary table.

Q-7 (a) List the benefits of normalizing a database. What is the key role of integrity constant in maintaining the reliability of database. 09

(b) Discuss the conditions for First, Second and Third normal form with example. 09

SECTION –D

Q-8 (a) List four essential properties of a transaction system. (4)

(b) Discuss the three problems realized during the concurrent transactions. (6)

(c) Explain the significance of two phase locking in concurrency control. Is it helpful in avoiding deadlock? (8)

Q-9(a) Explain the data warehouse in detail. On what principles, the data warehouses are setup to preserve the data located inside data warehouses. 09

(b) What is the importance of data mining in database systems? What benefits we can draw by using data mining techniques? 09

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B.Tech 4th –Semester Examination-May, 2019

OPERATING SYSTEMS

Paper Code: CSE-210

Time : 2:30 Hours **Max Marks: 90**

Note *: Question No. 1 is compulsory. Attempt remaining four questions from all section, selecting at least one question from each section.

Q1. Attempt all questions from the following: 9x2=18

1. Which module gives control of the CPU to the process selected by the short-term scheduler?

a) dispatcher b) interrupt c) scheduler d) none of the mentioned

2. Logical extension of multiprogramming operating system is

a. time sharing b. multi-tasking c. single programming d. both a and b

3. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?

a) first-come, first-served scheduling b) shortest job scheduling

c) priority scheduling d) none of the mentioned

4. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called

a) job queue b) ready queue c) execution queue d) process queue

5. Example of open source operating system is

a. UNIX b. Linux c. windows d. both a and b

6. Which one of the following can not be scheduled by the kernel?

a) kernel level thread b) user level thread c) process d) none of the mentioned

7. Which one of the following is the deadlock avoidance algorithm?

a) banker's algorithm b) round-robin algorithm

c) elevator algorithm d) karn's algorithm

8. To avoid deadlock

a) there must be a fixed number of resources to allocate b) resource allocation must be done only once

c) all deadlocked processes must be aborted d) inversion technique can be used

Fill I/O

9. Kernel mode of the operating system is also called

a. user mode b. system mode c. supervisor mode d. both a and b

Section-A

Q2. a) Define an operating system? State and explain the basic functions or services of an operating system? (09)

b) Explain the differences between multiprogramming and time-sharing systems? (09)

Q3. (a) Distinguish between user mode and kernel mode operations of the operating system? (09)

(b) Distinguish between multiprogramming and multitasking? (09)

Section-B

Q4. Define deadlock? What are the four conditions necessary for a deadlock situation to arise? How it can be prevented? (18)

Q5. (a) Explain the concept of multi-threading? Discuss the following multithreading models. (09)

a) Many-to-one

b) One-to-one

c) Many-to-many

(b) State the factors on which the performance of the Round Robin CPU scheduling algorithm depends? (09)

Section-C

Q6. (a) Explain in detail the requirements that memory management technique needs to satisfy? (09)

(b) Discuss briefly the swapping concept with necessary examples? (09)

Q7. (a) Differentiate between paging and segmentation? (09)

(b) Describe contiguous memory allocation concept with advantages and disadvantages? (09)

Section-D

Q8. (a) State the challenges in designing a distributed operating system? (09)

(b) Describe about different types of disk scheduling? (09)

Q9. Write short notes on: (3*6=18)

a) Shell programming

b) Context switching

c) Distinguish between thread with process?

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Name of Examination – B.Tech (CSE) 4th Sem
Subject – Computer Architecture & Organization
Paper No. CSE – 208

Max. Marks 90

Time – 2:30

NOTE: Question No. 1 is compulsory. Attempt any five questions. One question is compulsory from each section.

(9*2=18)

Q-1.

1. The ALU makes use of _____ to store the intermediate results.
   a) Accumulators b) Registers
   c) Heap d) Stack

2. The control unit controls other units by generating ____
   a) Control signals b) Timing signals
   c) Transfer signals d) Command Signals

3. _____ are numbers and encoded characters, generally used as operands.
   a) Input b) Data
   c) Information d) Stored Values

4. The Input devices can send information to the processor.
   a) When the SIN status flag is set b) When the data arrives regardless of the SIN flag
   c) Neither of the cases d) Either of the cases

5. _____ bus structure is usually used to connect I/O devices.
   a) Single bus b) Multiple bus
   c) Star bus d) Rambus

6. To overcome the lag in the operating speeds of the I/O device and the processor we use ____.
   a) Buffer spaces b) Status flags
   c) Interrupt signals d) Exceptions

7. The method of accessing the I/O devices by repeatedly checking the status flags is _____
   a) Program-controlled I/O b) Memory-mapped I/O
   c) I/O mapped d) None of the mentioned

8. The method of synchronizing the processor with the I/O device in which the device sends a signal when it is ready is
   a) Exceptions b) Signal handling
   c) Interrupts d) DMA

