

SRM VALLIAMMAI ENGINEERING COLLEGE
(An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF INFORMATION TECHNOLOGY

QUESTION BANK



III SEMESTER

1908304–INFORMATION TECHNOLOGY ESSENTIALS

Regulation – 2019

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DEPARTMENT OF INFORMATION TECHNOLOGY QUESTION BANK

SUBJECT : 1908304 – 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.	Questions	BT Level	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	Mention the uses of cache.	BTL2	Understanding	
8	Write an information about Website	BTL2	Understanding	
9	Outline the uses of IP address	BTL2	Understanding	
10	Infer GET and POST request?	BTL2	Understanding	
11	Build the reason for which people tend to visit the website	BTL3	Applying	
12	Identify the HTTP Protocols?	BTL3	Applying	
13	Organize the factors that need to be considered while testing the web site?	BTL3	Applying	
14	Mention the features of Authoring tools	BTL4	Analyzing	
15	Differentiate server and web server.	BTL4	Analyzing	
16	Examine various function of web browser.	BTL4	Analyzing	
17	Judge HTTP stateless Protocol?	BTL5	Evaluating	
18	Assess how to reduce the page load time	BTL5	Evaluating	
19	Formulate the issues to be considered while building a website for common user?	BTL6	Creating	
20	Predict the steps for creating the web sites	BTL6	Creating	
21.	Mention the types of HTTP messages	BTL3	Applying	
22.	Discuss the purpose of rendering Engine.	BTL4	Analyzing	
23.	List out the difference types of server.	BTL4	Analyzing	
24.	Define FQDN and PQDN	BTL4	Analyzing	
PART – B				
1	Describe the procedure to create a website.	(13)	BTL1	Remembering
2	State the following in brief. i)Web Compatibility. ii) Search Engine. iii) Web Design.	(4) (5) (4)	BTL1	Remembering

3	What do you meant by enhancement of Website? Explain their possibilities. (13)	BTL1	Remembering
4	State and mention the role of the following i)Structure of HTTP Response Message (5) ii)Cache control. (4) iii)Web Server (4)	BTL1	Remembering
5	Discuss briefly about IP addressing. (13)	BTL2	Understanding
6	Summarize some features of a web site. (13)	BTL2	Understanding
7	Illustrate the Following i)Apache. (3) ii)IIS. (3) iii)DBMS. (3) iv)HTTP Request Message Structure. (4)	BTL2	Understanding
8	Identify the phases available in Website development? Explain in brief. (13)	BTL3	Applying
9	Explain in detail about HTTP Protocol. (13)	BTL3	Applying
10	Identify Website design issues in detail. (13)	BTL3	Applying
11	Compare some popular web browsers features. (13)	BTL4	Analyzing
12	Analyze in detail about DNS operation. (13)	BTL 1	Remembering
13	Assess the following statement. i) Networking. (6) ii)User Interface. (7)	BTL5	Evaluating
14	Formulate the function of the server and explain their types in brief. (13)	BTL6	Creating
15.	Identify the various features of authoring tools. (13)	BTL3	Applying
16.	Discuss in detail about the web browser architecture. (13)	BTL3	Applying
17.	(i). Explain the various web site design issues. (6) (ii).Mention the various ways to enhancing the website (7)	BTL4	Analyzing
18.	Explain in detail about the feature to be consider while designing the website. (13)	BTL4	Analyzing
PART – C			
1	Create your own concept for creating a professional education website.(15)	BTL6	Creating
2	Formulate the Various basic features of web browsers. (15)	BTL6	Creating
3	(i).Comparison between Application Server ,Web Server and Database server. (10) (ii).Differentiate between Apache and IIS Web Server. (5)	BTL5	Evaluating
4	Evaluate the features and its application for the following: i) Application Server. (5) ii) Web Server. (5) iii) Database Server. (5)	BTL5	Evaluating
5	Find the class of each IP address. Give suitable explanation. i) 227.12.14.87. (3) ii) 193.14.56.22. (3) iii) 14.23.120.8. (3) iv) 252.5.15.111. (3) v) 134.11.78.56. (3)	BTL4	Analyzing

UNIT II SCRIPTING ESSENTIALS

Need for Scripting languages - Types of scripting languages - Client side scripting - Server side scripting – PHP - Working principle of PHP - PHP Variables – Constants - Operators – Flow Control and Looping - Arrays - Strings - Functions - File Handling - PHP and MySQL - PHP and HTML - Cookies - Simple PHP scripts

