



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
 [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]  
 Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

**Question Paper Code: 50041**

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. 2026

Fourth Semester

Computer Science and Engineering

U19CS412 – OPEN SOURCE SOFTWARE

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

**PART – A**

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Define Open Source.	2	K1	CO1
2.	List any two examples of Linux distributions.	2	K1	CO1
3.	Write the syntax for declaring variables in PHP.	2	K1	CO2
4.	Differentiate between for and for each loops in PHP.	2	K2	CO2
5.	Why are cookies used in PHP?	2	K2	CO3
6.	Write any two SQL commands with their functionality.	2	K2	CO3
7.	Define subroutines in Perl.	2	K1	CO4
8.	List any two uses of regular expressions in Perl.	2	K1	CO4
9.	Differentiate between GET and POST methods in CGI.	2	K2	CO5
10.	Mention any two file operations in Perl.	2	K1	CO5

**PART – B**

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	A startup company is planning to release its software as open source. Discuss the importance of choosing the right FOSS license with examples. Explain the need, advantages, and applications of Open Source Software.	13	K2	CO1

(OR)

- |        |  |    |    |     |
|--------|--|----|----|-----|
| b)     | Explain Linux system structure and Kernel vs. User mode operations.  | 13 | K2 | CO1 |
| 12. a) | An education portal wants to list all prime numbers between 1 and 1000 for a math quiz section. Write a PHP script to generate this. | 13 | K3 | CO2 |

(OR)

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|--------|--|----|----|-----|
| b)     | Write PHP programs to calculate factorial using (i) a function and (ii) without a function.            | 13 | K3 | CO2 |
| 13. a) | Explain PHP-MySQL connectivity with steps. Write a PHP program to insert and retrieve student details. | 13 | K2 | CO3 |

(OR)

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|--------|---|----|----|-----|
| b)     | Write short notes on Session Handling and Cookies in PHP with examples.           | 13 | K2 | CO3 |
| 14. a) | Explain variables, arrays, and control structures in Perl with suitable examples. | 13 | K2 | CO4 |

(OR)

- |        |  |    |    |     |
|--------|--|----|----|-----|
| b)     | Write a Perl program to swap two numbers without using a third variable and explain.   | 13 | K2 | CO4 |
| 15. a) | A news portal wants to back up its daily reports. Write a Perl program to read one file and write its content into another file. | 13 | K3 | CO5 |

(OR)

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|----|--|----|----|-----|
| b) | Write a Perl CGI program to create a student table (Roll No, Name, DOB, Age, Blood Group, Contact No, Year) and insert a record. | 13 | K3 | CO5 |
|----|--|----|----|-----|

### PART – C

(1 x 15 = 15 Marks)

- | Q.No.  | Questions   | Marks | KL | CO  |
|--------|---|-------|----|-----|
| 16. a) | A government organization is comparing Ubuntu, CentOS, and Red Hat to decide which Linux distribution to adopt. Write a detailed case study comparing their features, usability, and support. | 15    | K2 | CO1 |
| (OR)   |   |       |    |     |
| b)     | A programmer is developing an inventory system in Perl and encounters frequent runtime issues. Write short notes on error handling in Perl with examples.                                     | 15    | K4 | CO4 |