Time: 3 Hrs   **M.M:-80**

Instructions :

- All questions are compulsory.
- Read carefully and do neatly
- The question paper consists of 40 questions divided into 4 sections
- **Section A** contains 20 questions of 1 mark each , **Section B** contains 6 questions of 2 marks each , **section C** contains 8 questions of 3 marks each , **Section D** contains 6 questions of 4 marks each
- **5 marks reasoning included.**

SECTION – A   (20 X 1)

Q1) Write distributive property of multiplication over addition

Q2) write additive inverse of $\frac{3}{5}$.

Q3) The reciprocal of 0 is -

    (a) -1   (b) 0   (c) 1   (d) not identified

Q4) The solution of equation 2x- b = 0 is

    (a) $-b$ (b) b   (c) $\frac{3}{5}$ (d) $\frac{-b}{2}$

Q5) A linear equation in one variable has

(a) Only one solution   (b) two solution   (c) no solution   (d) more than two solution

Q6) On subtracting 8 from x. The result is 2. The value of x is

    (a) 0   (b) 17   (c) 10   (d) -7

Q7) The value of $\frac{1}{4^{-2}}$ is

    (a) 8   (b) 16   (C) $\frac{1}{16}$ (d) $\frac{1}{18}$

Q8) The standard form of 0.0000056

    (a) 5.6×10^{6} (b) 56×10^{6} (c) 56×10^{-6} (d) 5.6×10^{-6}

Q9) Which of the following is the sq. of the odd no.

    (a) 169   (b) 216   (c) 100   (d) 196

Q10) Which of the following is an cube of an even no.

    (a) 125   (b) 216   (c) 729   (d) 1331

Q11 Cube root of 1000 is equal to

(a) 1   (b) 10   (c) 100   (d) all of the above

Q12) The cube of 0.5 is_____.

Q13) The algebraic expression containing three terms is called_____.

(a) Polynomial   (b) monomial   (c) trinomial   (d) binomial

Q14) Which of the following is binomial

(a) -5 x   (b) 3y – 6z   (c) x + y – t   (d) 0

Q15) Common Factor of $ax^2 + bx$ is

(a) a   (b) x^2 (c) x   (d) 1

Q16) The common factor of 31m and 20rs is

(a) 5   (b) -1   (c)   1   (d)   3

Q17)   The value of $2^3 \, X \, 4 \div 2^8$

(a) 4   (b) $\frac{1}{4}$ (c) -4   (d) 0

Q18)   Which of the following is inversely with each other

(a)Speed & distance covered   (b) distance covered and taxi fare
(c) distance travelled and time taken   (d) speed and time taken

Q19)   If 8 mangoes cost Rs 96 how many mangoes can be bought for Rs 300

(a) 20   (b) 15   (c) 25   (d) 30

Q20)   If x and y inversely proportion x = 10, y = 6 when x = 20, y =

(a) 5   (b) 8   (c) 10   (d) 3

SECTION-B   (6 X 2)

Q21) Using distributive property simplify - $\frac{5}{6} \left(\frac{12}{15} + \frac{6}{25} \right)$

Q22) Solve the equation -   3y - 5 = 2y + 1

Q23) Simplify and write in exponential form- $\frac{2^{-6}}{(50+60)^{-2}}$ or $2^8 \, X \, 6 \div 32 \, X \, 12$

Q24) Find the root of $\frac{625}{2116}$

Q25) Using identity evaluate 98^2

Q26) Factorize $15x^2yz + 10xy^2z + 5xyz^2$ or $4x^3 - 81xy^2$

SECTION-C   (8 X 3)

Q27) Locate on same no. line (a) $-\frac{5}{4}$ (b) $2\frac{1}{3}$

Q28) The sum of three consecutive even natural no. is 48find the greatest of these no..

Q29) Express in standard form

(a) 556 km in cm
(b) 0.0000000000000000016coulom charge of an electron.

Q30) Write Pythagorean triplet whose one no. is 16

Q31) Evaluate (a) $\sqrt{\frac{0.027}{0.001}} + \sqrt{\frac{0.216}{0.008}} + \sqrt{\frac{0.064}{0.008}}$

Q32) Subtract $3x^3 - xy^2 - 8x^2y - 3y^3$ from $x^3 - 5x^2y + 3xy^2 - 3y^3$ or
obtain the product of (2x+y) (yz + zx)

Q33) Carry out the following division by factorisation method $(x^2 - 22x + 117) \div (x - 9)$

Q34) Using the same pattern replace the ?

SECTION – D   (6 X 4)

Q35) Write four rational no. between $\frac{6}{8}$ and $\frac{7}{8}$

Q36) In a hostel of 50 girls there are food provision for 40 days if 30 more girls join the hostel how long will these provision will last

Q37) Factorize $x^5 - 16xy^4$ or $x^8 - 256y^8$

Q38) If $x - \frac{1}{x} = 30$ find the value of $x^2 - \frac{1}{x^2}$

Q39) Find the cue of 74 by using column method

Q40) The age of Riya and Lakshami are in the ratio 5:7 four years later the sum of their ages will e 56 years what are their present age