Reg. No.

B.E / B.TECH. DEGREE EXAMINATION, MAY 2023
Fifth Semester
CS18501 – USER INTERFACE TECHNOLOGIES
(Common to CS & IT)
(Regulation 2018)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	To understand the concepts and architecture of the World Wide Web	2
CO 2	To understand and practice Markup Language	3
CO 3	To understand Embedded Dynamic Scripting on Client-side Internet Programming	3
CO 4	To understand and practice NoSQL MongoDB Database	3
CO 5	To understand and practice Server-side JS Framework	2

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

		CO	RBT LEVEL
1.	Summarize the characteristics of ARPANET.	1	1
2.	Write the structure of HTTP response.	1	1
3.	What are the new features of HTML5?	2	1
4.	Write the sample code for internal CSS. Compare with inline CSS.	2	1
5.	Write a JavaScript code to create an object using class.	3	2
6.	Compare BOM and DOM .	3	2
7.	List out the advantages and disadvantages of the NOSQL database.	4	1
8.	What is the size of the JSON document's unique identifier?	4	2
9.	How do you import a module in Node.js? Give an example.	5	2
10.	Distinguish between on() and emit() methods in Node.js.	5	2

PART- B (5 x 14 = 70 Marks)

				Marks	CO	RBT LEVEL
11. (a)	(i)	Discuss the characteristics of ARPANET.		(6)	1	3
	(ii)	Write the structure of HTTP response to client request. Apply all fields in the response message .		(8)	1	3
		(OR).				
(b)		Explain the working procedure of following protocols in accordance to the client request:				
		a) SMTP		(7)	1	3
		b) POP3		(7)	1	3

12. (a)		Write a HTML 5 code to design advertisement webpage for college admission Web page must include all the semantic tags to describe college features, play videos about college and canvas to include images on the website.	**(14)**	2	3

(OR)

(b)	**(i)**	Design a webpage for online shopping. Apply cascasding style sheet features to present the product and its content to make the website more attractive to the customer.	**(8)**	2	3
	(ii)	Illustrate the animation to change the box color from red to yellow within 4 seconds. Explain the HTML5 animation properties used in the program.	**(6)**	2	3
13. (a)	**(i)**	Write a JavaScript program to provide solutions to quadratic equations. Generate all possible outputs and display the result.	**(8)**	3	3
	(ii)	Demonstrate border-radius and box shadow property using HTML5 code.	**(6)**	3	3

(OR)

(b)	**(i)**	Explain Class, Constructor and Object in Javascript with the help of a suitable program.	**(7)**	3	3
	(ii)	Discuss various JQuery selectors with suitable example.	**(7)**	3	3
14. (a)	**(i)**	Compare and Contrast MongoDB with RDBMS. Create the Student database in MongoDB	**(7)**	4	4
	(ii)	List out Various data types supported by MongoDB. Write a program to create fields using all MongoDB data types.	**(7)**	4	4

(OR)

(b)	**(i)**	Implement array/embedded document to handle one-one and one - many relationship .	**(7)**	4	4
	(ii)	Apply MongoDB CRUD operations to the Inventory system. Inventory database must have the fields like Item_id, Item_Name, Quantity, Price, Date_of_Purchase, Reorder_Level and Supplier_ detail.	**(7)**	4	4
15. (a)	**(i)**	Discuss about working methodology of Node.js with neat diagram	**(6)**	5	3
	(ii)	Write a Node.js program to create a web server and retrieve home, student and admin pages.	**(8)**	5	3

(OR)

(b)	**(i)**	Illustrate event handling in Node.js using the GET method for webpage which collects user details.	(7)	5	3
	(ii)	Implement the following using Node.js: a) Connect MongoDB b) Create Employee Database c) Create Collections to Employee database. Explain all operations .	(7)	5	3

PART- C (1 x 10 = 10 Marks)
(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Distinguish between Synchronous and asynchronous web communication. Demonstrate the AJAX web communication procedure.	(10)	3	3

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