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Question Paper Code : 80203

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Second Semester

Information Technology

IT 8201 — INFORMATION TECHNOLOGY ESSENTIALS

(Regulation 2017)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define World Wide Web.

2. Give examples for web server.

3. Write down the need and advantages of Scripting language.

4. Write the output of the given code segment:

    var_dump(0123 == 123);

    var_dump('0123' == 123);

    var_dump('0123' ===123);

5. What is the purpose of DNS server?

6. You want to implement a mechanism that automates the IP configurations, which protocol will you use to accomplish this?

7. List the features of LTE standard in wireless communication.

8. What would be the minimum distance between the centers of two cells with the same band of frequencies if cell radius is 1 km and the reuse factor is 12?

9. Write any four tools or technologies used to develop simple information retrieval system.

10. You are asked to develop an E-commerce web site for a leading super market stores. Write down the steps to be followed in requirement analysis stage.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Explain in detail about creating a web site for Kids play Store with neat web page layouts and also justify the arrangement of elements in your layout. (7)

    (ii) Compare and contrast the types of authoring tools available with examples. (6)

Or

(b) (i) Explain with neat sketches the working principle and features of Application Server and Web Server with an example for each. (7)

    (ii) Explain the process involved in fetching the relevant web site when an URL is given in the web browser. (6)

12. (a) (i) Define a class named 'user' with name and password as variables. Create a method named 'display user' which will display the above property values. Now extend this class user by adding another two properties namely e mail and phone number. Now write a display method inside this inherited class to display all the properties. Write the code snippet for the above implementation. (7)

    (ii) In how many ways a CSS can be integrated to a HTML web page? Explain with suitable example to set the background color of different element in HTML page using CSS. (6)

Or

(b) (i) Discuss in detail about creation, deletion and usage of cookies. (7)

    (ii) Write a PHP program to print out the sum of pairs of numbers of a given Sorted array of positive integers which is equal to a given number. (6)

13. (a) (i) Explain in detail TCP/IP architecture and also brief the various protocols used in this model. (7)

    (ii) Discuss on the different network topology and give example for each. (6)

Or

(b) (i) Discuss the different typed of packet switching modes and the delay parameters involved in transmitting the packets. (7)

    (ii) List any five network components and explain the usage and functionality of each. (6)

2   80203

14. (a) (i) How does a mobile unit communicate to a public telephone system using GSM? Explain. (7)

      (ii) Differentiate FDMA and CDMA. (6)

Or

(b) (i) Explain the cell phone network architecture in detail. (7)

      (ii) Discuss on the cellular frequency reuse technique. (6)

15. (a) (i) Build an interactive application for online education portal with the following functionalities. (7)

      (1) There should be at least five subjects

      (2) The time table should be displayed

      (3) The students should be able to choose their course instructor

      (4) Online assignment and test should be provided

      (5) Maximum enrollment should be fixed and needed form validation is to be done. Discuss on the portal design, Overall layout, hyperlinks used and the component layout of every page

      (ii) Using the software engineering design methodology explain the various process involved in the development of the above online education portal. (6)

Or

(b) (i) Design a personal information application which maintains your bio-data, contacts, appointments, favorite music and reminder notification. It should also maintain your income and expense details. Discuss on the application design, layout, hyperlinks used and component layout of the above application. (7)

      (ii) Design and develop a tourism website for Tamilnadu Government. Discuss on the multimedia components used and browser compatibility testing to handle the above components effectively. (6)

80203

PART C — (1 × 15 = 15 marks)

16. (a) You are appointed as a web developer in "XYZ banking service". You are asked to develop a website for Banking sector which can maintain all day to day transaction activities carried out by the customer both online and in bank counter. Based on the transaction, an alert message has to be sent to the customer through email and mobile phone message. The design must include the maintenance of back end information effectively. Multi-modal components are to be incorporated into the web site to facilitate the various disability persons for eg Speech to text for visually challenged people. Discuss on the development process in detail with code snippets and lay outs where ever needed. (15)

Or

(b) Design a web site for an Non-profit organization that takes care of organizing blood donation camps, Eye check up camp and servicing old people. The site should contain the details of events, list of members and program details. It should also have facilities for enrollment for a particular program by the public and their registration is confirmed by email. Discuss on the development process in detail with code snippets and lay outs where ever needed. (15)

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80203