

- 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. Foss stands for
 - a. Free open source system
 - b. Free open source software
 - c. Free object source system
 - d. Free object software system
- ii. OSI with respect to opens source software stands for
 - a. open source initiative
 - b. open system interchange
 - c. open source interchange
 - d. open system interconnection
- iii. GCC is
 - a. GNU collection compiler
 - b. GNU C compiler
 - c. Global C compiler
 - d. GNU Convertor compiler
- iv. LAMP is
 - a. Linux based Advanced MySQL database Programming
 - b. Linux Apache Web server MySQL database PHP/Python/Perl
 - c. Linux Android MySQL database, PHP/Python/Perl
 - d. Linux Advanced MYSQL Programs
- v. Oracle VM Virtual Box is an example of
 - a. Free open source software available under GNU-GPL
 - b. Licensed software
 - c. Shareware software
 - d. Public Domain

(b) Fill in the blanks

- i. _____ is software where source code is available for modification to everyone.
- ii. Eclipse is a popular IDE donated by _____ to the open source community.
- iii. _____ is free and open source web browser developed by Mozilla foundation.
- iv. _____ operating is free open system for mobile device.
- v. _____ is open source project for automation of Linux based application.

(c) Short answer :(Attempt all)

- i. What is open source license?
- ii. What is closed source code software?
- iii. What do you mean by open source ethics?
- iv. What is GPL?
- v. What is GNU - debugger?

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Q. 2 Attempt the following (Any THREE) (Each of 5Marks) (15M)

- (a) Write a note on public domain software.
- (b) Discuss the concept of "Free doesn't mean no Cost".
- (c) Explain open source software development model with a diagram.
- (d) Write a short note on the following
 - i. Apache license
 - ii. BSD license
- (e) What is software localization? How it is related to internationalization?
- (f) Explain the zero marginal cost with respect to FOSS.

Q. 3 Attempt the following (Any THREE) (Each of 5Marks) (15M)

- (a) Write a short note on the following:
 - i. Wikipedia
 - ii. Wordpress
- (b) Explain five key components of Open Office.
- (c) How one can contribute to an open source project using GitHub?
- (d) Explain the following terms
 - i. Open Source Design
 - ii. Open source Teaching
- (e) Distinguish between Commercial design practices and Open/Free Design practices
- (f) What is Open Source hardware? How hardware can be 'Open'?

Q. 4 Attempt the following (Any THREE) (Each of 5Marks) (15M)

- (a) Explain features Linux operating system.
- (b) Write short note on Android operating system.
- (c) List five advantages of Virtualization.
- (d) Describe in detail containerization.
- (e) Discuss any two open source database technology.
- (f) What is Virtualization? Explain any two types of virtualization.

Q. 5 Attempt the following (Any THREE) (Each of 5Marks) (15M)

- (a) Explain the following terms
 - i. Copyleft
 - ii. Copyright
- (b) What is communication and etiquette? Explain.
- (c) Write short note on 'Docker'.
- (d) What are the problems with traditional commercial software?
- (e) Explain role of open source in government.
