UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: Open-Source Software Fundamentals   **Semester: V**
Program: B. Tech. (CSE)   **Time: 03 hrs.**
Course Code: CSOS3013P   **Max. Marks: 100**

Instructions: Attempt all questions.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Write about the significance of open-source software.	4	CO1
Q2	List the different licenses used for open-source software.	4	CO2
Q3	Give two examples of each: a) LINUX distributions b) Closed source software	4	CO4

Q4	Differentiate:
	  a) OSI and FSF
	  b) IIS and Apache Web server
		4	CO3

Q5	Write steps to create a repository in GitHub.	4	CO2

SECTION B
(4Qx10M= 40 Marks)

Q 6	Discuss what motivates developers to contribute to open-source software.	10	CO3
Q 7	Briefly write about GNU Linux including the following points: its history, advantages, and architecture.	10	CO2
Q8	Explain the working of GitHub and models for collaboration development (Shared repository, Fork, and Pull).	10	CO2
Q 9	Give an account of open-source challenges.	10	CO1

SECTION-C
(2Qx20M=40 Marks)

Q 10	Explain the open-source development model clearly stating its benefits.	20	CO3

| Q 11 | Discuss the ways in which developers can contribute to open-source software.

OR

Case: Simulation of Project Delay

-        Project Starts: Planned to Complete in 12 months

-        Month 10: The project manager proposed to add two new resources to the existing project for targeting to complete this project in 12 Months Whereas the Engineers have said that they have already completed 70% of the Project and 30% of the Project will be completed in the next two months.

-        Month 11: Team has informed us that it can't be completed in month 12 as per the commitment. Discussion started on Brook's law and the Project manager added two new resources and postponed completing this project for 13 months.

-        Month 13: The project is not yet ready, and the Engineers have been recalled to the Project Manager for violating Brook's law of adding new people.

Month 14: The project is ready and released late by 2 months.

a) Mention the reasons why the simulated project was delayed.
b) How Brook's law applies in this scenario. | 20 | CO2 |