

**CCE RR**  
**REVISED & UN-REVISED**

**B**

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

ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ. ಪರೀಕ್ಷೆ, ಜೂನ್ – 2018  
**S. S. L. C. EXAMINATION, JUNE, 2018**

ಮಾದರಿ ಉತ್ತರಗಳು  
**MODEL ANSWERS**

ದಿನಾಂಕ : 23. 06. 2018 ]

ಸಂಕೇತ ಸಂಖ್ಯೆ : **74**

Date : 23. 06. 2018 ]

**CODE NO. : 74**

ವಿಷಯ : ಎಲಿಮೆಂಟ್ಸ್ ಆಫ್ ಕಂಪ್ಯೂಟರ್ ಸೈನ್ಸ್  
**Subject : ELEMENTS OF COMPUTER SCIENCE**

( ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus )  
( ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater )

[ ಗರಿಷ್ಠ ಅಂಕಗಳು : **90**

[ **Max. Marks : 90**

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
1.	i)	Fill in the blanks with the correct symbol/word(s) by selecting from the choices given in the brackets :  10 × 1 = 10 The software which acts as an interface between the user and the system is .....  ( loader, operating system, keyboard ) Ans. operating system	1
	ii)	Two parts of a program can be connected by .....  ( circle, rectangle, arrow ) Ans. circle	1




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[ Turn over

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	iii)	A set of simple statements enclosed in a pair of braces is called a ..... of statements.  ( <i>constant, label, block of</i> )  Ans. block of	1
	iv)	..... statements makes the program self explanatory.  ( <i>comment, sum, space</i> )  Ans. comment	1
	v)	..... is a formatted output function.  ( <i>printf ( ), scanf ( ), putchar ( )</i> )  Ans. printf ( )	1
	vi)	The escape character used for tab setting is ..... .  ( <i>\n, \t, \f</i> )  Ans. \t	1
	vii)	The bitwise AND operator is ..... .  ( <i>&amp;, &amp;&amp;, %</i> )  Ans. &	1
	viii)	Multiple branching can be implemented using ..... statement.  ( <i>goto, switch, if...else</i> )  Ans. switch	1
	ix)	The variable declared inside any function is called as ..... variable.  ( <i>local, global, integer</i> )  Ans. local	1

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	x)	<p>..... is an unconditional branching statement.</p> <p>( Loop, For, Goto )</p> <p>Ans. Goto</p>	1
2.	a)	<p>Define interpreters. 2</p> <p>Ans.</p> <p>Interpreters take instructions of the program one by one, convert it into equivalent machine language program and immediately executes it. Interpreters are easy to write and do not require large memory space in computer.</p>	2
	b)	<p>Write short notes on assembly language. 3</p> <p>Ans.</p> <p>The complicated nature of machine language programming lead to a search for simpler methods of programming. This resulted in a relatively simpler method of programming known as assembly language. Here simple English abbreviations are used instead of strings of 0's and 1's. For example an assembly language statement to add two numbers may look as follows :</p> <p>ADD A, B</p> <p>This assembly language statement instructs the computer to add the number in memory location denoted by A to the number in memory location B and to store the result in memory location A. The keywords are such as ADD, Sub etc.</p>	3

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	c)	<p>Name the system softwares and application softwares. 5</p> <p><i>Ans.</i></p> <p><u>System software :</u></p> <p>i) MS-DOS</p> <p>ii) C-compiler</p> <p>iii) Basic interpreter</p> <p>iv) Unix, Linux</p> <p><u>Application software :</u></p> <p>i) Computerised billing system</p> <p>ii) Inventory packages</p> <p>iii) Auto CAD</p> <p>iv) Tally, Pay plus</p>	<p>2 × 2½ = 5</p>
3.	a)	<p>Define assembler. 2</p> <p><i>Ans.</i></p> <p>The assembly language is written using brief abbreviations and mnemonics, but the computer understands only machine language. So the assembly language program must be converted into machine language program for its execution. The program written in assembly language is called source code. This source program must be translated to its equivalent machine language program is called object code.</p>	2

