





9. List the steps involved in a typical application development lifecycle.
10. Write any four multimedia applications used in education domain.

PART – B (5×13=65 Marks)

11. a) i) Compare and contrast application server and database server. (6)  
 ii) Explain the process of client server communication for a web request. (7)
- (OR)
- b) i) Discuss on any four components that are needed to create a fully dynamic web page. (6)  
 ii) Explain the process of developing a web application and hosting on the web server. (7)
12. a) i) Write a PHP program to declare an array of integers, to sort them in ascending order and to display the sorted array using for-each. (6)  
 ii) Write a PHP program to read a text file line by line and to display it on the screen. (7)
- (OR)
- b) i) Design a form that offer choices to user to select country name. Depending on the name selected map image of the country should be displayed on the same window and the capital of the country in the text format should be displayed near the image. (10)  
 ii) What are cookies and how are they used? (3)
13. a) i) Show how data flows through different layers in a TCP/IP network, calculate the number of times encapsulation and decapsulation take place. (6)  
 ii) Discuss the collision avoidance technique used in wireless LAN. Is it possible for collisions to still occur? Explain. (7)
- (OR)
- b) i) Compare and contrast different types switching methodologies in network communication. (6)  
 ii) Explain the various networking topologies in detail. (7)
14. a) i) Explain with a block diagram in detail how different services are provided by GSM. (6)  
 ii) Discuss in detail about the digital cell phone components. (7)

(OR)

- b) i) Briefly discuss how call roaming service is carried out in cellular network. (6)  
 ii) Explain about generation of cellular networks. (7)

15. a) i) Design a simple personal information system that gives you reminders for each day. Identify the inputs to be taken, processing to be done and the output to be produced. What multimedia components can be added to this application? (6)  
 ii) Explain the architecture of a generic search system. If this system is to be used for searching only images, which components would need to be changed and how? (7)

(OR)

- b) i) Design a simple social-media application to pass on messages to friends about the birthday of individual (except the birthday person) in the group to other friends. (6)  
 ii) Design an application for a blood bank which accept blood request and based on the request (blood group) it identify the people from the database and send them the message. What are the important features needed for this? (7)

PART – C (1×15=15 Marks)

16. a) Using DIV element, write HTML code to design a web site for a online catering service. The web site should provide some highlighting facilities provided by them. The web site must provide the available menu and cost-of each menu item in a tabular form. The web site must also accept the order form which includes any number of items and quantity required. Write script to validate the form and to compute the total amount to be paid. In the web site the images of the items should be displayed. Draw the layout of your web site first and write HTML code for each page.

(OR)

- b) Using frame and form, design a web site for an orphanage which should accept donation from the people for 1 day lunch and medical assistance expense. It should also inform the donor how the donation has been spent. The web pages should be properly designed and should be viewed in any screen (mobile, pc). Amount transfer information should be done through validation. Draw the layout of your web site pages and write the code for each page.

PART C — (1 × 15 = 15 marks)

Reg. No. : 

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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.

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)

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)

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)



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**Question Paper Code : 90326**

**B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019**  
**Second Semester**  
**Information Technology**  
**IT 8201 – INFORMATION TECHNOLOGY ESSENTIALS**  
**(Regulations 2017)**

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

**PART – A**

**(10×2=20 Marks)**

1. List out the features need to be considered while designing website.
2. List out steps for creating a website.
3. List out the differences between server side and client side scripting languages.
4. Write about MySQL.
5. List out the advantages and limitations of Wi-Fi.
6. List out the networking components.
7. Compare and contrast FDMA, TDMA and CDMA techniques.
8. Define cell splitting and sectoring.
9. Define database, DBMS. List out database applications.
10. List out some social and multimedia applications.

**PART – B**

**(5×13=65 Marks)**

11. a) Explain about the browser fundamentals.

(OR)

- b) Explain about the different types of servers.

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12. a) Explain about the PHP built-in string functions with syntax and examples.  
(OR)

b) Explain about the accessing MySQL using PHP.

13. a) Define protocol. Explain about any two routing protocols.

(OR)

b) Describe about the switching techniques with diagrams.

14. a) Briefly describe about the sequence of the generations of cellular networks with their improvements.

(OR)

b) Explain about the digital cell phones components in detail.

15. a) i) Explain about the interactive applications. (7)

ii) Explain the various media used for multimedia application. (6)

(OR)

b) Explain about the design and development of information systems.

PART – C

(1×15=15 Marks)

16. a) Create an Opinion Poll Application using PHP and MySQL.

(OR)

b) Create a database for Hospital Management System (HMS) using MySQL environment. Draw an ER-Diagram for HMS.