**Q. Write Algorithm and Program for checking the validity of PAN card**

Algorithm

* Start
* Use variable **PAN\_Number**
* Read **PAN\_Number**
* for **counter** in range (0,5)

**bool1** = **PAN\_Number**[**counter**].isalpha()

* for **counter** in range (5,9)

**bool2** = **PAN\_Number**[**counter**].isdigit()

* for **counter** in range (9,10)

**bool3** = **PAN\_Number**[**counter**].isalpha()

* Stop

Python Program

PAN\_Number = input(**"Enter a PAN Number : "**)  
length = len(PAN\_Number)  
for counter in range(0,5):  
 bool1 = PAN\_Number[counter].isalpha()  
for counter in range(5,9):  
 bool2 = PAN\_Number[counter].isdigit()  
for counter in range(9,10):  
 bool3 = PAN\_Number[counter].isalpha()  
if (bool1 == True and bool2 == True and bool3 == True and length == 10):  
 print(**"{} is a valid PAN Number"**.format(PAN\_Number))  
else:  
 print(**"{} is an invalid PAN Number"**.format(PAN\_Number))

Alternate Python code

import re  
PAN\_Number = input(**"Enter a PAN Number : "**)  
if re.match(**'^[a-zA-z]{5}[0-9]{4}[a-zA-z]$'**,PAN\_Number.strip()):  
 print(**"{} is a valid PAN Number"**.format(PAN\_Number))  
else:  
 print(**"%s is an invalid PAN Number"** %PAN\_Number)