**Php exam questions.**

1. Write a PHP script that connects to a MySQL database using PDO. The database should use the following parameters: host is localhost, database name is courses, username is root, and password is root1234. After establishing the connection, Write a PHP function called updateStudentGrade that updates a student's grade in math course. The function should take parameters for the student ID, course name, and new grade. Use prepared statements and return true if the update was successful or false if not.
2. Write a PHP script that implements a "remember me" feature:  
   a) Create a login form with fields for username, password, and a "remember me" checkbox. (2 points)  
   b) If the user logs in successfully and selects the "remember me" option, set a cookie to store the username. (2 points)  
   c) Set the cookie to expire after 30 days. (2 points)  
   d) If the cookie exists and is valid, display the message: “[Username] logged in”. (2 points)  
   e) If the cookie does not exist, print the message: “Username does not exist”. (2 points)
3. Write a PHP script that connects to a MySQL database using PDO. The database should use the following parameters: host is localhost, database name is online\_courses, username is root, and password is root1234. After establishing the connection, create a PHP function named addNewCourse which takes three parameters: course name, instructor name, and course duration. Inside the function, insert a new record into the courses table using these values. You must use prepared statements to safely insert the data and protect against SQL injections.
4. Write a PHP script that calculates how many kilometers a person has walked based on their step count. Create variables for user's name, number of steps walked and average step length in meters (assume 0.8 meters per step). Write a function to convert the total distance to kilometers. Print a personalized message including the result.
5. Create a PHP script that implements a "dark mode" preference using cookies. First, display a toggle button to switch between light and dark modes. When clicked, set a cookie to remember the user's preference for 30 days. Check for this cookie when the page loads and apply the appropriate mode. Use inline CSS to change the background and text colors based on the selected mode.
6. Create a PHP script that checks a person's eligibility for a movie. The script should have variables for a person's age and whether they have parental permission (true/false). If the person is 18 or older, print "You can watch any movie". If they are under 18 but have parental permission, print "You can watch PG-13 movies". Otherwise, print "You can only watch G-rated movies".
7. Write a PHP script for a search feature. If the page is accessed without parameters, show a search form that submits back to the same page. If a 'query' parameter is present, display a message saying "You searched for: [query]" and include a link to clear the search and return to the form.
8. Create a PHP script that checks if the page was accessed via GET or POST method. If accessed via GET, display a form that submits to the same page via POST, with fields for name, email, and message. If accessed via POST, validate that all fields are filled out, then display the submitted information in a formatted way.
9. Write a PHP script that connects to a MySQL database using PDO. The database parameters should be:  
   Host: localhost  
   Database name: students  
   Username: root  
   Password: “admin\_1234”  
   Create a PHP function called getAllStudents that retrieves all records from a 'students' table. The function should return the results as an associative array. Include proper parameter binding.
10. Write a PHP function called createUserActivity that logs user activities in a database. Connect to a database (host="localhost", dbname="userportal", username="logger", password="log123") using mysqli. The function should accept parameters for user\_id, activity\_type (login, logout, post, etc.), and timestamp. Use prepared statements to insert into an 'activity\_log' table and handle any potential errors.
11. Given this array of student test scores:

$scores = [

["name" => "Emma", "math" => 85, "science" => 92, "literature" => 78],

["name" => "Michael", "math" => 75, "science" => 80, "literature" => 82],

["name" => "Sophia", "math" => 92, "science" => 95, "literature" => 90],

["name" => "Jacob", "math" => 70, "science" => 65, "literature" => 74],

["name" => "Olivia", "math" => 88, "science" => 91, "literature" => 86]

];

a) Calculate and print each student's average score across all subjects (2 points)  
b) Determine and print the highest score in each subject (2 points)  
c) Find and print all students who scored above 85 in science (2 points)  
d) Calculate the class average for each subject (2 points)  
e) Add a new "grade" field for each student based on their average score: A (90+), B (80-89), C (70-79), D (60-69), F (below 60) (2 points)

12. Create a PHP function that manages a simple file-based guest book. The function should read entries from a file called "guestbook.txt" and display all existing entries on the page.

