

My Today Paper of CS508 (19/12/2016)

**Question # (01):**

**Explain the term Writability as a measure of supports for abstraction with example?**

**Question # (02):**

**Find the length of the LIST L' (D E F G I) by using List manipulation function?**

**Question # (03):**

**In which a program will crash, in run time checking or compile time checking?  
And briefly explain program reason?**

**Question # (04):**

**Write the name of operators which are available in Ada but not in C/C++?**

**Answer:**

Remainder                  Rem

AbsoluteValue              Abs

Exponentiation            \*\*

Range                      ..

Membership                In

String Concatenation      &

**Question # (05):**

**Convert the following facts into Prolog facts**

**Fred Eats Orange**

**Dolphin Is A Mammal**

**John Likes Merry**

**Sana Sing Song**

**Azmat Cooks Food**

**Question # (06):**

**A XYZ school requires a scientific system, The system will be responsible for delivering full understanding of the subjects to students by implementing all the mathematical rules and formulae e.g. Solving differential equation, evaluating integrals etc, Being a programmer identify the language which is most suitable for the design of this system, Also explain the reason for selection**

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Here I am going to share my cs508 paper which was held on 17 december 2016 The questions in cs508 current paper was like:

**1. Which language had a strong influence on one of the high level system programming language like C?**

**Answer:**

ALGOL 68 was from the continued development of ALGOL 60, but it is not a superset of that language. Its design is based on the concept of orthogonality. ALGOL 68 had even less usage than ALGOL 60 but had strong influence on subsequent languages, especially C, Ada and Pascal.

**2. What is the role of Atoms in LISP?**

**Answer:**

Atoms include numbers, symbols, and strings. It supports both real numbers and integers.

**3. Which of the languages first provided a structured exception handling mechanism among Ada and C++?**

**Answer:**

PL/1 has introduced the concept of exception handling. But ADA has elaborated this concept.

- Ada was the first language to provide a structured exception handling mechanism.
- Ada includes an exception handling mechanism so that these problems can be dealt with at run time.
- Errors can be signaled as exceptions and handled explicitly.

**4. Considering 'Generalization' as an important factor that helps to manage complexity of any programming language. Briefly mention how could generality be considered as an important language evaluation criteria?**

**Answer:**

Generality is also an important factor that helps to manage complexity of any programming language and deals with the applicability of the language to a range of

different domains. For example: C is more general purpose than FORTRAN or LISP. So, therefore can be used in more domains than these two languages.

**5. Explain the concept of dangling else with an example. And also explain the solution to this problem.**

**Answer:**

“Dangling else” in C explains the association of single else statement in a nested if statement. In nested if statements, when single “else clause” occurs, the situation happens to be dangling else.

For example:

```
if (condition)
```

```
    if (condition)
```

```
    if (condition)
```

```
else
```

```
printf("dangling else!\n"); /* dangling else, as to which if statement, else clause  
associates */
```

Solution to the problem:

In such situations, else clause belongs to the closest if-statement which is incomplete. That is the innermost if-statement. We can make else clause belong to wanted if statement by enclosing all if statements in block outer {} to which if statement to associate the else clause.

For example:

```
if (condition) {
```

```
    if (condition)
```

```
    if (condition)
```

```
} else printf("else associates with the outermost if statement!\n");
```

**6. Suppose you have to write a program in Ada Language for calculating marks of a student for 3 subjects. The total marks for each subject is as follow: Subject1=**

**100 Subject2= 200 Subject2= 400 How will you restrict users to not enter values less than 0 and greater than total marks? Also write code snippet for this.**

**Note: The use of loops and conditions are not allowed.**

**Answer:**

```
with Ada.Text_IO;
use Ada.Text_IO;
procedure Subject is
  S1: String(1 .. 100)
  S2: String(1 .. 200)
  S3: String(1 .. 400)
  Last: Integer;
begin
  Put_Line("Subject1:");
  Get_Line(S1, Last);
  Put_Line("Subject2:");
  Get_Line(S2, Last);
  Put_Line("Subject3:");
  Get_Line(S3, Last);
end Subject;
```

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Current paper cs508 17/12/2016

**1. Write two data type use in SNOBOL.**

**Answer:**

SNOBOL only supported Integers and Strings as the basic data types

**2. Why we say expansion handling mechanism of Ada good then other language.**

**3.Type BIG is mod 8;**

**big1: BIG:=3; any error in Ada code**

**Answer:**

Yes, there are two errors in Ada code as shown below:

type BIG is mod 8; -- values are 0,1,2,3,4,5,6,7

big1: **big** := 6; -- initialization

**4. Write three aspect of Readability.**

**Answer:**

- Simplicity
- Control Statements
- Data types and data structures

**5. Why we not write > (squire x) in lips. Write any way to assign value to x.**

**6. Why Readability preferred over writability when conflicting satiation occur. Explain**

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#Cs508 Current Midterm paper

