

SRM VALLIAMMAI ENGINEERING COLLEGE

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF INFORMATION TECHNOLOGY

QUESTION BANK



III SEMESTER

IT3362 INFORMATION TECHNOLOGY ESSENTIALS

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SRM Nagar, Kattankulathur-603203.
Department of Information Technology
Question Bank



SUBJECT : IT3362 INFORMATION TECHNOLOGY ESSENTIALS

SEM / YEAR : III / II

UNIT I - WEB ESSENTIALS

Creating a Website – Working principle of a Website – Browser fundamentals – Authoring tools – Types of servers: Application Server – Web Server – Database Server

PART-A

Q.No	Question	BTL	Competence
1	Define Authoring tool.	BTL1	Remembering
2	Define HTTP?	BTL1	Remembering
3	List any two functions of web browser.	BTL1	Remembering
4	What is URL?	BTL1	Remembering
5	What is meant by web browser?	BTL1	Remembering
6	State HTTP tunneling.	BTL1	Remembering
7	State the principle of good website design.	BTL2	Understanding
8	Write an information about Website	BTL2	Understanding
9	Outline the uses of IP address.	BTL2	Understanding
10	Define DNS.	BTL2	Understanding
11	Differentiate between Webpage and Website.	BTL2	Understanding
12	What are the types of web authoring tools?	BTL1	Remembering
13	List the factors that need to be considered while testing the web site?	BTL1	Remembering
14	Name the features of Authoring tools	BTL1	Remembering
15	Relate server and web server.	BTL1	Remembering
16	List various function of web browser.	BTL2	Understanding
17	Judge HTTP stateless Protocol?	BTL1	Remembering
18	State how to reduce the page load time.	BTL2	Understanding
19	Find the issues to be considered while building a website for common user?	BTL1	Remembering
20	List the steps for creating the web sites.	BTL1	Remembering
21	Mention the types of HTTP messages.	BTL1	Remembering
22	State the purpose of rendering Engine.	BTL2	Understanding
23	List out the different types of server.	BTL1	Remembering
24	Define Cache.	BTL1	Remembering

PART-B				
1	Identify the procedure to create a website.	(16)	BTL3	Applying
2	Analyze the essential components required to design a professional education website and justify your design choices.	(16)	BTL4	Analyzing
3	Examine the enhancement of Website? Explain their possibilities.	(16)	BTL4	Analyzing
4	State and analyze the role of the following i) Structure of HTTP Response Message ii) Cache control. iii) Web Server	(6) (5) (5)	BTL4	Analyzing
5	Examine briefly about IP addressing.	(16)	BTL4	Analyzing
6	Organize some features of a web site.	(16)	BTL3	Applying
7	Examine the Following i) Apache. ii) IIS iii) DBMS iv) HTTP Request Message Structure.	(4) (4) (4) (4)	BTL4	Analyzing
8	Identify the phases available in Website development? Explain in brief.	(16)	BTL3	Applying
9	Explain in detail about HTTP Protocol.	(16)	BTL3	Applying
10	Explain in detail about the feature to be consider while designing the website.	(16)	BTL3	Applying
11	Compare some popular web browsers features.	(16)	BTL4	Analyzing
12	Analyze in detail about DNS operation.	(16)	BTL 4	Analyzing
13	i) Comparison between Application Server, Web Server and Database server. ii) Differentiate between Apache and IIS Web Server.	(10) (6)	BTL4	Analyzing
14	Discover the function of the server and explain their types in brief.	(16)	BTL4	Analyzing
15	Identify the various features of authoring tools.	(16)	BTL3	Applying
16	Discuss in detail about the web browser architecture.	(16)	BTL3	Applying
17	i) Explain the various web site design issues. ii) Mention the various ways to enhancing the website.	(8) (8)	BTL4	Analyzing

UNIT II - SCRIPTING ESSENTIALS AND PHP WITH MYSQL
Need for Scripting languages – Types of scripting languages – Client side scripting – Server side scripting – Embedding PHP in HTML – Understanding identifiers – Using Operators – Making Decisions with conditionals – Arrays – Functions – Object oriented PHP- Working with MySQL Databases– Accessing MySQL Database with PHP.

