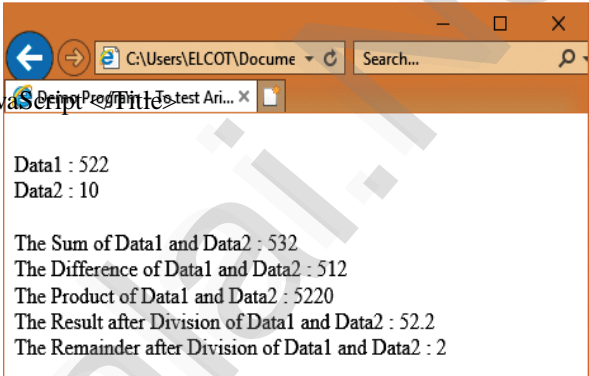|	
[HALF YEARLY EXAMINATION KEY ANSWER -2024-2025]	
STD: XI – COMPUTER APPLICATIONS – DR SURESH MATRIC HSS – RAMANATHAPURAM (DIST)	
I	**(One word)**
	1.C 2.C 3.D 4.A 5.B 6.C 7.B 8.B 9.C 10.A 11.B 12.D 13.B 14.B 15.A
II	**(Two Marks) (Q.no 24 is compulsory)**
16	❖ The ALU is a part of the CPU where various computing functions are performed on data. ❖ The ALU performs arithmetic operations such as addition, subtraction, multiplication, division and logical operations
17	Google and Bing
18	❖ The icons which are available on desktop by default while installing Windows OS are called standard icons. ❖ The standard icons available in all Windows OS are My Computer, Documents and Recycle Bin.
19	❖ A presentation software is a computer software package used to show information, in the form of a slide show. ❖ Each slide uses a variety of multimedia elements that grabs the viewer's attention and retains it.
20	❖ The CC (Carbon Copy) field allows you to specify recipients who are not direct addressees ❖ The BCC (Blind Carbon Copy) field is similar to CC, except the recipients are secret. ❖ Each BCC recipient will receive the e-mail, but will not see who else received a copy.
21	❖ The <hr> (Horizontal Rules) tag, which is known as "Thematic Breaks" separate sections of an HTML document visually. ❖ It produces a horizontal line spread across the width of the browser. This is an empty tag.
22	1. GIF (Graphical Interchange Format) 2. JPEG (Joint Photographic Experts Group) 3. PNG (Portable Network Graphics) 4.SVG (Scalable Vector Graphics)
23	<Link rel = "style sheet" type = "text/css" href = CSS_File_Name_with_Extension>
24	$65_{10}= (1000001)_2$
III	**(Three Marks) (Q.no 33 is compulsory)**
25	❖ Each number system is uniquely identified by its **base value** or **radix**. ❖ Radix or base is the count of number of digits in each number system. ❖ Radix or base is the general idea behind positional numbering system. **Example:** 1.Binary –Radix 2 $(1010)_2$ 2.Octal – Radix 8 $(457)_8$ 3.Decimal- Radix 10 $(314)_{10}$ 4.hexa-Decimal – Radix 16 $(25F)_{16}$
26	1.User Interface (UI) 2.Memory Management 3.Process management 4. Security Management 5. Fault Tolerance 6.File Management
27	1. Place the insertion pointer in the row or in the column where you would like to add new rows or columns and right click. 2. Choose Row -Insert – to insert a row or Column - Insert – to insert a column. 3. A dialog box will appear, from which you can select the number of rows or columns to insert. 4. You can also set the position of the new rows or columns to before or after. Click Ok to close the dialog box.
28	❖ The Transmission Control Protocol/ Internet Protocol) to transmit data via various types of media. ❖ The internet protocol (IP) addressing system is used to keep track of the millions of users. ❖ The internet uses TCP/IP is a set of protocols that comprise hierarchies.
29	1. <table> tag is used to create a table. 2. <tr> tag defines table rows 3. <th> tag defined table columns 4. <td> tag is used to specify the data in a cell. 5. <caption> tag defines title for the table
30	**Method:** ❖ The method attribute of the form tag is used to identify how the form element names and values will be sent to the server. ❖ The get method will append the names of the form elements and their values to the URL. **Action** ❖ The action attribute identifies the server side program or script that will process the form. ❖ The action will be the name of a Common Gateway Interface (CGI) program written in programming languages like Perl, JavaScript, PHP or Active Server Pages (ASP). **General Format of <form> tag** <Form method=get/post action= "back_end_server_script"> Form elements </Form>
31	❖ In JavaScript there are times when the same portion of code needs to be executed many times with slightly different values is called Loops. ❖ JavaScript supports three kinds of looping statements. They are 1. For loop, 2.while loop 3.do..while loop
32	❖ The <script> …….</script> tag containing JavaScript can be placed anywhere within in the web page, but it is normally recommended that should be kept it within the <head> tags.

