

GUIDELINES FOR LAB WORK AND PRACTICAL EVALUATION OF COMPUTER APPLICATIONS (COMMERCE)

2014 - 15 Admission onwards

(Modified for the academic year 2023 onwards)

We follow outcome focussed assessment approach in the evaluation process in the Kerala School Curriculum 2013. Term-end Evaluation is an important aspect of assessment. Along with Term-end Evaluation at the end of an academic year, Practical Evaluation (PE) is to be conducted. PE is the term-end assessment of the lab work done in the academic year. Lab work is an integral part of the Continuous and Comprehensive Evaluation (CCE). Hence, it should be considered for the process assessment and portfolio assessment which are the components of Continuous Evaluation (CE) score. In view of Covid-19 pandemic, the syllabus for practical in Computer Applications (Commerce) and guidelines for PE have been modified during the period 2020 - 2023. Since the academic activities are turned into its normal mode, the practical curriculum has been reinstated with the following specifications.

A. Syllabus for Practical

The practical should begin in Class XI itself and it should go on with the respective theoretical aspects. Areas to be covered for the lab work and the minimum number of problems are given below:

- | | |
|--|----------------------|
| 1. Programming in C++ | (10 problems) |
| • if - else statement | (2 problems) |
| • switch statement | (1 problem) |
| • Looping statements | (3 problems) |
| • Array manipulation | (2 problems) |
| • Functions | (2 problem) |
| 2. Developing HTML documents | (6 problems) |
| • Basic tags, tag | (1 problem) |
| • Hyper-linking | (1 problem) |
| • Lists | (2 problems) |
| • Table | (1 problem) |
| • Form | (1 problem) |
| 3. Database queries using MySQL | (4 problems) |
| • Four tables should be identified and queries should be designed in such a way that all clauses, operators and aggregate functions are to be covered. | |

B. Lab Work

A minimum of 20 problems, as specified above, are to be solved through the lab work. Sample questions from each area are given below.

Programming in C++

1. Input three numbers and find the largest.
2. Input the principal amount, type of account (C for current a/c or S for SB a/c) and number of years, and display the amount of interest. Rate of interest for current a/c is 8.5% and that of SB a/c is 6.5%.
3. Input a digit and display the same in word. (Zero for 0, One for 1, ..., Nine for 9)
4. Find the sum of the first N natural numbers without using formula.
5. Input an integer number and check whether it is palindrome or not.
6. Display the multiplication table of a number having 12 rows.
7. Create an array to store the heights of 10 students and find the largest value.
8. Find the length of a string without using strlen() function.
9. Find the factorial of a number with the help of a user-defined function.
10. Input two numbers and swap them with the help of a user defined function.

Developing HTML documents

11. Design a simple and attractive web page for Kerala Tourism. It should contain features like background colour/image, headings, text formatting and font tags, images, etc.
12. Design a simple webpage about your school. Create another webpage named address.htm containing the school address. Give links from school page to address.htm and reverse.
13. Design a webpage as shown below using appropriate list tags.

Permanent members in UN Security Council

- Russia
- China
- USA
- UK
- France

14. Design a webpage as shown below using appropriate list tag.

Wild life Sanctuaries in Kerala

1. Eravikulam
2. Periyar
3. Chinnar
4. Wayanad

15. Design a web page containing a table as shown below.

Speed Limits in Kerala

Vehicles	Near School (In Km/hour)	Within Corporation/ Municipality (In Km/hour)	State Highway (In Km/hour)
Motor Cycle	30	50	50
Motor Car	30	50	80
Light motor vehicles	30	50	80
Heavy motor vehicles	30	40	65

16. Design a simple web page as shown below.

Client Login
Enter User Name
Enter your Password

Database queries using MySQL

17. Create a table Student with the following fields and insert at least 5 records into the table except for the column Total.