13. Write a PHP function that calculates the average rating of a movie based on five user reviews. Use the provided variables and do not change their values. Print a formatted message displaying the movie title and its average rating:  
$movieName = "The Matrix", $rating1 = 5, $rating2 = 4, $rating3 = 3

14. Write a PHP script that uses a while loop to find the first 5 numbers that are both greater than 100 and divisible by 9. Print each number when you find it.

15. Create two arrays: one containing three subject names and another containing the corresponding scores a student received in those subjects. Use the array\_combine() function to create an associative array with subjects as keys and scores as values. Then calculate and print the average score.

16. Start with this array: $numbers = [5, 1, 9, 8, 4, 6, 2, 10, 3, 7];

a) Use array method to create a new array containing only odd numbers (2 points)  
b) Use array method to create another array with each value squared (2 points)  
c) Use array method to calculate the sum of all original numbers (2 points)  
d) Find the smallest number in the array (2 points)  
e) Print the length of the array (2 points)

17. Write a PHP script that reads a text file named "quotes.txt" line by line and displays each quote in an HTML list. The script should handle the case where the file doesn't exist with an appropriate error message.

18. Write a PHP script that generates a personalized email signature. Create variables for name, job title, company, phone number, and email address with values of your choice. Format these details into a professional email signature with HTML tags for styling. Print the complete signature and also show the PHP code that generated it.

19. Match each PHP file system function with its correct description:

A. filesize()  
B. opendir()  
C. file\_exists()  
D. unlink()  
E. mkdir()  
F. is\_dir()  
G. scandir()  
H. fopen()  
I. fwrite()  
J. fclose()  
K. filemtime()  
L. rename()  
M. copy()  
N. rewind()

Returns the size of a file in bytes: \_\_\_\_\_\_\_

Opens a directory handle for reading: \_\_\_\_\_\_\_

Checks whether a file or directory exists: \_\_\_\_\_\_\_

Deletes a file from the file system: \_\_\_\_\_\_\_

Creates a new directory: \_\_\_\_\_\_\_

Checks whether the specified path is a directory: \_\_\_\_\_\_\_

Returns an array of files and directories inside a directory: \_\_\_\_\_\_\_

Opens a file or URL for reading/writing: \_\_\_\_\_\_\_

Writes data to an open file: \_\_\_\_\_\_\_

Closes an open file pointer: \_\_\_\_\_\_\_

20. Create a function called calculateTip that accepts two parameters: the bill amount and the service quality ("excellent", "good", or "fair"). The function should return a 20% tip for excellent service, 15% for good service, and 10% for fair service. Call the function with a bill of $84.00 and "good" service, and print the tip amount.

21. Write a PHP script that creates three variables to store the name, price, and tax rate of an item. The item name must be "Bluetooth Mouse", the price must be 12, and the tax rate should be 0.08 (8%). Using these variables, calculate the final total of the purchased item by adding the tax to the price. Finally, print a checkout message formatted as follows: "Thank you for purchasing the [item]! Your total is $[price]." Make sure the total includes the tax.

22. $fruits = ["Apple", "Banana", "Orange", "Grape", "Pear"];

a) Use array\_push() to add "Mango" to the end of the array. (2 points)

b) Then use array\_unshift() to add "Kiwi" to the beginning of the array. (2 points)

c) After that, use array\_pop() to remove the last element and use array\_slice() to get only the first 3 elements of the array. (2 points)

d) Finally, reverse the array using array\_reverse() and print the final version. (2 points)

e) Replace the 3rd and 4th elements of the main array with "Papaya" and "Peach" using array\_splice(). (2 points)

23. Write a PHP script that limits the number of login attempts using sessions. First, create a login form with username and password fields. Track the number of failed login attempts in a session variable. After 3 failed attempts, display a message that says, "Too many failed attempts" and prevent further login attempts.

24. Write a PHP script that connects to a MySQL database using PDO. The database should use the following parameters: host is localhost, database name is university, username is root, and password is root1234. After establishing the connection, create a PHP function called searchStudents that searches for students based on a name query. The function should use a LIKE clause to find partial matches in either first name or last name fields. Return the matching records as an associative array. Handle the case where no students are found.

25. Write a function called calculateAge that accepts a birthdate in the format 'YYYY-MM-DD' and returns the person's age in years. Use the PHP date functions to perform the calculation. Test your function with the birthdate '2000-09-20' and print the resulting age.