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	❖ The <script> tag alerts the browser program to start interpreting all the text between these tags as ascript commands. **Syntax:** <script language="javascript" type="text/javascript"> JavaScript code </script> • The <SCRIPT> tag takes two important attribute 1.language 2.type.

33	```html
	<html>
	<head> <title> Sum using Function</title> </head>
	<body>
	<script type="text/JavaScript">
	function sum(x)
	{
	var x, s = 0;
	for(var i = 1; i <= 10; i++)
	{
	x = prompt("Enter a number: ", "0");
	s = parseInt(s) + parseInt(x);
	}
	return s;
	}
	document.writeln("The sum of given 10 numbers = " + sum());
	</script>
	</body>
	</html>
	``

IV	**(Five Marks)**

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Generation & Period	Main Component used	Merits/Demerits
First Generation 1940-1956	**Vacuum tubes**	❖ Big in size ❖ Consumed more power ❖ Malfunction due to overheat ❖ Machine Language was used
Second Generation 1956-1964	**Transistors**	❖ Smaller compared to First Generation ❖ Generated Less Heat ❖ Consumed less power compared to first generation ❖ Punched cards were used ❖ First operating system was developed – Batch Processing and Multiprogramming Operating System ❖ Assembly language was used.
Third Generation 1964-1971	**Integrated Circuits (IC)**	❖ Computers were smaller, ❖ faster and more reliable ❖ Consumed less power ❖ High Level Languages were used
Fourth Generation 1971-1980	**Microprocessor** Very Large Scale Integrated Circuits (VLSI)	❖ Smaller and Faster ❖ Microcomputer series such as IBM and APPLE were developed ❖ Portable Computers were introduced.
Fifth Generation 1980 – till date	Ultra Large Scale Integration(ULSI)	❖ Parallel Processing ❖ Super conductors ❖ Computers size was drastically reduced. ❖ Can recognise Images and Graphics ❖ Introduction of Artificial Intelligence and Expert Systems ❖ Able to solve high complex problems including decision making and logical reasoning
Sixth Generation In future	❖ Parallel and Distributed computing ❖ Computers have become smarter, faster and smaller ❖ Development of robotics ❖ Natural Language Processing ❖ Development of Voice Recognition Software	

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Or	**i) $(255)_{10} = (\ ?\ )_2$**
	
	 Step :1
	 2 255 $(255)_{10} =$ **$(11111111)_2$**
	 2 127-1 **Step :2 (Binary to Octal)**
	 2 63-1 $(11111111)_2$ $(?)_8$
	 2 31-1 <u>011</u> <u>111</u> <u>111</u> $(255)_{10} =$ **$(377)_8$**
	 2 15-1 3 7 7
	 2 7-1
	 2 3-1 **Step : 3 (Binary to Hexa Decimal)**
	   1-1 $(11111111)_2$ $(?)_{16}$
	            <u>1111</u> <u>1111</u> $(255)_{10} =$ **$(FF)_{16}$**
	             F F

	ii) $(126)_{10} = (\ ?\ )_2$
	
	 Step :1
	 2 126 $(126)_{10} =$ **$(1111110)_2$**
	 2 63-0 **Step :2 (Binary to Octal)**
	 2 31-1 $(1111110)_2$ $(?)_8$
	 2 15-1 <u>011</u> <u>111</u> <u>110</u> $(126)_{10} =$ **$(376)_8$**
	 2 7-1 3 7 6
	 2 3-1
	 2 1-1 **Step : 3 (Binary to Hexa Decimal)**
	             $(1111110)_2$ $(?)_{16}$
	            <u>0111</u> <u>1110</u> $(126)_{10} =$ **$(7E)_{16}$**
	            7 E