PART-A

Q.No	Question	BTL	Competence
1	Define client side scripting.	BTL1	Remembering
2	Outline echo and print.	BTL1	Remembering
3	What is PHP? Give a suitable example	BTL1	Remembering
4	What is a Scripting Language?	BTL1	Remembering
5	List the common usage of PHP.	BTL1	Remembering
6	Label the working principle of PHP.	BTL1	Remembering
7	Infer associative array in PHP.	BTL2	Understanding
8	What did you mean by PHP variables?	BTL2	Understanding
9	Define server side scripting.	BTL2	Understanding
10	Classify types of scripting languages.	BTL2	Understanding
11	Write the structure of PHP.	BTL1	Remembering
12	How will you delete cookies in PHP?	BTL1	Remembering
13	Why do you move to script writing method in web programming?	BTL1	Remembering
14	Differentiate Constant and Variable in PHP.	BTL2	Understanding
15	State the difference between “Insert”, “Update” and “Modify” events?	BTL1	Remembering
16	State the difference between Java script and VB script.	BTL1	Remembering
17	Relate the following Code and give the output <pre><?php \$x=5; \$y=10; Function myTest() { Global \$x,\$y; \$y=\$x**\$y; \$x=300 } myTest(); echo \$y.”,”,\$x; ?></pre>	BTL2	Understanding
18	Relate the following Code and give the output <pre><html> <head> <title>Checkboxes</title> <?PHP \$ch1='unchecked'; If(isset(\$_POST['Submit'])) { If(isset(\$_POST['ch1'])) { \$ch1=\$_POST['ch1']; If(\$ch1=='net1')</pre>	BTL2	Understanding

	<pre> { \$ch1='checked'; } } } ?> </head> </pre>		
19	How to write and execute PHP document?	BTL2	Understanding
20	Give the suitable example for basic syntax of PHP.	BTL1	Remembering
21	Mention the advantages of scripting languages.	BTL2	Understanding
22	Differentiate between server side and client side scripting.	BTL2	Understanding
23	Write down the data types used in PHP?	BTL2	Understanding
24	What is Associated Array in PHP?	BTL2	Understanding

PART-B

1	Apply PHP and HTML concepts to develop a simple form that accepts a user name and displays it using the echo statement.	(16)	BTL3	Applying
2	Examine the following: i) Scope of the variables. ii) Parameters. iii) Function dealing with array.	(5) (5) (6)	BTL4 BTL4 BTL4	Analyzing
3	i) Why we move to scripting languages. ii) List the types of scripting languages and explain it.	(8) (8)	BTL3	Applying
4	i) List and explain the data types of PHP. ii) Describe about Arithmetic operators and its operations.	(8) (8)	BTL3	Applying
5	Discuss the various operators used in PHP with an example.	(16)	BTL3	Applying
6	Explain the various functions methods in PHP with an example.	(16)	BTL4	Analyzing
7	Explain about Cookies about the following a) Create. b) Delete. c) Retrieve. d) Setting. e) Access.	(4) (4) (3) (3) (2)	BTL4	Analyzing
8	Create a form containing information Sl.No, title of the book, publishers, quantity, price, read the data from the form and display it using PHP Script.	(16)	BTL3	Applying
9	i) Write and inspect the PHP script to display Fibonacci of length 10. ii) Write and inspect PHP script to compute the sum of positive integer up to 30 using do – while statement.	(8) (8)	BTL3	Applying