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	b)	<p>Write the symbols for the following system flowchart : 3</p> <p>i) Data preparation</p> <p>ii) Manual preparation</p> <p>iii) Video display unit.</p> <p><i>Ans.</i></p> <p>i) Data preparation</p>  <p>ii) Manual preparation</p>  <p>iii) Video display unit</p> 	3 × 1 = 3
	c)	<p>Write short notes on flowchart. 5</p> <p><i>Ans.</i></p> <p>A flowchart is a diagrammatic representation of an algorithm. Here different symbols are used for representing different operations. The operations are specified by packing them in appropriate symbol boxes and the flow of control is indicated by connecting them in boxes by arrows.</p> <p>Characteristics :</p> <p>i) They are easy to understand as they are diagrammatic representation</p> <p>ii) They are concise and precise</p> <p>iii) Flowchart is language free</p> <p>iv) Flowchart makes the programming easy.</p>	5
4.	a)	<p>Name the two sets of characters in C language. 2</p> <p><i>Ans.</i></p> <p>Two sets of characters in C language :</p> <p>i) Source characters</p> <p>ii) Execution characters.</p>	2 × 1 = 2

Qn. Nos.	Sub. Qn.No.	Value Points	Marks														
	b)	List the rules to name a variable. 3 <i>Ans.</i> i) Allowable characters are letters <i>a - z</i> & <i>A - Z</i> digits 0 - 9 and under score ( <i>_</i> ) ii) No other special character is allowed iii) The first character must be a letter or an underscore iv) Reserved words cannot be used as variable names.	3														
	c)	Write short notes on data types. 5 <i>Ans.</i> Data refers to any information which is to be stored in computer. For example Marks of a student, Salary of a person, Name of a person are all data. These data may be of different types. Computer allocates memory to a variable depending on the data is to be stored in the variable. So it becomes necessary to define the type of data which is to be stored in the variable while declaring it. A discussion on the different data types follows : <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Type</th> <th style="width: 50%;">Declaration statement</th> </tr> </thead> <tbody> <tr> <td>i) signed short integer</td> <td>short in x;</td> </tr> <tr> <td>ii) unsigned short integer</td> <td>unsigned short int x;</td> </tr> <tr> <td>iii) signed integer</td> <td>int x;</td> </tr> <tr> <td>iv) unsigned integer</td> <td>unsigned int x;</td> </tr> <tr> <td>v) signed integer</td> <td>long int x;</td> </tr> <tr> <td>vi) unsigned long integer</td> <td>unsigned long int x;</td> </tr> </tbody> </table>	Type	Declaration statement	i) signed short integer	short in x;	ii) unsigned short integer	unsigned short int x;	iii) signed integer	int x;	iv) unsigned integer	unsigned int x;	v) signed integer	long int x;	vi) unsigned long integer	unsigned long int x;	5 × 1 = 5
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5.	a)	Define statement. 2 <i>Ans.</i> A statement represents a step in the sequence of operations. The program is written in a sequence of statements. The statements end in a semi-colon (;)	2														

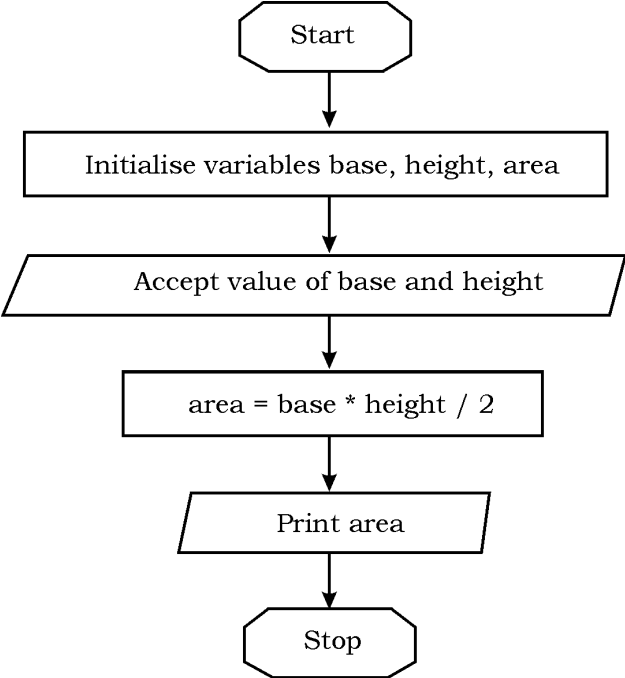
Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	b)	<p>List the different types of statements. 3</p> <p><i>Ans.</i></p> <p>Different types of statements :</p> <p>i) Null statement</p> <p>ii) Declaration statement</p> <p>iii) Assignment statement</p> <p>iv) Input statement</p> <p>v) Output statement</p> <p>vi) Expression statement</p>	3
	c)	<p>What is the necessity of comment ? Give its syntax. 5</p> <p><i>Ans.</i></p> <p>Comments are the statements which do not have any effect on the execution of the program as the compiler ignores them. But the use of comments increase the readability of the program and helps in documentation.</p> <p>Comments are enclosed between / * and * /</p> <p>Syntax :</p> <p>/ * comment entry ( compiler will ignore contents of comment only ) * /</p>	5
6.	a)	<p>Identify the errors in the following statements : 3</p> <p>i) <math>S = X1 + Y1</math></p> <p>ii) <math>t = \frac{a \times b}{c}</math></p> <p>iii) <math>5 = X + Y + Z</math></p> <p><i>Ans.</i></p> <p>i) Semicolon missing</p> <p>ii) Multiplication operator is improper and semicolon is missing</p> <p>iii) On the left hand side a constant is not allowed.</p>	$3 \times 1 = 3$

