

Nirma University

Institute of Technology

Semester End Examination (IR/RPR), May - 2023

B. Tech. in Computer Science and Engineering, Semester-VI

2CSDE69 LAMP Technology

Roll /

Exam No.

Supervisor's Initial
with Date

Time: 3 Hours

Max Marks: 100

- Instructions:
1. Attempt all questions.
 2. Figure to right indicate full marks.
 3. Assume suitable assumptions and specify them.
 4. Section-wise separate answer book to be used.
 5. Ensure you write optimized code.

SECTION - I

Q-1 Answer the following.

[20]

A. Create a class OPERAND that contains two double data type variables that are used to store operands. Class CALCULATOR extends the class OPERAND and it contains a variable to store result and another variable to store arithmetic operator. Class CALCULATOR has parameterized constructor with three arguments that initialize its own variable that stores arithmetic operator as well as its parent class variables that are used to store operands using super keyword concept. Class CALCULATOR also contains a method EXECUTE which performs the appropriate operation as per arithmetic operator and displays the result. Design a PHP page to fulfil above requirements.

[08]

B. Write a PHP code for the following:

[12]

CO3, BL3 a) Given an array and a value, find if there is a triplet in array whose sum is equal to the given value. If there is such a triplet present in array, then print the triplet. Else print "Triplet not found".

Sample Example:

Array = {12, 3, 4, 1, 6, 9}, sum = 24;

Output: 12, 3, 9

Explanation: There is a triplet (12, 3 and 9) present in the array whose sum is 24.

b) Find the first character with index that is different between two strings.

Sample Example:

String1 : 'football'

String2 : 'footboll'

Expected Result: First difference between two strings at index 5: "a" vs "o"

OR

B.
CO3,
BL3

Write a PHP code for following:

[12]

- a) Find the majority element in the array. A majority element in an array $A[]$ of size n is an element that appears more than $n/2$ times.

Sample Example-1:

Array: $A[] = \{3, 3, 4, 2, 4, 4, 2, 4, 4\}$

Output: 4

Explanation: The frequency of 4 is 5 which is greater than the half of the size of the array size.

Sample Example-2:

Array: $A[] = \{3, 3, 4, 2, 4, 4, 2, 4\}$

Output: No Majority Element

Explanation: There is no element whose frequency is greater than the half of the size of the array size.

- b) Generate simple random password [do not use any inbuilt PHP function] from a string. Minimum string length must be of 20 characters. String contains alphabets and digits. Minimum password length must be 8 characters.

Q-2
CO3,
BL3

Write down client and server PHP code using socket programming for the following functionalities: [15]

- Client send string message to the server. Also display reply of the server.
- Server return result of removing duplicates in a given string message send by client and return string to the Client.

Sample example:

Client send string message to server i.e.: technology

Client receive the string from server: technolgy

Q-3
CO1,
BL2

Discuss the following concepts:

[15]

- Exception handling using try, throw and catch with code snippet(/s)
- LAMP software components
- PHP constant with code snippet(/s)

SECTION - II

Q-4 Answer the following.

[20]

A.
CO1,
BL3

Write PHP scripts by considering the regular expressions concept check for the validity of an entered email-id and mobile number entered by the user. Consider the following constraints: [07]

For email-id:

- The @ symbol should not appear more than once.
- The dot (.) can appear at the most once before @ and at the most twice or at least once after @ symbol.
- The substring before @ should not begin with a digit or underscore or dot or @ or any other special character.

For mobile number field:

- The field should accept only numeric values.
- Only 10 digits to be accepted as valid input.

If the mentioned constraints are not satisfied appropriate error messages should be displayed to the user.

B.
CO3,
BL6

Write PHP code for the given scenario:

[13]

The vehicle Parking Registration form is to be designed and it has the following fields:

Field Name	PHP Validations and Necessary Constraints
Vehicle Owner Name	Required Field Validation: Length must be less than 80 characters
Vehicle Registration Number	Required Field Only accepts alphabets, Digits, Blank Spaces, and - character
Vehicle Type	Required Field Radio Button with options: <ul style="list-style-type: none"> ○ Two-Wheeler ○ Three-Wheeler ○ Four-Wheeler
Date for which parking is required	Required Field
Venue for the parking	Dropdown list with atleast 5 parking venues displayed
Number of Hours required for parking the vehicle	Dropdown list with numeric values 1 to 6
Time Slot required for Parking	Dropdown list with options: <ul style="list-style-type: none"> 8 AM to 10 AM 10 AM to 12 PM 12 PM to 2 PM 2 PM to 4 PM 4 PM to 6 PM

Implement PHP code with validations and necessary constraints as mentioned in the above table for all fields. Repopulate all the form fields data entered by the user as and when any wrong input is encountered else display the entered data on the same page in a tabular format using any of the form redirection methods. Use POST method for form submission.

OR

B.
CO3,
BL6

Write PHP Code for storing page views count using the concept of COOKIES. Upon each page refresh the page count should be [13]

incremented and displayed on a webpage. Compare and Contrast SESSION vs COOKIES.

Q-5
CO2,
BL6

Write PHP code for designing an application as per the given [15] scenario:

- i) Make a connection to a MySQL database, and log-in with valid credentials. The connection resource should be stored in a variable with an appropriate name. Select the database name as DEMO_LAMPT.
- ii) Create a Student_Info table having fields : Student_id, Student_Name, Branch, Batch_Year , Almaconnect_id, Profile_picuture. Use appropriate datatypes for each fields.
- iii) If any of these operations cause an error, stop execution and print the error message.
- iv) Search student information based on Branch according the character typed in the textbox. Fetch the Student information from the Student table and display it in below mentioned format:

<div style="border: 1px solid black; width: 150px; margin: 0 auto; padding: 5px;"> Profile Picture of Student <div style="background-color: black; width: 80px; height: 80px; margin: 10px auto;"></div> </div> <p>Student Name Branch: CSE Batch Year: 2022</p> <div style="border: 1px solid black; width: 150px; margin: 0 auto; padding: 5px; text-align: center;"> Go to Almaconnect Page </div>	<div style="border: 1px solid black; width: 150px; margin: 0 auto; padding: 5px;"> Profile Picture of Student <div style="background-color: black; width: 80px; height: 80px; margin: 10px auto;"></div> </div> <p>Student Name Branch: CSE Batch Year: 2023</p> <div style="border: 1px solid black; width: 150px; margin: 0 auto; padding: 5px; text-align: center;"> Go to Almaconnect Page </div>
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Q-6
CO3,
BL6

Write PHP code for an application to perform the following [15] operations on file:

- i) Create a file information.txt and write content into the file as " The CSE Dept, \n Institute of Technology \n Nirma University \n is one of the top rated departments."
- ii) Copy the content from the information.txt file to another file newinfo.txt line by line using the file handling function.
- iii) Count and display the number of lines and characters copied from information.txt to the newinfo.txt file.
- iv) Display the contents of the copied file on a webpage.