



Total Pages : 8

B.Sc./4th Sem (H)/COMS/24(CBCS)

2024

4th Semester Examination

COMPUTER SCIENCE (Honours)

Paper : SEC 2-T

[CBCS]

Full Marks : 25

Time : Two Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

(HTML Programming)

Group - A

Answer any *three* questions : $2 \times 3 = 6$

1. Explain the difference between the `<div>` and `<span>` tags in HTML.
2. How do you create a hyperlink in HTML? Provide an example using the `<a>` tag.
3. What is the purpose of the `<head>` and `<body>` tags in an HTML document?
4. How can you create an ordered list and an unordered list in HTML?

P.T.O.

(2)

5. What is the use of the alt attributed in an `<img>` tag? Why is it important?

Group - B

Answer any *two* questions : $5 \times 2 = 10$

6. How can you create a table in HTML? Write the HTML code to create a table with 3 rows and 3 columns, with headers for each column. $2+3$
7. What is the purpose of `<Font>` tag in HTML? Explain the `<pre>` tag with example. $3+2$
8. What is list? Explain `<ol>` with all attribute and example. $2+3$

Group - C

Answer any *one* question : $9 \times 1 = 9$

9. What are HTML forms, and how are they used to collect user input? Explain the roles of the `<form>`, `<input>`, and `<button>` tags, and demonstrate how to create a simple login form with username and password fields. $2+4+3$
10. Explain the structure of a basic HTML document. Describe the purpose of the following tags : `<html>`, `<head>`, `<title>`, `<body>` and `<meta>`. Include an example of a simple HTML document in your answer. $2+3+4$
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(3)

OR

(XML Programming)

Group - A

Answer any *three* questions : $2 \times 3 = 6$

1. What are the advantages of XML?
2. What is a markup language?
3. Define XML Schema.
4. Distinguish HTML and XHTML.
5. Define DOM.

Group - B

Answer any *two* questions : $5 \times 2 = 10$

6. What are the basic rules while writing XML?
7. What are the features of XML?
8. What are the limitations of XSL? How XSL is different from CSS? $2+3$

Group - C

Answer any *one* question : $9 \times 1 = 9$

9. Explain the use of DTD for structuring the XML document. Write the difference between an attribute and an element in XML.
10. Explain about various types of XML Parsers.

P.T.O.

(4)

OR

[Oracle (SQL / PL-SQL) Programming]

Group - A

Answer any *three* questions : $2 \times 3 = 6$

1. Explain Bind variables with example.
2. What is a View?
3. What is DDL?
4. What is %TYPE?
5. What is COMMIT?

Group - B

Answer any *two* questions : $5 \times 2 = 10$

6. What are the features of PL/SQL? How it is different from SQL? $3+2$
7. What are different Data Types present in PL/SQL?
8. Briefly explain the concept of RAISE exception with any one example.

Group - C

Answer any *one* question : $9 \times 1 = 9$

9. What is a Cursor? Why is it required? Define implicit cursor attributes : %FOUND, %NOTFOUND, %ROWCOUNT and % ISOPEN. $2+2+5$
 10. What are the different types of joins in PL/SQL? Explain with example. Explain the purpose of Grant and Revoke statement. $2+3+4$
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(5)

OR

(Linux/Unix Programming)

Group - A

Answer any *three* questions : $2 \times 3 = 6$

1. What is shell?
2. Explain Fork() system call.
3. Write difference between 'cmp' and 'diff' command.
4. What are process states in Unix?
5. What do you mean by internal and external command in unix?

Group - B

Answer any *two* questions : $2 \times 5 = 10$

6. How can you use 'egrep' and 'fgrep' to take pattern from a file? Give example of each. $2\frac{1}{2} + 2\frac{1}{2}$
7. Give suitable example of 'While Loop'. How do you change ownership of a file in Linux? $3 + 2$
8. Explain Pipe. Give example. $3 + 2$

Group - C

Answer any *one* question : $9 \times 1 = 9$

9. Define process. Explain different state of process. Why process management is essential? $2 + 5 + 2$

P.T.O.

10. (i) Explain the process of installation, booting and shutdown in Linux.
- (ii) Write a shell script to check a number is prime or not. 5+4
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(7)

OR

(R-Programming)

Group - A

Answer any *three* questions : $2 \times 3 = 6$

1. What is data frame?
2. What are the applications of R?
3. What are the different ways to get help in R?
4. Differentiate between `tapply` and `mapply`.
5. Why vectorized functions are used in R?

Group - B

Answer any *two* questions : $5 \times 2 = 10$

6. Write about control statements in R.
7. What is subsetting? Write down the operators used in subsetting. $2 + 3$
8. Write any user defined function with a return value. What are the different parts of a function?

Group - C

Answer any *one* question : $9 \times 1 = 9$

9. Elaborate the following R objects :

(a) vector

P.T.O.

(b) data frame

(c) matrix

3+3+3

10. What are the different ways to read the dataset? How to create and rename a variable in R? What are the read write methods available in R and explain? 3+3+3