10	i) Write PHP program to greatest among three numbers. ii) Write a PHP script to compute sum and average of N numbers. iii) Write PHP programs to print whether current year is leap year or not.	(5) (5) (6)	BTL3	Applying
11	i) Examine the PHP script to compute factorial of 'n' using while or for loop construct. ii) Write a PHP program to read a text file line by line and display it on screen.	(8) (8)	BTL4	Analyzing
12	Analyze the File handling methods and explain with example.	(16)	BTL4	Analyzing
13	Evaluate how we use cookies and also show usage of PHP to solve by checking the image extension before uploading a image.	(16)	BTL5	Evaluating
14	Construct a PHP script to compute the Square root, Square, Cube and Quad of 10 numbers.	(16)	BTL6	Creating
15	i) Write PHP Program to print whether given number is odd or even. ii) Discuss the various modes of operation in file handling.	(8) (8)	BTL5	Evaluating
16	Explain the various control and looping statements in PHP with examples.	(16)	BTL3	Applying
17	Summarize in brief about arrays in PHP with suitable examples.	(16)	BTL4	Analyzing

UNIT III - NETWORKING ESSENTIALS

Fundamental computer network concepts – Types of computer networks – Network layers – TCP/IP model – Wireless Local Area Network – Ethernet – WiFi – Network Routing – Switching – Network components.

PART-A

Q.No	Question	BTL	Competence
1	Define a Computer Networks.	BTL1	Remembering
2	What are the metrics used by routing protocols?	BTL1	Remembering
3	What is the similarity between transport layer and data link layer?	BTL1	Remembering
4	What is network Topology?	BTL1	Remembering
5	Generalize LAN, WAN and MAN.	BTL1	Remembering
6	State Ring and Star Topology	BTL1	Remembering
7	List the common approaches for switching.	BTL2	Understanding
8	Outline some basic network components?	BTL2	Understanding
9	Can you list the five components of data communication?	BTL2	Understanding
10	Classify the network types.	BTL2	Understanding
11	Identify an example for an Application Layer.	BTL2	Understanding

12	List the Characteristics of Computer networks.	BTL1	Remembering
13	List the layers in OSI layer.	BTL1	Remembering
14	Relate the Transport Layer and Application Layer.	BTL2	Understanding
15	Why are protocols needed?	BTL2	Understanding
16	Differentiate Simplex, Half-Duplex and Full- Duplex.	BTL2	Understanding
17	Draw the network layers and assess their function.	BTL2	Understanding
18	List the three types of address in TCP/IP.	BTL1	Remembering
19	Give the name of a protocol used in transport layer of the network.	BTL2	Understanding
20	State the responsibilities of a Transport layer.	BTL2	Understanding
21	List the different network criteria.	BTL1	Remembering
22	List all the parameters used to measure network performance.	BTL1	Remembering
23	Define routing.	BTL2	Understanding
24	What are the two approaches to packet switching?	BTL1	Remembering

PART-B

1	Define computer networks. Explain the types of computer networks with neat examples.	(16)	BTL3	Applying
2	i) Explain the various network performance parameters in detail. ii) Explain the types of transmission modes.	(8) (8)	BTL3	Applying
3	List the basic network components and Write about the network components.	(16)	BTL3	Applying
4	Analyze the various issues and limitations involved in different types of network topologies in detail.	(16)	BTL4	Analyzing
5	Analyze the architecture of IEEE 802.11.	(16)	BTL3	Applying
6	Explain briefly about switching with all the types with appropriate example.	(16)	BTL3	Applying
7	Analyze the Importance of TCP / IP and compare with OSI.	(16)	BTL4	Analyzing
8	Organize the different Network Topologies and apply them for appropriate scenarios with suitable diagram.	(16)	BTL3	Applying
9	Explain the physical properties of Ethernet 802.3 with necessary diagram of Ethernet transceiver and adaptor.	(16)	BTL5	Evaluating
10	Discuss in detail about open source shortest path routing with neat diagrams.	(16)	BTL3	Applying
11	What are the major difference between Distance Vector Routing and Link State Routing? Discuss how these routing techniques work.	(16)	BTL4	Analyzing

