Course Allocation Table/ Section (CAT):

11A

	PT	PL	CT	CL	MT	ML
T1	3	3				
T2		3				
T3						
T4						
T5						
T6						

Lecture hours Availability Table (LAT):

(Per course, Per section, Per week)

PT	PL	CT	CL	MT	ML
3	6	3	6	3	6

Course Type Table: (Type)

T	L	T	L	T	L

Preference Allocation Table: (PAT) (For each class)

[Highest Priority :10 Lowest Priority: 0]

	PT	PL	CT	CL	MT	ML
T1	6	5	3	2		
T2	6	5				
T3	1	2				
T4	6	5				
T5	5	4				
T6	4	3				

Teacher's Lecture Hours Availability Table (HAT):

T1	T2	T3	T4	T5	T6
20	20	20	20	20	20

ALGORITHM:

```
For CourseId  ←  0 to (numCourse - 1) do
   While(LAT[CourseId] > 0)    do
      For TeacherId←  0 to (numTeacher - 1) do
        PQ[TeacherId] ←    (PAT[TeacherId][ CourseId] / 10)
              * (HAT[TeacherId] / 20)
        End for
      T ← doSORT(PQ[])    // largest to smallest
            x ←  0 ; //allocation hours
   for TeacherId  ← T[0] to T [(numTeacher - 1)] do
       if (Type[CourseId] = T)   then
                    for k←LAT[CourseId] down to 1 do
                          if (HAT[TeacherId] – k > 0) then
                              x←k ;
                              break if ;
                              end if ;
                    end for ;
    else
          if  HAT[TeacherId] – 3 > = 0 then
                    x  ←3 ;
          end if ;
   end if-else;
  if ( x > 0) then
          CAT[TeacherId][ CourseId] ←CAT[TeacherId][ CourseId] + x ;
          HAT[TeacherId] ← HAT[TeacherId] – x;
```

LAT [CourseId] ⟵ LAT [CourseId] – x;

Break;

End if;

End for ;

If x = 0 then

Report error (“Not Possible”);

Exit ();

End if ;

End while ;

End for;

Step 1 :

PQ: T1 => 6/10 * 20/20 =0.6

T2 => 6/10 * 20/20 =0.6

T3 => 1/10 * 20/20 =0.1

T4 => 6/10 * 20/20 =0.6

T5=> 5/10 * 20/20 =0.5

T6 => 4/10 * 20/20 =0.4

TQ: T1,T2,T4,T5,T6,T3

HAT: 17,20,20,20,20,20

LAT: 0,6,3,6,3,6

Step 2:

PQ: T1 => 5/10 * 17/20 =0.4

T2 => 0.5

T3 => 0.2

T4 => 0.4

T5=> 0.4

T6 => 0.3

TQ: T2,T1,T4,T5,T6,T3

HAT: 17,17,20,20,20,20

LAT: 0,3,3,6,3,6

Step 3:

PQ: T1 => 0.4

T2 => 5/10 * 17/20=0.4

T3 => 0.2

T4 => 0.4

T5=> 0.4

T6 => 0.3

TQ: T1,T2,T4,T5,T6,T3

HAT: 14,17,20,20,20,20

LAT: 0,0,3,6,3,6