PART – A

Q. No.	Questions	BT Level	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	Show the purpose of \$Global variable.	BTL3	Applying
12	How will you delete cookies in PHP?	BTL3	Applying
13	Why do you move to script writing method in web programming?	BTL3	Applying
14	Differentiate Constant and Variable in PHP.	BTL4	Analyzing
15	Analyze the difference between “Insert”, “Update” and “Modify” events?	BTL4	Analyzing
16	State the difference between Java script and VB script.	BTL4	Analyzing
17	Evaluate 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>	BTL5	Evaluating
18	Evaluate the following Code and give the output <pre><html> <head> <title>Checkboxes</title> <?PHP \$ch1='unchecked'; If(isset(\$_POST['Submit']))</pre>	BTL5	Evaluating

	<pre> { If(isset(\$_POST['ch1'])) { \$ch1=\$_POST['ch1']; If(\$ch1=='net1') { \$ch1='checked'; } } } ?> </head> </pre>		
19	How to write and execute PHP document.	BTL6	Creating
20	Give the suitable example for basic syntax of PHP	BTL6	Creating
21.	Mention the advantages of scripting languages	BTL3	Applying
22.	Differentiate between server side and client side scripting.	BTL4	Analyzing
23.	Write down the data types used in PHP.	BTL2	Understanding
24.	What is Associated Array in PHP.	BTL4	Analyzing
PART – B			
1	i)What are the benefits of using PHP and MySQL. (7) ii)Recall the need of Structured Query Language (SQL). (6)	BTL1	Remembering
2	State the following i)Scope of the variables. (4) ii)Parameters. (4) iii) Function dealing with array. (5)	BTL1	Remembering
3	i) Why we move to scripting languages. (6) ii) List the types of scripting languages and explain it. (7)	BTL1	Remembering
4	i) List and explain the data types of PHP. (7) ii)Describe about Arithmetic operators and its operations. (6)	BTL1	Remembering
5	Discuss the various operators used in PHP with an example. (13)	BTL2	Understanding
6	Explain the various functions methods in PHP with an example. (13)	BTL2	Understanding
7	Explain about Cookies about the following a) Create. (3) b) Delete. (3) c) Retrive. (3) d) Setting. (2) e) Access. (2)	BTL2	Understanding
8	Identify the operation and usage of Join in SQL and organize its types. Explain in brief. (13)	BTL3	Applying
9	i)Write and inspect the PHP script to display Fibonacci of length 10. (7) ii)Write and inspect PHP script to compute the sum of positive integer up to 30 using do – while statement. (6)	BTL3	Applying
10	i)Write PHP program to greatest among three numbers. (4) ii)Write a PHP script to compute sum and average of N numbers. (4) iii)Write PHP programs to print whether current year is leap year or not. (5)	BTL3	Applying

11	i)Examine the PHP script to compute factorial of 'n' using while or for loop construct. (7) ii)Write a PHP program to read a text file line by line and display it on screen. (6)	BTL4	Analyzing
12	Analyze the File handling methods and explain with example. (13)	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. (13)	BTL5	Evaluating
14	Construct a PHP script to compute the Square root, Square, Cube and Quad of 10 numbers. (13)	BTL6	Creating
15.	(i)Write PHP Program to print whether given number is odd or even. (6). (ii) Discuss the various modes of operation in file handling. (7)	BTL5	Evaluating
16.	Explain the various control and looping statements in PHP with examples. (13)	BTL3	Applying
17.	Summarize in brief about arrays in PHP with suitable examples. (13)	BTL4	Analyzing

PART – C

1	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. (15)	BTL6	Creating
2	Assess the difference between mysql_connect and mysql_pconnect. Explain with examples. (15)	BTL5	Evaluating
3	Design a simple HTML form and accept the user name and display the name through PHP echo statement. (15)	BTL5	Evaluating
4	Develop a website calculator for fixed deposits for 15 years at the rate of interest 13 percent of the premium per year. (15)	BTL6	Creating
5	Explain the various String operations in PHP with an example. (15)	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.	Questions	BT Level	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	BTL3	Applying
12	Organize the Characteristics of Computer networks	BTL3	Applying
13	Identify the layers in OSI layer	BTL3	Applying

