

**CCE RF
CCE RR**

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ಕರ್ನಾಟಕ ಪ್ರೌಢ ಶಿಕ್ಷಣ ಪರೀಕ್ಷಾ ಮಂಡಳಿ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು – 560 003
**KARNATAKA SECONDARY EDUCATION EXAMINATION BOARD, MALLESHWARAM,
BANGALORE – 560 003**

ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ. ಪರೀಕ್ಷೆ, ಮಾರ್ಚ್/ಏಪ್ರಿಲ್, 2022
S. S. L. C. EXAMINATION, MARCH/APRIL, 2022

ಮಾದರಿ ಉತ್ತರಗಳು
MODEL ANSWERS

ದಿನಾಂಕ : 01. 04. 2022]

ಸಂಕೇತ ಸಂಖ್ಯೆ : **74**

Date : 01. 04. 2022]

CODE NO. : 74

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಕಂಪ್ಯೂಟರ್ ಸೈನ್ಸ್

Subject : ELEMENTS OF COMPUTER SCIENCE

(ಶಾಲಾ ಅಭ್ಯರ್ಥಿ & ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Fresh & Regular Repeater)

[ಗರಿಷ್ಠ ಅಂಕಗಳು : **90**

[**Max. Marks : 90**

Qn. Nos.	Sub. Qn.No.	Value Points	Total
1.	i)	FORTRAN is a (A) high level language (B) low level language (C) assembly language (D) machine language. Ans. (A) high level language	1
	ii)	Two parts of a program can be connected by (A) rhombus (B) capsule (C) rectangle (D) circle. Ans. (D) circle	1

RF/RR (A)-(200)-9015 (MA)



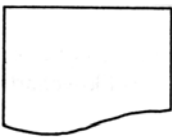
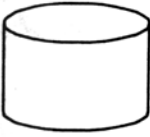
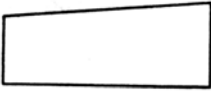
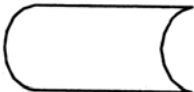
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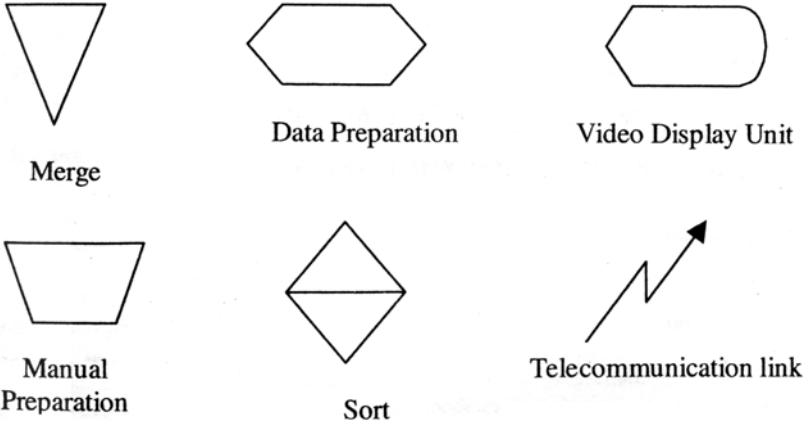
Qn. Nos.	Sub. Qn.No.	Value Points	Total
	iii)	<p>An identifier whose value does not change throughout the program is called a</p> <p>(A) variable (B) constant</p> <p>(C) reserve word (D) label.</p> <p><i>Ans.</i></p> <p>(B) constant</p>	1
	iv)	<p>The size of char data type is</p> <p>(A) 1 byte (B) 2 bytes</p> <p>(C) 4 bytes (D) 8 bytes.</p> <p><i>Ans.</i></p> <p>(A) 1 byte</p>	1
	v)	<p>The escape sequence character set for end of string is</p> <p>(A) \n (B) \b</p> <p>(C) \0 (D) \r</p> <p><i>Ans.</i></p> <p>(C) \0</p>	1
	vi)	<p>The maximum length of a variable in C is</p> <p>(A) 64 (B) 32</p> <p>(C) 16 (D) 8.</p> <p><i>Ans.</i></p> <p>(D) 8</p>	1
	vii)	<p>The formatted output function in a computer programming is</p> <p>(A) menu () (B) printf ()</p> <p>(C) scanf () (D) putchar ()</p> <p><i>Ans.</i></p> <p>(B) printf ()</p>	1

