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## 

## Subject ：ELEMENTS OF COMPUTER SCIENCE

（ 山ుసరాఙతిఁక లలల అభ్యథ్／Regular Repeater ）
దినాంも：02．07． 2022 ］
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戸రమూఐధధ అంచగళు ： 90 ］
［ Max．Marks ： 90

## General Instructions to the Candidate ：

1．This Question Paper consists of objective and subjective types of 9 questions．

2．This question paper has been sealed by reverse jacket．You have to cut on the right side to open the paper at the time of commencement of the examination．Check whether all the pages of the question paper are intact．
3．Follow the instructions given against both the objective and subjective types of questions．
4．Figures in the right hand margin indicate maximum marks．
5．The maximum time to answer the paper is given at the top of the question paper．It includes 15 minutes for reading the question paper．

Note : Answer all the questions.

1. Four alternatives are given for each of the following questions / incomplete statements. Select the most appropriate alternative and write it in the answer book along with its alphabet : $\quad 10 \times 1=10$
i) PAYROLL is an example of
(A) application software
(B) system software
(C) package software
(D) utility software.
ii) The software which acts as interface between the user and the system is

(A) loader
(B) keyboard
(C) operating system
(D) mouse.
iii) An identifier used to identify a statement is
(A) constant
(B) label
(C) variable
(D) delimiters.

iv) The size of float data type is

(A) 3 bytes
(B) 2 bytes
(C) 5 bytes
(D) 4 bytes.
v) The escape sequence character set for vertical tab is
(A) $\backslash \mathrm{V}$
(B) $\quad \backslash t$
(C) $\quad \backslash \mathrm{f}$
(D) $\quad \backslash \mathrm{a}$
vi) A name having a few letters, numbers and special character (underscore) is called
(A) keywords
(B) identifiers
(C) reserved keywords
(D) C-tokens.
vii) Which of the following operators has the highest precedence?
(A) *
(B) $==$
(C) $=>$
(D) +

[ Turn over
viii) The operator \& is used for
(A) logical AND
(B) bitwise OR
(C) bitwise AND
(D) logical OR.
ix) The integer conversion character is
(A) f
(B) d
(C) I
(D) C
x) The unformatted output function in a computer programming is
(A) getchar ()
(B) $\operatorname{scanf}()$
(C) $\operatorname{printf}()$
(D) putchar ()
2. a) Identify whether the given variable names are valid or not. 2
i) Compound interest
ii) Total.
b) Explain C character set.
c) Write the classification of C-tokens.
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3. a) Which are the different data types in C ? ..... 2
b) Explain comments. ..... 3
c) Differentiate between input statement and output statement. ..... 5
4. a) What are binary operators ? ..... 2b) Explain postfix operators.3
c) Write a flowchart to find area and perimeter of a circle. ..... 5
5. a) Define hierarchy of operators. ..... 2
b) Write a C program to find whether given number is even or odd.
8
$O R$
a) Write the advantages of shorthand assignment operators. ..... 2b) Write a C program to compute area of a circle.8
6. a) List the bitwise operators provided by C. ..... 2
b) Write a C program to calculate sum and average of two numbers.
7. a) Explain relational operators.
b) Write a C program to calculate simple interest.
8. a) Convert the following mathematical expressions into

C expressions :
i) $\quad$ root $=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a}$
ii) $(a+b)(a-b)$.
b) Write a C program to evaluate the expression $S=\frac{a+b}{c+d}$.
9. a) What will be the value of the following expressions when $A=3$,

$$
B=5 \text { and } C=2 \text { ? }
$$

i) $\quad S=((A+(B-C) * B / A)-A * C$
ii) $\quad S=B / A$.
b) Write a C program to find circumference of a circle.
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a) Convert the following mathematical expressions into
C expressions :


$$
\text { i) } a b+c d
$$

$$
\text { ii) } \frac{2 x^{2}+3 x-1}{10}
$$b) Write a C program to find largest of two numbers.8



