

## Guidelines for Practical Examination, 2023

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. There is a slight variation in the syllabi of Computer Science, Computer Applications (Commerce) and Computer Applications (Humanities) for the academic year 2022 – 23. Obviously it will reflect in the practical examination also.

### **Syllabifor ComputerScience and Computer Applications (Commerce)**

#### **1. Programming in C++ (Minimum 8 problems)**

- if – else statements
- switch statement
- Looping statements
- Array manipulation

#### **2. Developing HTML documents (Minimum 5 problems)**

- Basic tags, <IMG> tag
- Lists
- Hyper-linking
- Table

#### **3. Database queries using MySQL (Minimum 2 problems)**

- Two tables should be identified and queries should be designed in such a way that all clauses, operators and aggregate functions are to be covered.

### **Syllabusfor Computer Applications (Humanities)**

#### **1. Office packages and Image processing**

(Minimum 8 problems – 2 from each Application)

- Word Processing
- Spread Sheet
- Presentation Software
- Image Editing

#### **2. Developing HTML documents (Minimum 5 problems)**

- Basic tags, <IMG> tag
- Lists
- Hyper-linking
- Table

#### **3. Database queries using MySQL (Minimum 2 problems)**

- Two tables should be identified and queries should be designed in such a way that all clauses, operators and aggregate functions are to be covered.

### **Practical Log Book**

Practical Log Book (PLB) is a standard record book in which all the activities related to lab work are recorded. The PLB should contain a minimum of 15 works as specified in the practical syllabus. The format of recording in Practical Log Book may be as follows:

**Programming in C++**

LHS Page	RHS Page
<ul style="list-style-type: none"> <li>Algorithm / Flowchart</li> <li>Sample input and output</li> </ul>	<ul style="list-style-type: none"> <li>Problem No., Date of work</li> <li>Problem statement</li> <li>Source code</li> </ul>

**HTML coding**

LHS Page	RHS Page
<ul style="list-style-type: none"> <li>Tags and attributes required</li> <li>Printout of resultant page (if possible)</li> </ul>	<ul style="list-style-type: none"> <li>Problem No., Date of work</li> <li>Problem statement</li> <li>HTML code</li> </ul>

**Database queries using MySQL**

LHS Page	RHS Page
<ul style="list-style-type: none"> <li>Tables with sample records</li> <li>Output of queries</li> </ul>	<ul style="list-style-type: none"> <li>Problem No., Date of work</li> <li>Table structure and queries</li> <li>SQL statements</li> </ul>

**Office packages**

LHS Page	RHS Page
<ul style="list-style-type: none"> <li>Menus / Tools used</li> <li>Printout of resultant page (if possible)</li> </ul>	<ul style="list-style-type: none"> <li>Problem No., Date of work</li> <li>Problem statement</li> <li>Procedure required</li> </ul>

**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 15.
- Students must attend the PE with Practical Log Book. It should contain a minimum of 15 programs covering the practical syllabus as described earlier. Practical Log Book should be certified by the teacher-in-charge. The same should be verified and signed by the external examiner.
- There will be two parts in the question paper. Part A contains questions from C++ programming area for Computer Science and Computer Applications (Commerce), and from Office packages in the case of Computer Applications (Humanities). Part B contains questions for web applications from the respective syllabus. A candidate has to attend two questions – one from Part A and the other from Part B.
- Once the learner is assigned the questions, he/she should write the source code/procedure/statements for the given questions and submit it to the examiner. The examiner checks the correctness of the logic or procedure and allows doing it on the computer if found correct. If the logic or procedure is approximately 70% correct, some clues or hints may be given and the student is allowed to try on the computer. The student may be allowed to change the question within half an hour, if the question is found unanswerable. In such cases, score should be deducted appropriately.

- 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 (Script if required) – 10 score
  - Debugging skills (Error correction and execution) – 6 score
- The score distribution for each question in Office packages should be as follows:
  - Procedure/Formula/Menus & Commands/Tools – 10 score
  - Creativity and formatting ability – 6 score
- Total score for 2 questions – 32 score
- Practical Log Book – 4 scores
- Viva voce – 4 scores
- Total score for PE – 40 score

### Sample Questions for Computer Science

#### **Part A: Programming in C++**

1. Input three numbers and find the largest.
2. Find the roots of a quadratic equation by inputting the three coefficients.
3. Input a day number and display the corresponding day name of a week using switch statement.
4. Find the sum of the squares of the first N natural numbers without using any formula.
5. Find the sum of the digits of an integer number.
6. Find the factorial of a given number.
7. Input an integer number and check whether it is palindrome or not.
8. Create an array of N integer numbers and find the largest.

#### **Part B: Web page designing**

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

#### **Wild life Sanctuaries in Kerala**

- Iravikulam
- Muthanga
- Kadalundi

12. Design a webpage having a list as shown below.

#### **Covid 19 Protocol**

1. Wash your hands using soap
2. Wear mask covering nose and mouth
3. Keep social distance
4. Sanitize your hands frequently

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

**Terrestrial Planets (Source: NASA)**

Planet	Day Length (In Earth hours)	Year Length (In Earth days)
Mercury	1408	88
Venus	5832	224.7
Earth	24	365.26
Mars	25	687

### Part C: Structured Query Language

14. 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 Science batch.
- Display the name and total marks of students who are failed (Total < 90).
- Delete the student who scored below 30 in Mark3.