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	b)	<p>Write a C program to calculate the area of circle. 7</p> <p><i>Ans.</i></p> <pre>main ( ) { flot area; flot l,b,h,bs,r; int choice printf ("please enter your choice; \n\n'); printf ("choice =1, to compute area of                                 circle\n'); printf ("Enter l"); scanf ("%d; &amp;choice); { printf ("AREA OF CIRCLE ***\n"); printf ("enter the radius\n"); scanf ("%f", &amp;r); area = 3.142 * r * r; printf ("area = %f\n",area);</pre>	7
7.	a)	<p>Write conversion characters for various data types. 3</p> <p><i>Ans.</i></p> <pre>%d — Decimal integer %f — Floating point number %e — Floating point number with exponent %o — Octal number %ox — Hexadecimal number %c — Single character %s — String</pre>	3



Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	b)	<p>Write a C program to find whether the given number is even or odd. <span style="float: right;">7</span></p> <p><i>Ans.</i></p> <pre>main( ) {     int n,f;     printf ("\n\n Enter a number:");     scanf ("%d", &amp;n);     f = n%2;     if (f==0)         printf ("\n The number is even");     else         printf ("\n The number is odd");     getch( ); }</pre>	7
8.	a)	<p>Write short notes on logical operators. <span style="float: right;">3</span></p> <p><i>Ans.</i></p> <p>These are used to combine two or more conditions. They yield a value of either true or false depending on whether the combined condition is true or false.</p> <p>The three logical operators are</p> <p>&amp;&amp;    logical AND</p> <p>      logical OR</p> <p>     logical NOT</p>	3

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
	b)	<p>Write a C program to convert binary to decimal. 7</p> <p><i>Ans.</i></p> <pre>#include &lt;stdio.h&gt; #include &lt;conio.h&gt; #include &lt;math.h&gt;  main( ) { int n, r, s = 0, i;  clrscr( );  printf ("enter the value of n");  scanf ("%d", &amp;n);  i = 0  while (n!=0  {  r = n%10;  s = s + r * pow (2,i);  n = n/10;  i++;  }  printf ("the decimal number is = %d\n",s);  getch()  }</pre>	7

Qn. Nos.	Sub. Qn.No.	Value Points	Marks
9.	a)	<p>Write a flowchart to calculate the area of a triangle of given base and height. <span style="float: right;">3</span></p> <p><i>Ans.</i></p>  <pre> graph TD     Start([Start]) --&gt; Init[Initialise variables base, height, area]     Init --&gt; Input[/Accept value of base and height/]     Input --&gt; Calc[area = base * height / 2]     Calc --&gt; Output[/Print area/]     Output --&gt; Stop([Stop]) </pre>	3
	b)	<p>Write a C program to get display of odd numbers in between 1 to 20. <span style="float: right;">7</span></p> <p><i>Ans.</i></p> <pre> #include "stdio.h" main( ) { int i; clrscr ( ); printf ("odd numbers in between 1 to20 are\n"); for (i = 1; i &lt;= 20; i= i+2) printf ("%d\n",i); } </pre>	7