



**School of Computing**  
**First CIA Test – December 2021**

Course Code: **CSE101**

Course Name: **Problem Solving and Programming in C**

Year & Programme : **I Year - I Sem (Semi Lab)**

Duration: 45 minutes

Max Marks: 25

1. Salem Steels Private Limited is a steel plant involved in the production of stainless steel. The unit in Pollachi grade the steel based on the following properties(conditions): **(15 marks)**

- i) Hardness must be greater than 45
- ii) Carbon content must be less than 0.7
- iii) Tensile strength must be greater than 6500

The grades for grading the steel is as mentioned below:

- Grade is 10 if all three conditions are met
- Grade is 9 if conditions (i) and (ii) are met
- Grade is 8 if conditions (ii) and (iii) are met
- Grade is 7 if conditions (i) and (iii) are met
- Grade is 6 if only one condition is met
- Grade is 5 if none of the conditions are met

For the above-mentioned scenario, draw the flowchart and then develop the C program.

2. Write a C program to check whether the given number is an Adam's square number or not.

Eg.      Num = 12                      rev = 21  
          Numsquare = 144      revsquare = 441

If Numsquare is equal to reverse of revsquare then the given number is said to be Adam's square number. Otherwise print it is not an Adam's square number. **(10 marks)**

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