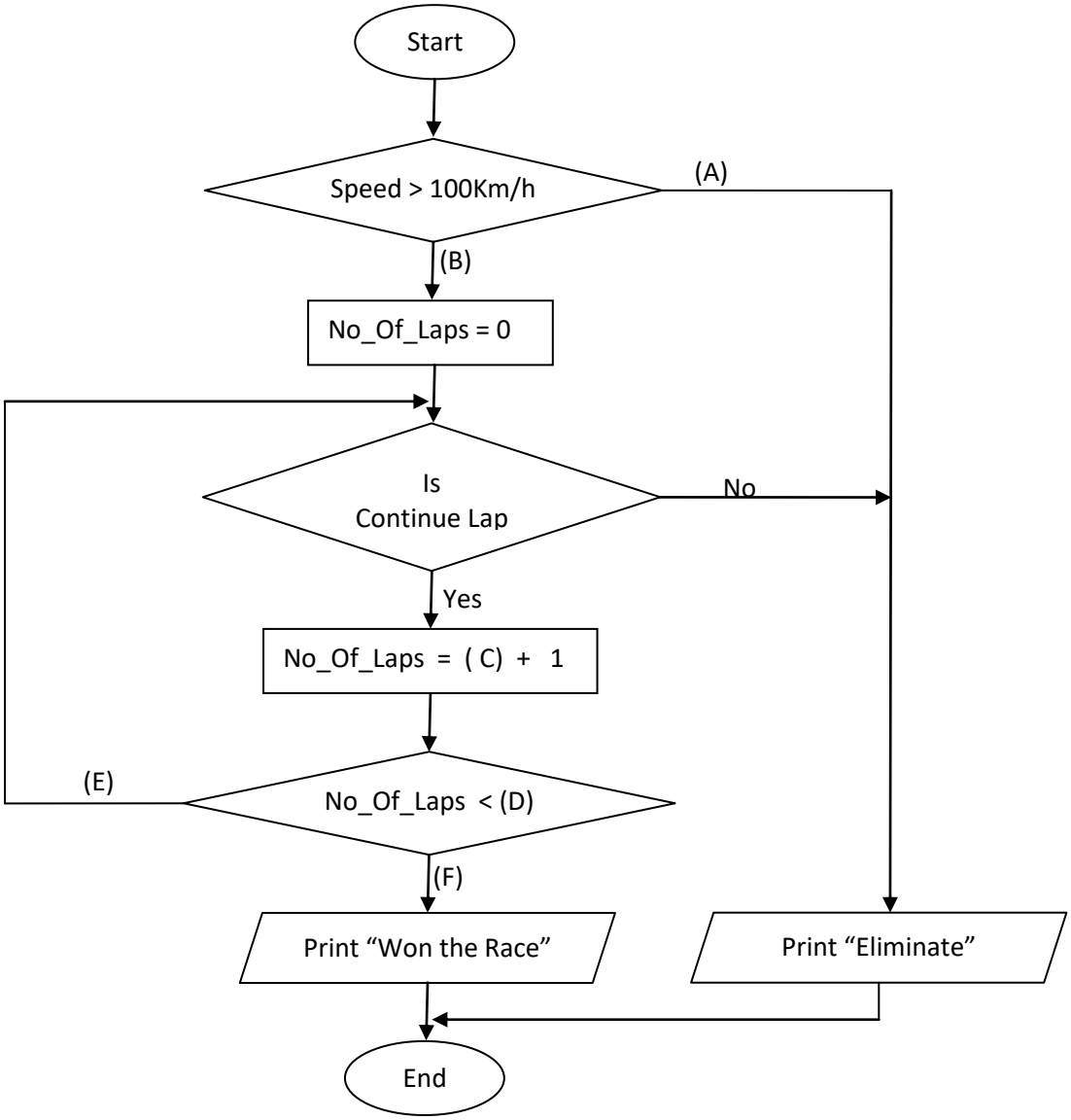
1. Car racers who are going to participated to a car race competition. Racers always need to keep their speed greater than 100Km/h, and also have to complete 50 laps in win the race. Participants who complete the 50 laps will be won the race. Others who couldn't complete the laps will be eliminated from the race.
    i. Fill the following flow chart according to the above scenario.
    ii. What are the control structures can be identified in the flowchart?



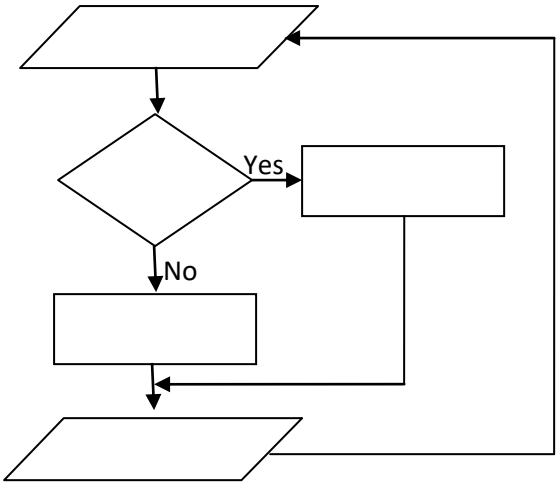
2. Write down the output of each of the following pascal code segments.

a.
```
sum:=0;
x:=1;
while x<=5 do
begin
    sum:=sum+x;
    x:=x+1;
end;
write(sum);
```

b.
```
a:=1;
b:=7
for i:=b-a to b+a do
    writeln(i*i);
```

3. A central cooling system uses a monitoring and feedback system to control the temperature of computer lab in the school. The system is used to maintain the temperature of the lab 25^0C. Complete the flow chart to writing a letter for each answer the flowchart boxes below.

A. On stage the AC.
B. Of stage the AC.
C. Read the temperature in the lab.
D. Is the temperature is greater than 25^0C.
E. Display the temperature of the Lab



4.

i. What is the output of the flow chart?
ii. Write a pseudo code for the logic indicated flow chart.
iii. If the decision X>15 is changed to X>=15, what is the output?