35 a	**Read only memory(ROM)** ❖ Read Only Memory refers to special memory in a computer with pre-recorded data at manufacturing time which cannot be modified. ❖ The stored programs that start the computer and perform diagnostics are available in ROMs. ❖ ROM stores critical programs such as the program that boots the computer. ❖ Once the data has been written onto a ROM chip, it cannot be modified or removed and can only be read. ❖ ROM retains its contents even when the computer is turned off. So, ROM is called as a non-volatile memory. **1.PROM:** ❖ Programmable read only memory is also a non-volatile memory on which data can be written only once. ❖ Once a program has been written onto a PROM, it remains there forever. ❖ Unlike the main memory, PROMs retain their contents even when the computer is turned off. ❖ The PROM differs from ROM. PROM is manufactured as a blank memory, whereas a ROM is programmed during the manufacturing process itself. ❖ PROM programmer or a PROM burner is used to write data to a PROM chip. ❖ The process of programming a PROM is called burning the PROM. **2.EPROM:** ❖ Erasable Programmable Read Only Memory is a special type of memory which serves as a PROM, but the content can be erased using ultraviolet rays. ❖ EPROM retains its contents until it is exposed to ultraviolet light. ❖ The ultraviolet light clears its contents, making it possible to reprogram the memory. ❖ An EPROM differs from a PROM, PROM can be written only once and cannot be erased. ❖ EPROMs are used widely in personal computers because they enable the manufacturer to change the contents of the PROM to replace with updated versions or erase the contents before the computer is delivered. **3.EEPROM:** ❖ Electrically Erasable Programmable Read Only Memory can be erased by exposing it to an electrical charge. ❖ Like other types of PROM, EEPROM retains its contents even when the power is turned off. ❖ Comparing with all other types of ROM, EEPROM is slower in performance.
OR	❖ The Distributed Operating System is used to access shared data and files that reside in any machine around the world. ❖ The user can handle the data from different locations. ❖ The users can access as if it is available on their own computer. **Advantages :** ❖ A user at one location can make use of all the resources available at another location over the network. ❖ Many computer resources can be added easily in the network ❖ Improves the interaction with the customers and clients. ❖ Reduces the load on the host computer.

36 a	❖ Headings are used to include titles to sections of a web page. ❖ HTML has six levels of headings viz. **<h1>** to **<h6>**. ❖ The number with **h** indicates the level of heading. Header tags display the body text as bolder and larger in size according to its level. **The syntax of heading tags:** <h…> Heading text </h…> **Example :** <html> <head> <title> Heading </title> </head> <body> <h1> Welcome to Computer Application</h1> <h2> Welcome to Computer Application</h2> <h3> Welcome to Computer Application</h3> <h4> Welcome to Computer Application</h4> <h5> Welcome to Computer Application</h5> <h6> Welcome to Computer Application</h6> </body> </html>
OR	**a) <strong> Important text :** 1. The <strong> tag is a phrase tag. 2. It is used to define important text by displaying text as bold. **b) <em> - Emphasized text:** 1. The <em> tag is used to emphasize the text. 2. That means, when you use this tag, the text will be in italics. **c) <mark> Tag:** ❖ The <mark> tag is used to highlight the text in HTML. ❖ This is also a container tag. ❖ Whatever the text given between <mark> and </mark> will be displayed as highlighting with default color. **d) <hr> tag:** The <hr> tag having four attributes viz. size, width, no shade and color. 1. Size: Thickness of the horizontal line can be changed with size attribute. The size is given in terms of pixels. 2. Width: The width attribute specifies the horizontal width of the rule line. 3. Noshade: The default view of a horizontal rule line is 3D. 4. Color: The horizontal line is displayed in gray color by default. **Syntax:** <hr size=value width=value noshade, color=color_name/code> **e) <sub> tag:** ❖ In HTML, the <sub> and <sup> tags are used to create subscript and superscripts respectively. ❖ As like as other formatting tags, this is also a container tag.
37 a	**1.Numbered List / Ordered List :** ❖ Numbered list is created within the tag pair <OL> ….. </OL> tag. ❖ The tag <LI> is used to present the list item in the list. Ordered list displays items in a numerical or alphabetical order. ❖ Both <OL> and <LI> tags are container tags. ❖ But the usual the practice, closing tag </LI> never be used. **Attributes of Ordered List:** (1) Type - changing numbering style (2) Start - changing numbering order **2.Un-numbered List / Unordered List:** ❖ Unordered lists are often referred as bulleted lists. ❖ Instead of numbers, each element in the list has prefixed with a special bullet symbol. ❖ Unordered list is surrounded within <UL> ……… </UL> tags. ❖ As discussed above, each list element is defined by <LI> tag. **3.Definition List :** ❖ Definition list is different from other two types of list. No bullet or number is provided for the list items. ❖ In this list type, the list element has two parts. ❖ (1) A definition term (2) The definition description ❖ Definition list is surrounded within <DL> ……. </DL> tags. ❖ Definition term is presented in between <DT> ….. </DT> tag and ❖ Definition description should be surrounded within <DD> ………… </DD> tag.

