Reg.No.:												

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

Question Paper Code: 50015

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025
Seventh Semester
Biomedical Engineering
U19CSOE7 - OPEN SOURCE SOFTWARE
(Common to IT & BT)
(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.	Enumerate the influence of Linux, Apache, and Blender in software development.	2	K2	CO1
2.	State the need for Open Source Software (OSS).	2	K2	CO1
3.	Describe the process of a mode switch (from User Mode to Kernel Mode), with an example.	2	K2	CO2
4.	Differentiate process and program.	2	K1	CO2
5.	Enumerate the steps involved in creating, accessing, and destroying a session in PHP.	2	K2	CO3
6.	Compare persistent and non-persistent database connections in MySQL.	2	K2	CO3
7.	Write a Perl subroutine that accepts a string and returns whether it is a palindrome or not.	2	K2	CO4
8.	Write a Perl program to reverse the elements of an array.	2	K1	CO4
9.	Write a Perl CGI script that takes user input from a form and displays it back on the browser.	2	K2	CO5
10.	List the programmable components of an email message.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.			Questions	Marks	KL	CO
11.	a)		Justify the usage of open-source software utilized in web development and mobile app development.	13	K2	CO1
			(OR)			
	b)		What are the different types of open source licensing models, and how do they differ in terms of usage and distribution rights?	13	K2	CO1
12.	a)	i.	Illustrate the usage of signals for inter-process communication (IPC).	6	K2	CO2
		ii.	Differentiate synchronous and asynchronous signals with examples.	7		
			(OR)			
	b)	i.	Discuss the role of configuration files in Linux services.	6	K2	CO2
		ii.	Enumerate the difference between a user-level and system-level service, with two examples.	7		
13.	a)	i.	Enumerate the steps and functions involved in implementing a file upload feature on a web server using PHP.	7	K2	CO3
		ii.	Describe the methods available in PHP to perform read and write operations on CSV files.	6		
			(OR)			
	b)	i.	Explain how cookies can be used to implement a "Remember Me" functionality on a website.	7	K2	CO3
		ii.	Discuss the limitations on the size and number of cookies in PHP.	6		
14.	a)	i.	What are namespace packages and how do they differ from regular packages?	7	K2	CO4
		ii.	Elaborate the advantages of modular programming using packages and modules.	6		
			(OR)			
	b)	i.	Write a Perl script snippet to iterate over an array and print only even numbers using a loop and conditional control structure.	7	K3	CO4
		ii.	Illustrate how can you combine if statements with loops, to control program flow dynamically?	6		

15.	a)	Design a Perl CGI script that allows users to submit feedback via a web form and stores it in a file.	13	K3	CO5
		(OR)			
	b)	Write a Perl CGI script that reads a text file and displays its contents in an HTML table.	13	K3	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.			Questions	Marks	KL	CO
16.	a)	i.	Write a Perl regular expression to match a date in DD-MM-YYYY format.	8	K3	CO3
		ii.	How can you capture a part of a string using parentheses in Perl regular expressions? Provide an example.	7		
			(OR)			
	b)	i.	How can you catch exceptions in Perl using eval, and handle them gracefully? Illustrate with an example.	8	K3	CO3
		ii.	What are Try::Tiny and Exception::Class modules in Perl? Justify its functionality, to improve error handling?	7		