USCS103 - FOSS

(2 ½ Hours)   [Total Marks: 75]

N.B.   1) All questions are compulsory.
        2) Figures to the right indicate marks.
        3) Illustrations, in-depth answers and diagrams will be appreciated.
        4) Mixing of sub-questions is not allowed.

Q. 1   Attempt All (Each of 5Marks)   (15M)
(a)   Multiple Choice Questions
        i.   FLOSS stands for _____
              a. Free Libre Open Source Software
              b. Free Least Open Source Software
              c. Fixed Libre Open Source Software
              d. Freedom Level Open Source Software)
        ii.   OSI stands for _____
              a. open system interchange   b. open source initiative
              c. open source interchange   d. open system interconnection)
        iii. LGPL stands for _____
              a. Library General Public License   b. Lesser General Public License
              c. Level General Public License   d. Linking General Public License
        iv.   Most commercial software programs enjoy a form of intellectual
              property protection called _____
              a. Copyright   b. Patent   c. Copyleft   d. Trademark
        v.   _____ is an example of closed source software.
              a. Python   b. Joomla   c. MySQL   d. Microsoft Office

(b)   Fill in the blanks
        i.   _____ refers to any program whose source code is made
              available for use or modification as users or other developers see fit.
        ii.   FSF founded by _____.
        iii. _____ is one of the content management systems.
        iv.   VMware is a _____ software.
        v.   _____ is one of the Desktop-dedicated open source operating
              system.

(c)   Short answer (Attempt all)
        i.   Public Domain Software
        ii.   Copyleft
        iii. GCC and GDB
        iv.   Shared Software
        v.   Communication and Etiquette

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Q. 2 Attempt the following (Any THREE)(Each of 5Marks) (15M)
(a) Write a note on the history of Free Software Foundation and the GNU Project.
(b) Diagrammatically explain Open source software development model.
(c) Describe in detail zero marginal cost in FOSS.
(d) Explain FOSS important licenses: Apache, GPL.
(e) Discuss the role of open source in government.
(f) What is software freedom? Explain its components.

Q. 3 Attempt the following (Any THREE) (Each of 5Marks) (15M)
(a) Discuss the following about Openoffice.org case study:-
    i. Introduction
    ii. Features
    iii. Any three components
(b) Define Open source hardware? How can hardware be 'Open'? Explain.
(c) What is GitHub? How one can contribute to it? Explain with steps.
(d) Explain the following points about Wikipedia open source project:-
    i. What is it?
    ii. Who is doing it?
    iii. How does it work?
    iv. What is its significance?
    v. Where is it going?
(e) List and explain any five rules of Open source media.
(f) Explain Open source teaching and its components of communication platforms?

Q. 4 Attempt the following (Any THREE) (Each of 5Marks) (15M)
(a) What is Linux Operating system? Discuss its any four features.
(b) Define Virtualization. Explain its types.
(c) What is Containerization? State its advantages and disadvantages.
(d) Write a short note on LAMP.
(e) Explain any three open source database technologies.
(f) Discuss Containerization technology - Docker.

Q. 5 Attempt the following (Any THREE) (Each of 5Marks) (15M)
(a) Differentiate between open source and closed source.
(b) Write a note on Commercial design practice and Free design practice.
(c) Explain the following terms with examples :-
    i. Development Tools
    ii. Debuggers
    iii. IDEs
(d) What are Open standards principles? Explain any five.
(e) How "FOSS does not mean no cost"? Justify.

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