12	Explain about the following i) WAN ii) LAN iii) Bridges iv) HUB	(4) (4) (4) (4)	BTL4 BTL4 BTL4 BTL4	Analyzing
13	Draw the neat diagram about OSI layer with neat explanation.	(16)	BTL5	Evaluating
14	Explain in detail about the TCP/IP Protocol architecture.	(16)	BTL3	Applying
15	Assess the use of common transmission media used in computer networks? Write down the benefits and drawbacks.	(16)	BTL5	Evaluating
16	Interpret with relevant diagram the functions of physical and data link layer.	(16)	BTL5	Evaluating
17	Discuss in detail about the functions of Session and transport layers with necessary diagrams.	(16)	BTL3	Applying

UNIT IV - MOBILE COMMUNICATION ESSENTIALS

Cell phone working fundamentals – Cell phone frequencies & channels – Digital cell phone components – Generations of cellular networks – Cell phone network technologies / architecture – Voice calls & SMS

PART-A

Q.No	Question	BTL	Competence
1	Define FDMA, CDMA	BTL1	Remembering
2	What is the fundamental working of a basic cell phone ?	BTL1	Remembering
3	List the advantages of GSM	BTL1	Remembering
4	Define a Cell.	BTL1	Remembering
5	What is IMEI?	BTL1	Remembering
6	Recall hard handoff and soft handoff.	BTL1	Remembering
7	List the components of mobile phone.	BTL2	Understanding
8	Classify the generation of cellular network.	BTL2	Understanding
9	Interpret the working function of AUC.	BTL2	Understanding
10	What is meant by Common air interface?	BTL2	Understanding
11	Identify the use of radio frequency and baseband.	BTL2	Understanding
12	Identify how HLR and VLR are used.	BTL2	Understanding
13	Compare CDMA and GSM.	BTL2	Understanding
14	Distinguish between fourth generation and fifth generation of network.	BTL1	Remembering
15	Classify the types of channel assignment.	BTL2	Understanding
16	Distinguish between FCA and DCA.	BTL2	Understanding
17	Define the goals of 3G.	BTL1	Remembering
18	Define the signal frequency in cell phone.	BTL1	Remembering
19	Identify the frequencies used according to generation.	BTL2	Understanding

20	List the typical uses of SMS?	BTL1	Remembering
21	Identify the functions handled by HLR?	BTL2	Understanding
22	Judge the names of GSM entities.	BTL2	Understanding
23	Write the services provided by GSM?	BTL1	Remembering
24	List the channels used in CDMA.	BTL1	Remembering

	PART-B			
1	i) What are the different topologies that can be used to set up a LAN? ii) Recall the security service of GSM.	(8) (8)	BTL3 BTL3	Applying
2	List the advantage of GPRS over GSM? Also explain the architecture of GPRS.	(16)	BTL3	Applying
3	Recall the following: i) Analog Cell Phone. ii) Digital Cell Phone.	(8) (8)	BTL3 BTL3	Applying
4	Describe the difference between 1G, 2G, 3G and 4G.	(16)	BTL4	Analyzing
5	Illustrate the working principle of cell phone with necessary steps.	(16)	BTL3	Applying
6	Outline the overview of GSM system architecture with neat diagram.	(16)	BTL3	Applying
7	Summarize the following i) SMS. ii) Voice Call.	(8) (8)	BTL3	Applying
8	Examine with appropriate explanation the components of cellular networks and mention the uses of components.	(16)	BTL3	Applying
9	Identify the cell phone frequencies and channels for all the generations and explain it.	(16)	BTL3	Applying
10	Explain how IP version 4 addresses are designed. How are they used by a router to forward packets?	(16)	BTL3	Applying
11	Explain about the cell phone network technology/architecture.	(16)	BTL4	Analyzing
12	Compare the characteristic of SDMA, FDMA, TDMA and CDMA.	(16)	BTL4	Analyzing
13	Draw the neat diagram of mobile network and evaluate them with necessary explanation.	(16)	BTL5	Evaluating
14	Formulate how an Ethernet based LAN works. You have only 32-port switches. You have to construct a network that can connect 200 nodes. How will you connect them up?	(16)	BTL6	Creating
15	Explain in detail about Long Term Technology.	(16)	BTL4	Analyzing
16	Illustrate channel allocation techniques and its various types.	(16)	BTL4	Analyzing
17	Sketch the procedure of voice calls and SMS transmitting and receiving.	(16)	BTL3	Applying