	4.Nested Lists:
	A list block can be defined inside another list is called as nested list.
OR	**Explain about the Arithmetic operator with suitable example.** (M-2020)(M-2022) (J-2024)

Arithmetic Operators :

❖ JavaScript supports all the basic arithmetic operators like addition (+), subtraction (–), multiplication (*), division (/), and modulus (%, also known as the remainder operator).

Arithmetic	Meaning	Example	Result
+	Addition	var sum = 20 + 120	Variable sum = 140
-	Subtraction	var diff = 20 – 120	Variable diff = 100
*	Multiplication	var prod = 10 * 100	Variable prod = 1000
/	Division	var res = 100/522	Variable res = 5.22
%	Modulus operator	var rem = 100 % 522	Variable rem = 22 (remainder)

Example Coding:

```
<Html>
<Head>
<Title>Demo Program – To test Arithmetic Operators in JavaScript</Title>
</Head>
<Body>
<script language="javascript" type="text/javascript">
var value1 = 522, value2=10;
document.write("<br>Data1 : "+value1);
document.write("<br>Data2 : "+value2);
var sum = value1+value2;
var diff = value1-value2;
var prod = value1*value2;
var res = value1/value2;
var rem = value1%value2;
document.write("<br><br>The Sum of Data1 and Data2 : "+sum);
document.write("<br>The Difference of Data1 and Data2 : "+diff);
document.write("<br>The Product of Data1 and Data2 : "+prod);
document.write("<br>The Result after Division of Data1 and Data2 : "+res);
document.write("<br>The Remainder after Division of Data1 and Data2 : "+rem);
</script>
</Body>
</Html>
```

38 a	1. **Cyber Terrorism:**
	❖ Hacking, threats, and blackmailing towards a business or a person.
	2. Cyber stalking:
	❖ Harassing through online.
	3. **Malware:**
	❖ Malicious programs that can perform a variety of functions including stealing, encrypting or deleting sensitive data, altering or hijacking core computing functions and monitoring user's computer activity without their permission.
	4. **Denial of service attack:**
	❖ Overloading a system with fake requests so that it cannot serve normal legitimate requests.
	5. **Fraud:**
	❖ Manipulating data, for example changing the banking records to transfer money to an unauthorized account.
	6. **Harvesting:**
	❖ A person or program collects login and password information from a legitimate user to illegally gain access to others' account(s).
	7. **Identity theft:**
	❖ It is a crime where the criminals impersonate individuals, usually for financial gain.
	8. **Intellectual property theft:**
	❖ Stealing practical or conceptual information developed by another person or company.
	9. **Salami slicing:**
	❖ Stealing tiny amounts of money from each transaction.
	10. **Scam:**
	❖ Tricking people into believing something that is not true.

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	11. Spam: ❖ Distribute unwanted e-mail to a large number of internet users. **12. Spoofing:** ❖ It is a malicious practice in which communication is send from unknown source disguised as a source known to the receiver.

OR	❖ Java Scripts offers the **switch** statement as an alternate to using **if...else** structure.
	 ❖ The switch statement is especially useful when testing all the possible results of an expression.
	 The syntax of a switch structure:
	 switch(expression)
	 {
	 case label 1:
	     statements1;
	     break;
	 case label 2:
	     statements2;
	     break;
	  case label n;
	     statements - N;
	     break;
	 default:
	     statements;
	 }
	 ❖ The switch statement begins by evaluating an expression placed between parenthesis, much like the if statement.
	 ❖ The result compared to labels associated with case structure that follow the switch statement.
	 ❖ If the result is equal to a label, the statements in the corresponding case structure are executed.
	 ❖ The default structure is can be at the end of a switch structure if the result of the expression that do not match any of the case labels.
	 Example :
	 switch(grade)
	 {
	 case 1:
	   document.write("Your Grade is Outstanding..");
	   break;
	 case 2:
	   document.write("Your Grade is Excellent..");
	   break;
	 case 3:
	   document.write("Your Grade is Good..");
	   break;
	 case 4:
	    document.write("Your Grade is Satisfectory..");
	    break;
	 default:
	    document.write("Your Grade Poor and have to re-appear Exam..");
	 } .

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