15. 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)  
 Basic Pay Decimal (10,2)  
 DA Decimal (10,2)  
 Gross\_pay Decimal (10,2)

- Update DA with 24% of Basic Pay.
- Display the details of employees with the designation 'Manager'.
- Update the Gross\_pay with the sum of Basic Pay and DA.
- Display the details of employee with gross pay below 10000.

## Sample Questions for Computer Applications (Commerce)

### Part A: Programming in C++

- Input a number and check whether it is even or odd.
- Input a number and check whether it is positive, negative or zero.
- Input a day number and display the corresponding day name of a week using switch statement.
- Find the sum of the first N natural numbers without using any formula.
- Find the sum of the digits of an integer number.
- Find the factorial of a given number.

7. Input an integer number and check whether it is palindrome or not.
8. Create an array of N integer numbers and find their sum.

### Part B: Web page designing

9. Design a simple and attractive webpage for Kerala Tourism. It should contain features like background colour/image, headings, text formatting and font tags, images, etc.
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### Part C: Structured Query Language

14. 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	

- a. Update the column Total with the sum of Mark1, Mark2 and Mark3.
- b. List the details of students in Science batch.
- c. Display the name and total marks of students who are failed (Total < 90).
- d. Delete the student who scored below 30 in Mark3.

15. 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)	
Basic Pay	Decimal (10,2)	
DA	Decimal (10,2)	
Gross_pay	Decimal (10,2)	

- Update DA with 24% of Basic Pay.
- Display the details of employees with the designation 'Manager'.
- Update the *Gross\_pay* with the sum of Basic Pay and DA.
- Display the details of employee with gross pay below 10000.

### Sample Questions for Computer Applications (Humanities)

#### Part A: Word Processing / Spread Sheet / Presentation Software/ Image Editing

- Create a new presentation file and perform the following tasks:

- Insert the following content in the first slide

<p><b>TOURIST SPOTS IN KERALA</b></p> <ul style="list-style-type: none"> <li>• Munnar</li> <li>• Kovalam</li> <li>• Ponmudi</li> <li>• Thekkady</li> </ul>
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- Change the background colour of the slide
  - Insert a new slide and insert an image of Kerala state (provided).
  - Insert a note to the slide as God's Own Country.
  - Save the file.
- Prepare an Examination Time Table using Spreadsheet software as given below

Date	Subject	Time	Venue
12/8/2021	English	10:00 - 11:00	Library hall
13/8/2021	Second Language	10:00 - 11:00	Auditorium
14/8/2021	Journalism	10:00 - 11:00	Audio-Visual Room
15/8/2021	Sociology	10:00 - 11:00	Library hall
16/8/2021	Computer Applications	10:00 - 11:00	Computer Lab.

- Save the file with name 'EXAM'.
- Bold face all column titles.
- Make the contents of the entire cell Italic.

- d. Change the row height to 1.2
  - e. Increase the column width of the table to fit the contents of the cells in a single line.
  - f. Insert a new column with column title 'Sl.No.' as the first column.
  - g. Save the worksheet again.
3. You are supplied with the image of a car (car.jpg). Open the file in GIMP and perform the following operations:
- a. Rotate the picture to 40 degrees.
  - b. Flip the picture
  - c. Shear the picture.
  - d. Save the picture after each activity with different names.
4. Open a new presentation file and perform the following activities
- a. In the first slide type the matter "PROTECT OUR ENVIRONMENT".
  - b. Bold face the matter and change size to 16.
  - c. Insert a picture (provided) as the back ground.
  - d. Duplicate the slide.
  - e. Change the content to "PLANT MORE TREES".
  - f. Insert a video file (provided).
  - g. Save the file.
5. Open a file in GIMP. Create the picture of Indian national flag. Save the file with name 'INDIA.XCF'. Export it to 'jpg' format.
6. Open a new document in Writer. Type the following matter and do the given tasks:
- MICROCOMPUTERS**
- The Microcomputer has the lowest level capacity. The machine has memories that are generally made of semiconductors fabricated on silicon chips. Large-scale production of silicon chips began in 1971 and this has been of great use in the production of microcomputers. The microcomputer is a digital computer system that is controlled by a stored program that uses a microprocessor, a programmable ROM and a RAM. The ROM defines the instructions to be executed by the computer while RAM is the functional equivalent of computer memory.
- a. Save the file with name 'COMPUTER'.
  - b. Centralise the heading 'MICROCOMPUTER'.
  - c. Change the font face of the paragraph to 'Ubuntu' and font size to 14.
  - d. Bold face and underline the paragraph heading.
  - e. Change the colour of the heading text to Green and paragraph text to Blue.
  - f. Copy the first sentence of the paragraph and place it at the end.
  - g. Change the line spacing of the paragraph to double spacing and justify the paragraph.
  - h. Save the document.
  - i. Change the line spacing of the paragraph to double spacing and justify the paragraph.
  - j. Save the document.