Qn. Nos.	Sub. Qn.No.	Value Points	Total
	viii)	Which symbol is used as a statement terminator in C ? (A) ; (B) ! (C) # (D) ~ <i>Ans.</i> (A) ;	1
	ix)	An expression that outputs a numeric value is called an (A) arithmetic expression (B) logical expression (C) relational expression (D) algebraic expression. <i>Ans.</i> (A) arithmetic expression	1
	x)	The equality operator is represented by (A) = (B) := (C) == (D) .EQ . <i>Ans.</i> (C) ==	1
2.	a)	Define translator. 2 <i>Ans.</i> Translators are programs which convert high level programs into equivalent machine level code. These translators are essentially system software usually written in assembly language.	2

Qn. Nos.	Sub. Qn.No.	Value Points	Total
	b)	<p>Write a short note on application software. 3</p> <p><i>Ans.</i></p> <p>These are the softwares which enable us to do specific tasks on the computer. These softwares consist of a set of programs to carry out operations for specific applications.</p> <p>Examples :</p> <p>i) Auto CAD</p> <p>ii) Tally</p> <p>iii) Pay plus</p> <p>iv) Computered billing systems</p>	3
	c)	<p>Explain the characteristics of flowchart. 5</p> <p><i>Ans.</i></p> <ul style="list-style-type: none"> — easy to understand — they are concise and precise — flowchart is language free — flowchart makes the program easy — flowchart provides convenient way of documentation. <p style="text-align: right;">5 × 1</p>	5
3.	a)	<p>List the different types of expressions. 2</p> <p><i>Ans.</i></p> <p>i) Arithmetic expressions</p> <p>ii) Relational expressions</p> <p>iii) Logical expressions 2 × 1</p>	2
	b)	<p>Explain delimiters. 3</p> <p><i>Ans.</i></p> <p>Delimiters are symbols used to separate items, but they do not specify any operation or yield a result.</p> <p>The delimiters used in C are</p> <p># - processor directive</p> <p>, - variable delimiter in variable list</p>	3

Qn. Nos.	Sub. Qn.No.	Value Points	Total
		; - statement delimiter : - label delimiter () - used in expressions [] - used with arrays { } - used to block C statements	3
	c)	Mention the rules to name a variable. 5 <i>Ans.</i> i) Allowable characters are letters a - z & A - Z, digits 0 - 9 and underscore (_) ii) No other special character is allowed iii) The first character must be a letter or an underscore iv) Both upper case and lower case letter are allowed v) Only the first six characters are significant in standard C vi) Reserved word cannot be used as variable name.	5
4.	a)	Write the conversion characters for various data types. 2 <i>Ans.</i> i) %d - Decimal ii) %f - Floating point number iii) %e - Floating point number with exponent iv) %O - Octal number v) %OX - Hexadecimal number vi) %C - Single character vii) %S - String	2

Qn. Nos.	Sub. Qn.No.	Value Points	Total												
	b)	<p>Explain the various arithmetic operators. 3</p> <p><i>Ans.</i></p> <p>These are the operators used to perform arithmetic operations on numeric data. The five arithmetic operators available in C are listed below :</p> <table border="1" data-bbox="400 674 967 1122"> <thead> <tr> <th>Operator</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">+</td> <td>addition</td> </tr> <tr> <td style="text-align: center;">-</td> <td>subtraction</td> </tr> <tr> <td style="text-align: center;">*</td> <td>multiplication</td> </tr> <tr> <td style="text-align: center;">/</td> <td>division</td> </tr> <tr> <td style="text-align: center;">%</td> <td>modulus division</td> </tr> </tbody> </table>	Operator	Operation	+	addition	-	subtraction	*	multiplication	/	division	%	modulus division	3
Operator	Operation														
+	addition														
-	subtraction														
*	multiplication														
/	division														
%	modulus division														
	c)	<p>Draw the symbols used in system flowchart. 5</p> <p><i>Ans.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Punched Card</p> </div> <div style="text-align: center;">  <p>Sequential Access Storage</p> </div> <div style="text-align: center;">  <p>Printed Document</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  <p>Direct Access File</p> </div> <div style="text-align: center;">  <p>Direct Access File</p> </div> <div style="text-align: center;">  <p>On-line storage</p> </div> </div>													