9. The method which offers higher speeds of I/O transfers is _____

a) Interrupts b) Memory mapping

c) Program-controlled I/O d) DMA

Section - A

Q-2. (a) Distinguish among computer organization and computer architecture. 9

(b) Write about binary codes and its advantages. 9

Q-3. (a) Explain with neat diagram OR, AND and NOT gate. 9

(b) What do you mean by Boolean algebra? Discuss in detail. 9

Section – B

Q-4. (a) Explain Flynn's classification of computer. 9

(b) What are addressing modes? Explain the various addressing modes with example. 9

Q-5. (a) Write short notes on SISD and MISD. 9

(b) Explain main memory with neat diagram. 9

Section – C

Q-6. (a) What is the need for memory in computers? Discuss different types of memories. 9

(b) Explain the memory hierarchy in computers. 9

Q-7. (a) Explain architecture of CPU with suitable diagram. 9

(b) What do you mean by register. Discuss in detail accumulator and CPU memory interaction. 9

Section – D

Q-8. (a) Discuss various types of Interrupts. 9

(b) Define Microinstruction. Explain micro program sequencer. 9

Q-9. Write short note on any two: (9*2=18)

(i) Computer Instructions

(ii) Address sequencing

(iii) Stack organization

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B.Tech IVSemester
Examination, May 19
ADVANCED INTERNET TECHNOLOGIES
Paper No.-CSE-206

Time: 2:30 hours

Max. Marks: 90

Note:- Attempt five question in all selecting one from each section. Question-1 is compulsory.

1. The first Network
   a) CNNET
   b) NSFNET
   c) ASAPNET
   d) ARPANET
2. This layer is an addition to OSI model when compared with TCP IP model
   a) Application layer
   b) Presentation layer
   c) Session layer
   d) Both Session and Presentation layer
3. The functionalities of presentation layer includes
   a) Data compression
   b) Data encryption
   c) Data description
   d) All of the mentioned
4. The default connection type used by HTTP is _____
   a) Persistent
   b) Non-persistent
   c) Can be either persistent or non-persistent depending on connection request
   d) None of the mentioned
5. The HTTP request message is sent in _____ part of three-way handshake.
   a) First
   b) Second
   c) Third
   d) Fourth
6. Which of the following is present in both an HTTP request line and a status line?
   a) HTTP version number
   b) URL
   c) Method
   d) None of the mentioned
7. What is a web browser?
   a) a program that can display a web page
   b) a program used to view html documents
   c) it enables user to access the resources of internet
   d) all of the mentioned
8. What is document object model (DOM)?
   a) convention for representing and interacting with objects in html documents
   b) application programming interface
   c) hierarchy of objects in ASP.NET
   d) none of the mentioned

9. Which of the following is / are the types of firewall?
   a) Packet Filtering Firewall
   b) Dual Homed Gateway Firewall
   c) Screen Host Firewall
   d) All of the mentioned
10. What is css stands for
   a) Color Style Sheets
   b) Cascade Sheets Style
   c) Cascade Style Sheet
   d) Cascading Style Sheets
11. JavaScript is a _____ language.
   a) Object-Oriented
   b) High-level
   c) Assembly-language
   d) Object-Based
12. A conditional expression is also called a _____
   a) Alternative to if-else
   b) Immediate if
   c) If-then-else statement
   d) None of the mentioned
13. What is block statement in JavaScript?
   a) conditional block
   b) block that contains a single statement
   c) both conditional block and single statement
   d) block that combines multiple statements into a single compound statement
14. The word "document" mainly refers to
   a) Dynamic Information
   b) Static Information
   c) Both Dynamic and Static Information
   d) Temporary information
15. Which object is the main entry point to all client-side JavaScript features and APIs?
   a) Standard
   b) Location
   c) Window
   d) Position
16Which property in the Window object is used to refer to a Location object?
   a) position
   b) area
   c) window
   d) location
17. The **setTimeout()** method is used to
   a) Make the event sleep
   b) Register a function to be invoked after a certain time
   c) Invoke an event after a certain time
   d) Time for iteration
18. AJAX stands for
   a) asynchronous javascript and xml
   b) advanced JSP and xml
   c) asynchronous JSP and xml

d) advanced javascript and xml

Section –A

2. Explain in detail the working of the HTTP Internet Protocols, Discuss on any four HTTP request methods? 18.

3. a) What do you mean by E-mail. What is composition of a message? 9
   b) What is web server? Explain with its architectural diagram? 9

Section –B

4. Give details working of web search engine? How web directory help to optimize its performance? 18.

5. Explain the General purpose web crawler. With the reference of Incremental and parallel crawler? 18.

Section –C

6. Explain Built in objects in JavaScript? Write a program to display the factorial of a number? 18

7. Write a script that asks the user to enter two numbers, obtains the two numbers from the user and outputs text that displays the sum, product, difference and quotient of the two numbers? 18

Section –D

8. What are the advantages and disadvantages of Ajax? What are the technologies used by Ajax? Explain? 18.

9. What is jQuery. Explain selectors with suitable example of jQuery? 18.