6. Construct a c program to implement pre-emptive priority scheduling algorithm.

#include<stdio.h>

#include<conio.h> int

main()

{

int i, NOP, sum=0,count=0, y, quant, wt=0, tat=0, at[10], bt[10], temp[10]; float

avg\_wt, avg\_tat;

printf(" Total number of process in the system: ");

scanf("%d", &NOP);

y = NOP;

for(i=0; i<NOP; i++)

{

printf("\n Enter the Arrival and Burst time of the Process[%d]\n", i+1);

printf(" Arrival time is: \t");

scanf("%d", &at[i]);

printf(" \nBurst time is: \t");

scanf("%d", &bt[i]); temp[i] =

bt[i];

}

printf("Enter the Time Quantum for the process: \t");

scanf("%d", &quant);

printf("\n Process No \t\t Burst Time \t\t TAT \t\t Waiting Time "); for(sum=0, i = 0;

y!=0; )

{

if(temp[i] <= quant && temp[i] > 0)

{

sum = sum + temp[i];

temp[i] = 0;

count=1;

}

else if(temp[i] > 0)

{

}

temp[i] = temp[i] - quant; sum

= sum + quant;

if(temp[i]==0 && count==1)

{

y--;

printf("\nProcess No[%d] \t\t %d\t\t\t\t %d\t\t\t %d", i+1, bt[i], sum- at[i], sum-at[i]-bt[i]);

wt = wt+sum-at[i]-bt[i];

tat = tat+sum-at[i]; count =0;

}

if(i==NOP-1)

{

i=0;

}

else if(at[i+1]<=sum)

{

i++;

}

else

{

}

}

i=0;

avg\_wt = wt \*

1.0/NOP; avg\_tat =

tat \* 1.0/NOP;

printf("\n Average Turn Around Time: \t%f", avg\_wt);

printf("\n Average Waiting Time: \t%f", avg\_tat);

getch();

}

Output:

