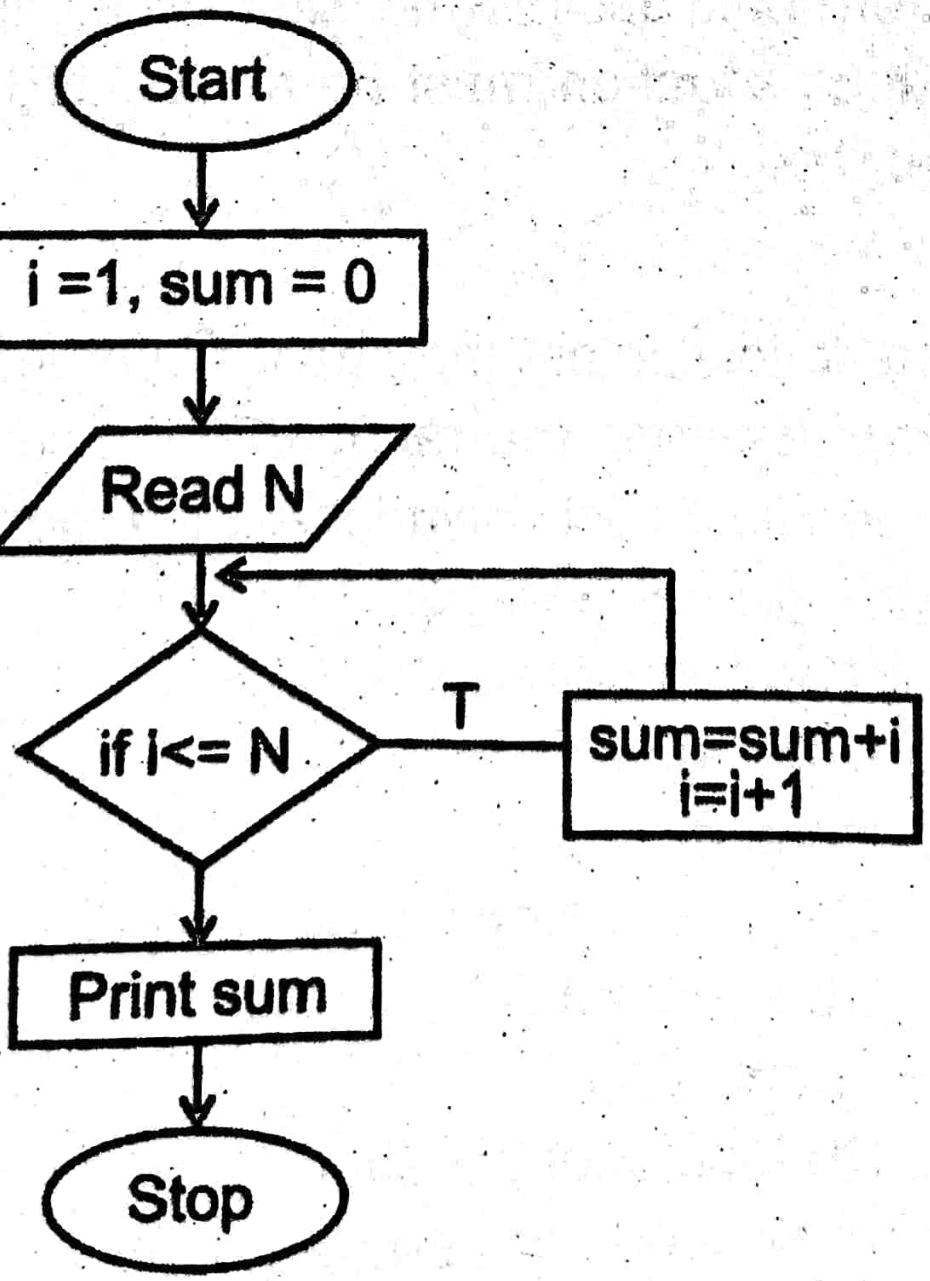
Qn. 27 **(SAY - 2015)**

Draw the flow chart to find the sum of first N natural numbers. **(3)**

ആദ്യത്തെ N നാച്ചുറൽ നമ്പറുകളുടെ തുക കണ്ടുപിടിക്കാനുള്ള ഫ്ളോ ചാർട്ട് വരക്കുക.



Qn. 28 **(MARCH - 2016)**

Make a flow chart using the given labelled symbols, for finding the sum of all even numbers upto 'N'

താഴെ വരച്ചിരിക്കുന്ന സിംബലുകൾ ശരിയായ രീതിയിൽ ക്രമീകരിച്ച് 'N' വരെയുള്ള ഇരട്ട സംഖ്യകളുടെ തുക കണ്ടുപിടിക്കുന്നതിനുള്ള ഫ്ളോചാർട്ട് നിർമ്മിക്കുക.

OR

Write an algorithm to accept an integer number and print the factors of it.

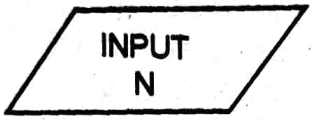
അല്ലെങ്കിൽ

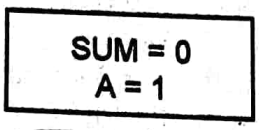
ഒരു ഇന്റിജർ നമ്പർ സ്വീകരിച്ച് അതിന്റെ ഫാക്ടറുകൾ കണ്ടെത്തുന്നതിനുള്ള അൽഗോരിതം എഴുതുക.

(3)

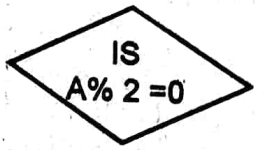
a) 

b) 

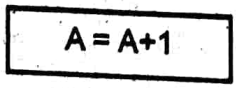
c) 

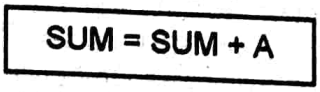
d) 

e) 

f) 

g) 

h) 

i) 

Ans Draw flowchart in any of the following order

e, c, d, f, i, h, a, b, g
e, d,c, f, i, h, a, b, g
e, c, d, a, f, i, h, b, g
e, d, c, a, f, i, h, b, g

Step 1 Start
Step 2 Input n
Step 3 i = 1
Step 4 if i<=n/2 then repeat step 5 & 6
Step 5 if n%i = = 0 print i
Step 6 i = i + 1
Step 7 Stop

Qn. 29 **(SCERT SAMPLE - I)**

List the two approaches followed in problem solving or programming. How do they differ?

പ്രശ്നപരിഹരണത്തിനും പ്രോഗ്രാമിംഗിനും ഉപയോഗിക്കുന്ന രണ്ട് വ്യത്യസ്ത സമീപനങ്ങൾ ഏതെല്ലാം? ഇവ തമ്മിലുള്ള വ്യത്യാസമെന്ത്?

(3)

Approaches in problem solving

Top down design : Larger programs are divided into smaller ones and solve each tasks by performing simpler activities. This concept is known as top down design in problem solving

Bottom up design : Here also larger programs are divided into smaller ones and the smaller ones are again subdivided until the lowest level of detail has been reached. We start solving from the lowest module onwards. This approach is called Bottom up design.

Phases in Programming

1) Problem identification : This is the first phase in programming. The problem must be identified then only it can be solved, for this we may have to answer some questions.
   During this phase we have to identify the data, its type, quantity and formula to be used as well as what activities are involved to get the desired out put is also identified for example if you are suffering from stomach ache and consult a Doctor. To diagnose the disease the Doctor may ask you some question regarding the diet, duration of pain, previous occurrences etc, and examine some parts of your body by using stethoscope X-ray, scanning etc.
2) Deriving the steps to obtain the solution.
   There are two methods, Algorithm and flowchart, are used for this.
   a) Algorithm :- The step-by-step procedure to solve a problem is known as algorithm. It comes from the name of a famous Arab mathematician Abu Jafer Mohammed Ibn Musaa Al-Khowarizmi, The last part of his name Al-Khowarizmi was corrected to algorithm.
   b) Flowchart :- The pictorial or graphical representation of an algorithm is called flowchart.