14	Examine the Transport Layer and Application Layer	BTL4	Analyzing
15	Why are protocols needed?.	BTL4	Analyzing
16	Differentiate Simplex, Half-Duplex and Full-Duplex.	BTL4	Analyzing
17	Draw the network layers and assess their function.	BTL5	Evaluating
18	Interpret the three types of address in TCP/IP	BTL5	Evaluating
19	Give the name of a protocol used in transport layer of the network	BTL6	Creating
20	Formulate the responsibilities of a Transport layer	BTL6	Creating
21	List the different network criteria.	BTL3	Applying
22	Analyze all the parameters used to measure network performance.	BTL4	Analyzing
23	Define routing.	BTL2	Understanding
24	What are the two approaches to packet switching?.	BTL3	Applying
PART – B			
1	Define computer networks. Explain the types of computer networks with neat examples. (13)	BTL1	Remembering
2	(i) Explain the various network performance parameters in detail. (7) (ii) Explain the types of transmission modes. (6)	BTL1	Remembering
3	List the basic network components and Write about the network components. (13)	BTL1	Remembering
4	Illustrate the working of CSMA / CD and CSMA/CA protocol. (13)	BTL1	Remembering
5	Differentiate between circuit switching and packet switching concepts. (13)	BTL2	Understanding
6	Summarize briefly about switching with all the types with appropriate example. (13)	BTL2	Understanding
7	Outline the Importance of TCP / IP and compare with OSI. (13)	BTL2	Understanding
8	Organize the different Network Topologies and apply them for appropriate scenarios with suitable diagram. (13)	BTL3	Applying
9	Identify the network layer and its applications (13)	BTL3	Applying
10	Discuss in detail about open source shortest path routing with neat diagrams. (13)	BTL3	Applying
11	What are the major difference between Distance Vector Routing and Link State Routing? Discuss how these routing techniques work. (13)	BTL4	Analyzing
12	Explain about the following i) WAN(3) ii) LAN(3) iii) Bridges(4) iv) HUB(3)	BTL4	Analyzing
13	Draw the neat diagram about OSI layer with neat explanation. (13)	BTL5	Evaluating
14	Formulate in detail about the TCP/IP Protocol architecture. (13)	BTL6	Creating
15.	Explain the two approaches of packet switching and circuit switching techniques. (13)	BTL4	Analyzing
16.	(i) Differentiate between a service port addressing, logical addressing and physical addressing (06) (ii) Name some services provided by application layer. (07)	BTL3	Applying
17.	Discuss in detail about the functions of Session and transport layers with necessary diagrams. (13)	BTL3	Applying
PART – C			
1	Formulate the issues in network topologies in detail. (15)	BTL6	Creating
2	Assess the use of common transmission media used in computer networks? Write down the benefits and drawbacks. (15)	BTL5	Evaluating
3	Explain the physical properties of Ethernet 802.3 with necessary	BTL5	Evaluating

	diagram of Ethernet transceiver and adaptor. (15)		
4	Analyze the architecture of IEEE 802.11. (15)	BTL6	Creating
5.	Interpret with relevant diagram the functions of physical and data link layer. (15)	BTL5	Evaluating

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.	Questions	BT Level	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	Outline the components of mobile phone.	BTL2	Understanding
8	Demonstrate 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.	BTL3	Applying
12	Identify how HLR and VLR are used.	BTL3	Applying
13	Compare CDMA and GSM.	BTL3	Applying
14	Distinguish between fourth generation and fifth generation of network	BTL4	Analyzing
15	Classify the types of channel assignment.	BTL4	Analyzing
16	Distinguish between FCA and DCA.	BTL4	Analyzing
17	Assess the goals of 3G.	BTL5	Evaluating
18	Determine the signal frequency in cell phone.	BTL5	Evaluating
19	Predict the frequencies used according to generation.	BTL6	Creating
20	Formulate the typical uses of SMS?	BTL6	Creating
21.	Illustrate the functions handled by HLR?	BTL2	Understanding
22.	Judge the names of GSM entities	BTL5	Evaluating
23.	Write the services provided by GSM	BTL6	Creating
24.	Illustrate the channels used in CDMA	BTL4	Analyzing

PART – B

1	i)What are the different topologies that can be used to set up a LAN? (6) ii) Recall the security service of GSM. (7)	BTL1	Remembering
2	List the advantage of GPRS over GSM? Also explain the architecture of GPRS. (13)	BTL1	Remembering
3	Recall the following: i) Analog Cell Phone. (6) ii) Digital Cell Phone. (7)	BTL1	Remembering