**1.Why COBOL was encountered at the start with problems? 2 marks.**

**2.From the following code snippet in Ada execute what statement if "A" contains "12". 2 marks.**

Case "A" is

When 1 => fly

When 11| 14 => null;

When 22|20..30=> ;

When others=>complain;

End case;

**3.Code given tha us ka output btana tha Lisp mein tha code. 3 marks.**

**4.In SnoBol 4 create a table of unspecified length. 3 marks**

**5.In transition C++ in Java what data structures are eliminated. Also give the reasons of elimination of data structure of C++ in Java. 5 marks.**

**6.In Ada how is different 5 marks.**

**I) C as a expression symbolic literals.**

**II)C++ as a operator overloading.**

**Answer:**

Unlike C, the same symbolic literal can be used in two enumeration types. For example:

typeRainbowColors is (Red, Orange, Yellow, Green, Blue, Indigo, Violet);

typeBasicColors is(Red, Green, Blue);

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Ada allows a limited overloading of operators. The exception in Ada is that the assignment operator ( $:=$ ) cannot be overridden. It can be overridden in case of inheritance from a special kind of "abstract class". When you override the equality operator ( $=$ ) you also implicitly override the inequality operator ( $\neq$ ).

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My yesterday paper

MCQS mostly are new one

**write two point that differentiate the LISP language from other language. 2**

**Why we need single language Ada. 2**

**Set the value of variable a HEIGHT =12 and Weight=5. 3**

**What is difference b/w these two statements  $>(\text{set-intersection } L1 \ L2)$  and  $>(\text{set-difference } L1 \ L2)$  5**

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my today paper

mcq were new from handouts 2 3 from past , 3 subjective Q were from past papers.

**Q no 1 write the simple Ada program whether a number is event or not?**

**Q no 2 which data structre is more widely use in LISP pogramming.?**

**Qno 3 write the ada program of given arguments Use for loop and use Put() method except PUt\_Line() and write NEW\_Line for new line the arguments are given below**

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**Q no 4 Set the value of variable a HEIGHT =12 and Weight=5.**

**Q no 5 dotime dolist men sy function tha koi ,**

**Q no 6 when Put\_Line method is called in Ada does need to call New\_Line method or not?**

**FORTTRAN men sy mcq thy , Lisp men sy thy , ada men sy thy sonobol men sy thy , First program jis ny error door kiye kon sa tha ,readabilty men sy thy , lisp k function kon kon sy hn , etc**

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My todays paper of CS508

85% paper from ADA language

U must prepare it.

What was the main emphasis of Ada language? >> marks 2

Describe the following statement by SNOBOL

:S(label2) F(label3) >>>>>> marks 2

A code was give and ask to show its output code like;

While N<6 If Ada.get\_lo; N=N+1 What is value of N ? >>> marks 3

Write the code of Cat in SNOBOL that has

Value, 2 3 more options

And extend it to

Owner\_cat, some thing like that. >>> marks 3

A code was given and we describe the working and out put ...>> Marks 5

Another one from SNOBOL marks 5

Regards;

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- 1) features of ALGOL language?
- 2) which language is used as defacto industrial standard?
- 3) define statement given

:S(Label2) F(Label3)

- 4) write case in ada language

add 1 ("Total paper") if 'A' and 'B'  
add "2" ("Total Ribbon") if 'L',  
add "3" ("Total box") if 'T',  
only write a case form

- 5) when and why use for standard language?



3) define statement given

:S(Label2) F(Label3)

4) write case in ada language

add "1" ("Total paper") if 'A' and 'B'  
add "2" ("Total Ribbon") if 'L', 'D', 'T'  
add "3" ("Total box") if 'T', 'x'  
only write a case form

5) when and why use for single stranded language?

6) Readability is raised than writeability why? Give examples

## **Answers:**

### **1- Features of ALGOL Language:**

Concept of type was formalized

- Names could have any length
- Arrays could have any number of subscripts
- Lower bound of an array could be defined
- Parameters were separated by mode (in & out)
- Subscripts were placed in brackets
- Compound statements were introduced (begin ... end)
- Semicolon as a statement separator was used
- Assignment operator was :=
- if had an else-if clause

### **2- LISP**

#### **3- :=S(label2) F(label3)**

(label) This is a command for unconditional jump to the label specified inside parentheses.

:S(label) This is a command for jump to the specified label if the statement in the body was executed successfully or resulted in true.

:F(label) It is opposite to the second (label) :S (label) and control jumps to the label if the statement is not executed successfully or resulted in false.

**:S(label2) F(label3)** It is a combination of the second (label) :S(label) and the third :F(label) and states that go to label2 in case of success and label3 in case of failure.

5- The need for a single standard language was felt in 1975 and the draft requirements were given the code name strawman. Strawman was refined to Woodman and then Tinman in 1976. It was further refined to ironman. At that time proposals were invited for the design of a new language