UNIT V - APPLICATION ESSENTIALS AND MODERN INFORMATION RETRIEVAL

Design and development of information systems - Simple database applications – Multimedia applications - Overview effective IRS –File Structures - User Interfaces – Visualization - Searching the Web

PART-A

Q.No	Question	BTL	Competence
1	Mention two principles of good UI design.	BTL1	Remembering
2	List the different type of information system.	BTL1	Remembering
3	State the importance of data model?	BTL1	Remembering
4	What is primary key?	BTL1	Remembering
5	Specify any two desirable characteristics of information system.	BTL1	Remembering
6	What is web crawler?	BTL1	Remembering
7	Outline information system.	BTL2	Understanding
8	Infer why personal information system is needed?	BTL2	Understanding
9	Summarize the concept of data independence in DBMS.	BTL2	Understanding
10	Illustrate the term Multimedia.	BTL2	Understanding
11	Define the steps used in design and development of information system.	BTL1	Remembering
12	What is file structure?	BTL1	Remembering
13	Identify the need of search engine and list few popular search engines.	BTL2	Understanding
14	List the rules used in table event.	BTL1	Remembering
15	Categorize the parts involved in information system.	BTL2	Understanding
16	Classify the two desirable character of information system.	BTL2	Understanding
17	What is mean by popular search engine.	BTL1	Remembering
18	Mention two tools used for data visualization.	BTL1	Remembering
19	Predict the social networks and its uses.	BTL2	Understanding
20	Compose the steps involved in a typical application development life cycle.	BTL1	Remembering
21	Summarize the components of IRS.	BTL2	Understanding
22	How are information retrieve models classified?	BTL2	Understanding
23	Categorize the social networking application.	BTL2	Understanding
24	What are the services in social network?	BTL1	Remembering

PART-B

1	What is an information system? What are the steps involved in the design and development of an information system?	(16)	BTL3	Applying
2	Explain the principles of good user interface design with real-world examples.	(16)	BTL3	Applying
3	Describe the architecture of a text search system. How would this have to be modified for music search?	(16)	BTL4	Analyzing
4	Describe the social network application with neat example.	(16)	BTL3	Applying
5	Discuss personal information system and explain the applications.	(16)	BTL3	Applying
6	Outline the important features and characteristics of information system.	(16)	BTL3	Applying
7	Summarize the simple database application or 2 tier architecture.	(16)	BTL3	Applying
8	Construct a sample multimedia application and identify the steps with neat explanations.	(16)	BTL3	Applying
9	Build a website for student information system using PHP/HTML/MySQL Student Information are stored in Database.	(16)	BTL3	Applying
10	Discuss the evolution of web search technologies and their future trends, including AI and machine learning.	(16)	BTL3	Applying
11	Explain about the information retrieval system.	(16)	BTL4	Analyzing
12	Explain the various types of charts and graphs used in data visualization, providing examples for each.	(16)	BTL4	Analyzing
13	Consider a multinational company which sells different electronic gadgets such as desk tops, lap tops, tablets, cameras, mobile, phones, etc. through online or various dealers. Dealers are registered with the company. Customers can buy through online or dealers. Delivery of electronic goods will be through various agencies. Every shipment of goods will be insured through insurance company. Consider this as an Information System project, describe the various requirements for building this Information System.	(16)	BTL5	Evaluating
14	Design a simple social-media application to pass on messages to friends whenever two people come in contact with (within range of) one another. Assume that you are using devices with Blue-tooth support to transfer messages.	(16)	BTL6	Creating
15	Explain the generation of Simple Interactive.	(16)	BTL4	Analyzing
16	Compare and contrast arrays and linked lists with respect to their structure, operations and use cases.	(16)	BTL6	Creating
17	Describe the design and development of Information systems.	(16)	BTL4	Analyzing