PRISM WORLD

Std.: 9 (English) **Maths - I** **Marks: 20**

Date: **Time: 1 hour**

Chapter: 1 to 2

Q.1 Choose the correct alternatives. **(3)**

1) Two rational numbers $\frac{a}{b}$ and $\frac{c}{d}$ are equal if and only if.

a. $ad > bc$ b. ad = bc c. $ad < bc$ d. None of these

2) Every integer is a rational number

a. True b. False

3) n (A) + n (A') = ...

a. n (B) b. n (U) c. n (AUB) d. n (AnB)

Q.2 Solve the following question. (Any Two) **(4)**

1) Divide, and write the answer in simplest form : $\sqrt{310} \div \sqrt{5}$

2) If n(A) = 20, n(B) = 28 and n(A∪B) = 36 then n(A∩B) = ?

3) Expand the following:

$(\sqrt{5} + \sqrt{2})^2$

Q.3 Solve the following question. (Any Two) **(6)**

1) Write the simplest form of rationalising factor for the given surds : $3\sqrt{72}$

2) Write the simplest form of rationalising factor for the given surds : $4\sqrt{11}$

3) Suppose U = {1, 3, 9, 11, 13, 18, 19}

B = {3, 9, 11, 13}

Find B' and draw Venn diagram of the above set.

Q.4 Solve the following question. (Any One) **(4)**

1) Rationalize the denominator : $\frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$

2) Out of 100 persons in a group, 72 persons speak English and 43 persons speak French. Each one out of 100 persons speak at least one language. Then how many speak only English? How many speak only French? How many of them speak English and French both?

Q.5 Solve the following question. (Any One) **(3)**

1)

Let U = {x|x $\in$ N, x < 10}

A = {a|a is even, a $\in$ U},

B = {b|b is divisors of 6, a$\in$U},

n(A) + n(B) = n(A$\cup$B) + n(A$\cap$B).

2) Rationalize the denominator : $\frac{12}{4\sqrt{3}-\sqrt{2}}$