Qn. Nos.	Sub. Qn.No.	Value Points	Total
		 <p style="text-align: right;">5 × 1</p>	5
5.	a)	<p>List the types of logical operators.</p> <p><i>Ans.</i></p> <p>i) && logical AND</p> <p>ii) logical OR</p> <p>iii) ! logical NOT</p> <p style="text-align: right;">2 × 1</p>	2
	b)	<p>Write a C program to find largest of two numbers.</p> <p><i>Ans.</i></p> <pre> /* Program to find largest of 2 numbers */ # include <stdio.h> main () { int, n, m, big ; clrscr (); printf ("\n Enter two integer numbers : "); scanf ("%d%d", &n, &m); big = (n>m) ? n:m ; printf ("\n the largest of %d and %d is : %d", n, m, big); } Enter two number : 10, 70 The largest of 10 and 70 is : 70 </pre>	8
		OR	

Qn. Nos.	Sub. Qn.No.	Value Points	Total
7.	a)	Convert the following mathematical expressions into equivalent C expressions : 2 i) $a^2 - \frac{b}{2} + c^2$ ii) $\frac{2x^2 + 3x - 1}{10}$ <i>Ans.</i> i) $a * a - b / 2 + c * c$ ii) $(2 * x * x + 3 * x - 1) / 10$ 2 × 1	2
	b)	Write a C program to find the highest marks of a student in four exams. 8 <i>Ans.</i> <pre> /* Program to find the highest marks of a student in 4 Exams */ #include <stdio.h> #include <conio.h> main() { int m1, m2, m3, m4, highest; clrscr(); printf("\n Enter the marks in 4 papers :\n"); scanf("%d %d %d %d", &m1, &m2, &m3, &m4); highest = m1 > m2 ? m1 : m2 ; highest = highest > m3 ? highest : m3 ; highest = highest > m4 ? highest : m4; printf("\n Highest marks in 4 papers = %d",highest); return; } </pre> <hr/> Output Enter the marks in 4 papers : 56 74 66 60 Highest marks in 4 papers = 74	8

Qn. Nos.	Sub. Qn.No.	Value Points	Total
9.	a)	<p>What will be the value of the following expressions when $A = 3, B = 5$ and $C = 2$?</p> <p>i) $S = (A + B) / C$</p> <p>ii) $S = B * C / A .$</p> <p>Ans.</p> <p>i) $S = 4$</p> <p>ii) $S = 10 / 3 = 3$ (integer division)</p>	<p>2</p> <p>2×1</p> <p>2</p>
	b)	<p>Write a C program to evaluate the following expression :</p> $P = \frac{Y^2 - XZ}{2Y} .$ <p>Ans.</p> <pre>main() { float x,y,z,p; printf("\n Enter the values of x, y and z :"); scanf("%f %f %f", &x,&y,&z); p=(y * y - x * z) / (2 * y); printf("\nThe result is %f",p); getch(); }</pre>	<p>8</p> <p>8</p>
		OR	
	a)	<p>Differentiate between = = and = operator.</p> <p>Ans.</p> <p>i) = = is an equality or relational number used for comparison</p> <p>ii) = is an assignment operator which assigns the resultant value on its right hand side to the variable on its left hand side.</p>	<p>2</p> <p>2</p>

Qn. Nos.	Sub. Qn.No.	Value Points	Total
	b)	Write a C program to calculate simple interest. 8 Ans. /* Program to calculate simple interest */ #include <stdio.h> main () { int year; float prin, rate si ; printf ("\n enter principal, rate and period: ") scanf ("%f %f %d" & prin, & rate, & year); SI = prin * rate * year/100; printf ("\n simple interest = %f," SI) return }	8