1.) Can we write 0 in the form of p/q?

a. Yes

b. No

c. Cannot be explained

d. None of the above

2.) The three rational numbers between 3 and 4 are:

a. 5/2, 6/2, 7/2

b. 13/4, 14/4, 15/4

c. 12/7, 13/7, 14/7

d.11/4, 12/4, 13/4

3.) In between any two numbers, there are:

a. Only one rational number

b. Two rational numbers

c. Infinite rational numbers

d. No rational number

4.) Every rational number is:

a. Whole number

b. Natural number

c. Integer

d. Real number

5.) √9 is ____ number.

a. A rational

b. An irrational

c. Neither rational nor irrational

d. None of the above

6.) Which of the following is an irrational number?

a. √16

b. √(12/3)

c. √12

d. √100

7.) 3√6 + 4√6 is equal to:

a. 6√6

b. 7√6

c. 4√12

d. 7√12

8.) √6 x √27 is equal to:

a. 9√2

b. 3√3

c. 2√2

d. 9√3

9.) Which of the following is equal to x^3?

a. $x^6 - x^3$

b. $x^6 . x^3$

c. x^6 / x^3

d. $(x^6)^3$

10.) Which of the following is an irrational number?

a. $\sqrt{23}$

b. $\sqrt{225}$

c. 0.3796

d. 7.478478

11.) Which of the following is an irrational number?

a. 0.14

b. 0.47474747----------

c. 0.978978978----------

d. 0.4014001400014…

12.) $2\sqrt{3} + \sqrt{3} =$

a. 6

b. $2\sqrt{6}$

c. $3\sqrt{3}$

d. $4\sqrt{6}$

13.) If some of the rational numbers between 7 and 11 are written in the form $m\backslash 6$, then integer values of m lie between

(a) 42 and 60

(b) 42 and 66

(c) 42 and 77

(d) 48 and 60

14.) The number obtained on rationalising the denominator of $1/ (\sqrt{7} - 2)$ is

a. $(\sqrt{7}+2)/3$

b. $(\sqrt{7}-2)/3$

c. $(\sqrt{7}+2)/5$

d. $(\sqrt{7}+2)/45$

15.) Which of the following is rational?

a. $4/0$

b. $0/4$

c. $\sqrt{3}$

d. π

16.) The irrational number between 2 and 2.5 is

a. $\sqrt{11}$

b. $\sqrt{5}$

c. $\sqrt{22.5}$

d. $\sqrt{12.5}$

17.) The value of √10 times √15 is equal to

a. 5√6

b. √25

c. 10√5

d. √5

18.) The decimal representation of the rational number is

a. Always terminating

b. Either terminating or repeating

c. Either terminating or non-repeating

d. Neither terminating nor repeating

19.) Which of the following is a rational number?

a. 0

b. 2√3

c. 2+√3

d. π

20.) Which of the following is an irrational number?

a. √(4/9)

b. √12/√3

c. √7

d. √81

Q21. Which of the following expressions are polynomials in one variable and which are not? State reasons for your answer.

(i) $y2 + \sqrt{2}$

(ii) $3 \sqrt{t} + t\sqrt{2}$

Q22. Find p(0), p(1) and p(2) for each of the following polynomials:

(i) $p(y)=y2-y+1$

Q23. Write the degree of each of the following polynomials:

(i) $5x3+4x2+7x$

(ii) 3

Q24. Factorise:

(i) $4x2+9y2+16z2+12xy-24yz-16xz$

Q25. Factorise each of the following:

(1) $27p3-(1/216)-(9/2) p2+(1/4)p$