4	Describe the difference between 1G, 2G, 3G and 4G. (13)	BTL1	Remembering
5	Illustrate the working principle of cell phone with necessary steps.(13)	BTL2	Understanding
6	Outline the overview of GSM system architecture with neat diagram. (13)	BTL2	Understanding
7	Summarize the following i) SMS. (6) ii) Voice Call. (7)	BTL2	Understanding
8	Examine with appropriate explanation the components of cellular networks and mention the uses of components. (13)	BTL3	Applying
9	Identify the cell phone frequencies and channels for all the generations and explain it. (13)	BTL3	Applying
10	Explain how IP version 4 addresses are designed. How are they used by a router to forward packets ? (13)	BTL3	Applying
11	Explain about the cell phone network technology/architecture. (13)	BTL4	Analyzing
12	Compare the characteristic of SDMA, FDMA,TDMA and CDMA. (13)	BTL4	Analyzing
13	Draw the neat diagram of mobile network and evaluate them with necessary explanation. (13)	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 ? (13)	BTL6	Creating
15.	Explain in detail about Long Term Technology. (13)	BTL6	Creating
16.	Illustrate channel allocation techniques and its various types. (13)	BTL4	Analyzing
17.	Sketch the procedure of voice calls and SMS transmitting and receiving. (13)	BTL3	Applying

PART – C

1	Explain the basic block structure of satellite communication. (15)	BTL6	Creating
2	If you lose your cell phone deactivate your SIM.How is this achieved in GSM architecture. (15)	BTL5	Evaluating
3	Demonstrate the frequency reuse factor in a cellular network?Draw the arrangement of cells for a frequency reuse factor. (15)	BTL5	Evaluating
4	Draw the block diagram of walkie talkie and explain the working principles with merits and demerits. (15)	BTL6	Creating
5.	With neat diagram explain about GPRS (15)	BTL6	Creating

UNIT V APPLICATION ESSENTIALS

Creation of simple interactive applications - Simple database applications - Multimedia applications - Design and development of information systems – Personal Information System – Information retrieval system – Social networking applications

PART – A

Q. No.	Questions	BT Level	Competence
1	Define interactive application	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	Construct the steps used in design and development of information system	BTL3	Applying
12	Examine about Web crawler.	BTL3	Applying
13	Identify the need of search engine and list few popular search engines.	BTL3	Applying
14	Analyze the rules used in table event.	BTL4	Analyzing
15	Categorize the parts involved in information system	BTL4	Analyzing
16	Classify the two desirable character of information system	BTL4	Analyzing
17	Criticize about popular search engine	BTL5	Evaluating
18	Assess PAMIR	BTL5	Evaluating
19	Predict the social networks and its uses.	BTL6	Creating
20	Compose the steps involved in a typical application development life cycle	BTL6	Creating
21.	Summarize the components of IRS	BTL2	Understanding
22.	How are information retrieve models classified?	BTL2	Understanding
23.	Categorize the social networking application	BTL4	Analyzing
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? (13)	BTL1	Remembering
2	List the steps involved in mobile application development. If you have to design a mobile app for techofes - giving details of all events - show the UI design. (13)	BTL1	Remembering
3	Describe the architecture of a text search system. How would this have to be modified for music search? (13)	BTL1	Remembering
4	Describe the social network application with neat example. (13)	BTL1	Remembering
5	Discuss personal information system and explain the applications.(13)	BTL2	Understanding
6	Outline the important features and characteristics of information system. (13)	BTL2	Understanding
7	Summarize the simple database application or 2 tier architecture. (13)	BTL2	Understanding
8	Construct a sample multimedia application and identify the steps with neat explanations. (13)	BTL3	Applying
9	Build a website for student information system using PHP/HTML/MySQL Student Information are stored in Database.(13)	BTL3	Applying
10	Examine the steps involved for creating simple interactive web application. (13)	BTL3	Applying
11	Explain about the information retrieval system. (13)	BTL4	Analyzing
12	Explain the advantage and disadvantage of three type of Data model. (13)	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	BTL5	Evaluating

	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. (13)		
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. (13)	BTL6	Creating
15.	Explain the generation of Simple Interactive. (13)	BTL4	Analyzing
16.	Write the applications of serial networking. (13)	BTL6	Creating
17.	Describe the design and development of Information systems. (13)	BTL4	Analyzing
PART – C			
1	Formulate the world impacts of social media like Facebook, Whatsapp, twitter, and Instagram. (15)	BTL6	Creating
2	Justify the digital mediums that are available to transfer the data and others work? Explain in details. (15)	BTL5	Evaluating
3	Explain the basic block diagram of the payroll architecture and explain in brief. (15)	BTL5	Evaluating
4	Construct the social effects of news broadcasting applications. (15)	BTL6	Creating
5.	Explain simple database application with an example. (15)	BTL5	Evaluating