7. Some data about students are given below. Convert the data directly into tabular form using the word processor.

ClassNo	Name	Sub1	Sub2	Sub3	Total
1	Aneesh	50	45	55	150
2	Parvathi	50	40	50	140
3	Sreedev	40	30	50	120
4	Sreedhar	40	40	30	110
5	Rahul	50	50	40	140

Hint. The text separator is comma (,)

- a. Save the file as 'MARKLIST.ODT'.
  - b. Insert a new row in between 3rd and 4th row and enter a sample record.
  - c. Format the table using an attractive pre-defined format.
  - d. Remove the last column of the table.
  - e. Remove the 4th row of the table.
8. Using the word processor (Libre Office Writer), create a leave letter addressed to your class teacher, requesting for one day leave. Perform the following activities also in the same document
- a. Save the file as 'Leave.odt'.
  - b. Bold face the 'From' and 'To' addresses appearing in the document.
  - c. Change the font size of above addresses to 12.
  - d. Make the body of the letter justify within left and right margins.
  - e. Change the line spacing of the body of the letter to double and font size 11.
  - f. Right align the name and signature at the end of the document.
  - g. Save the file again.
9. Create a Presentation on the topic Electronic waste with minimum five slides.
- a. Save the file with name 'E-WASTE'.
  - b. Insert suitable pictures.
  - c. Set slide transition and slide show timings.
  - d. Save the file.
10. Design a sign board (poster) picture to spread the message 'NO SMOKING' on the 'World Tobacco Day'. Save the file with name 'LIFE'.
11. Create a presentation (minimum 5 slides) about various sports / games popular in India.
- a. Save the file with name 'SPORTS'.
  - b. Insert suitable pictures.
  - c. Set slide transition and slide show timings.
  - d. Save the file.
12. You are supplied with images of various modes of environment pollution. Create an attractive collage. Save the file with name 'POLLUTION'.

### Part B: HTML

1. 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.



2. Design a webpage as shown below using appropriate list tags.

**Permanent members in UN Security Council**

- Russia
- China
- USA
- UK
- France

3. Design a simple web page about your school. Create another web page named address.html containing the school address. Give links from school page to address.html.
4. Design webpage for blood donation camp in your locality. The page should be formatted with background color, heading, text formatting, font tags, image, etc.
5. Design a web page containing a table as shown below.

**Speed Limits in Kerala**

<b>Vehicles</b>	<b>Near School (In Km/hour)</b>	<b>Within Corporation/ Municipality(In Km/hour)</b>	<b>In other roads (In Km/hour)</b>
Motor Cycle	25	40	50
Motor Car	25	40	70
Light Motor Vehicles	25	40	60
Heavy Motor Vehicles	15	35	60

6. Prepare an HTML document to create the following Table

**STRENGTH OF THE SCHOOL**

<b>Batch</b>	<b>No of boys</b>	<b>No of Girls</b>	<b>Total</b>
Science	30	20	50
Commerce	32	18	50

7. Design a web page as shown below using appropriate list tags.

**Top Arts Colleges in India**

1. Lady Shriram College for Women, Delhi
2. Loyola College, Chennai
3. St. Stephen's College, Delhi
4. St. Xavier's College, Mumbai
5. Miranda House, University College for Women, Delhi

8. Design a web page that displays the following table.

**Student Details**

Class	Science	Commerce	Humanities
Plus One	49	50	48
Plus Two	50	50	49

**Part C: STRUCTURED QUERY LANGUAGE**

1. 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
  - a. Update the column Total with the sum of Mark1, Mark2 and Mark3.
  - b. List the details of students in Commerce batch.
  - c. Display the name and total marks of students who are failed (Total < 90).
  - d. Display the name and batch of those students who scored 90 or more in Mark1 and Mark2.
  - e. Delete the student who scored below 30 in Mark3.
  
2. 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.
  - e) Delete all the data from the table.
  
3. 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\_CodeVarchar (5)

Qty Integer

Unit\_Price Decimal (10,2)

Exp\_Date Date

a. Display the details of items which expire on 31/3/2016.

b. Display the item names with stock zero.

c. Remove the items which expire on 31/12/2015.

d. Increase the unit price of all items by 10%.

e. List the items manufactured by "ABC & Co" with quantity above 100.

4. Create a table Book with the following fields and insert at least 5 records into the table.

Book\_ID Integer Primary key

Book\_NameVarchar (20)

Author\_NameVarchar (25)

Pub\_NameVarchar (25)

Price Decimal (10,2)

a. Display the details of books with price 100 or more.

b. Display the Name of all the books published by SCERT.

c. Increase the price of the books by 10% which are published by SCERT.

d. List the details of books with the title containing the word "Programming"

at the end.

e. Remove all the books written by "Balaguruswamy".

5. Create a table Bank with the following fields and insert at least 5 records into the table.

Acc\_No Integer Primary key

Acc\_NameVarchar (20)

Branch\_NameVarchar (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.

e. Delete all the current accounts in Mahe branch.