HERAMB PROFESSIONAL INSTITUTE

Date:11/05/17

XII / MATHEMATICS   **MARKS: 30**   **DURATION: 1 HR**

Q.NO. 1 State which of the following sentence is a statement and write their truth value

(i) Please get me a pen. (ii) Today is Sunday. (iii) The square of any odd integer is positive. (iv) Two parallel lines intersect each other.

Q.NO. 2 Express the following into symbolic form

(i) It is raining and cold . (ii) He is tall but handsome. (iii) Either we play kabaddi or go for cycling. (iv) Shobha speaks Marathi or English .

Q.NO. 3 Write the negation of the following

(i) 3 is a rational number. (ii) 7 is greater than 5. (iii) Zero is a complex number. (iv) 2+5=7.

Q.NO. 4 Write the truth value of the following

(i) 3+3=7 if and only if 3+5=1 (ii) If Taj mahal is in Madhaya Pradesh then Pune is in Punjab.(iii) Neither 21 is a prime number nor it is divisible by 3. (iv) Milk is white if and only if sky is blue .

Q.no. 5 Given p:stock price is high. q:stock is rising . Write the following in the verbal form

(i) p∨q (ii) p→q (iii) p→~q (iv) p↔q

Q.NO. 6 Given p:Rahul is rich. q:He is happy.   Write the following in the verbal form

(i) ~p→q (ii) ~p∧q (iii) p→~q (iv) ~p↔~q