Roll_Number	Integer	Primary key
Name	Varchar (25)	
Batch	Varchar (15)	
Mark1	Integer	
Mark2	Integer	
Mark3	Integer	
Total	Integer	

- Update the column Total with the sum of Mark1, Mark2 and Mark3.
- List the details of students in Commerce batch.
- Display the name and total marks of students who are failed (Total < 90).
- Display the name of students in alphabetical order and in batch based.

18. Create a table Employee with the following fields and insert at least 5 records into the table except the column Gross_pay and DA.

Emp_code	Integer	Primary key
Emp_name	Varchar (20)	
Designation	Varchar (25)	
Department	Varchar (25)	
Basic	Decimal (10,2)	
DA	Decimal (10,2)	
Gross_pay	Decimal (10,2)	

- a. Update DA with 75% of Basic.
 - b. Display the details of employees in Purchase, Sales and HR departments.
 - c. Update the Gross_pay with the sum of Basic and DA.
 - d. Display the details of employee with gross pay below 10000.
19. Create a table *Stock*, which stores daily sales of items in a shop, with the following fields and insert at least 5 records into the table.
- | | | |
|-------------------|----------------|-------------|
| Item_code | Integer | Primary key |
| Item_name | Varchar (20) | |
| Manufacturer_Code | Varchar (5) | |
| Qty | Integer | |
| Unit_Price | Decimal (10,2) | |
- c. Display the item names with stock zero.
 - d. Display the number of items manufactured by the same manufacturer.
 - c. Display the highest price and lowest quantity in the stock.
 - d. Increase the unit price of all items by 10%.
20. Create a table *Bank* with the following fields and insert at least 5 records into the table.
- | | | |
|-------------|----------------|-------------|
| Acc_No | Integer | Primary key |
| Acc_Name | Varchar (20) | |
| Branch_Name | Varchar (25) | |
| Acc_Type | Varchar (10) | |
| Amount | Decimal (10,2) | |
- a. Display the account details of "Savings Account" in Kodungallur branch.
 - b. Change the branch name "Trivandrum" to "Thiruvananthapuram".
 - c. Display the details of customers in Thiruvananthapuram, Ernakulam and Kozhikode.
 - d. List the details of customers in Thrissur branch having a minimum balance of Rs. 5000.

C. Practical Evaluation (PE)

The following are the guidelines to be followed while conducting PE:

- The questions should strictly be from the prescribed syllabus.
- Examination will be of 3 hours duration and maximum score will be 40.
- Practical evaluation will be conducted in batches. The maximum number of students in each batch is limited to 20.
- Students must attend the PE with Practical Log Book. It should contain a minimum of 20 programs covering the practical syllabus as described earlier. Practical Log Book should be certified at the end of Class XI as well as Class XII by the teacher-in-charge. The same should be verified and signed by the external examiner.

- The question paper for PE will be provided by the DHSE.
- There will be three parts in the question paper. Part A contains questions from Programming in C++. Part B contains questions for web applications from the respective syllabus and Part C includes questions for database queries. A candidate has to attend two questions – one from Part A and the other from either Part B or C whichever is assigned.
- One question paper will be selected by the student at random from a set of 20 Question papers. Appropriate strategy may be adopted by the examiner to ensure the fair conduct of examination.

The score distribution for each question in C++ should be as follows:

- Logic of the solution (Program coding) – 10 score
- Debugging skills (Error correction and execution) – 6 score

The score distribution for each question in web application should be as follows:

- Proper tags and attributes – 10 score
- Debugging skills (Error correction and execution) – 6 score

The score distribution for each question in SQL should be as follows:

- Proper commands, clauses, operators, etc. – 10 score
- Debugging skills (Error correction and execution) – 6 score

Total score for 2 questions	-	32 score
Practical Log Book	-	4 score
Viva voce	-	4 score
Total	-	40 score

- Viva voce should not create sense of fear among the students. It should be a casual interaction with the students during the evaluation to check whether he/she has conceptual/process clarity in the given two questions only. The examiner may ask 4 to 6 questions to award the scores for viva voce.