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Mathematics

Physics

Chemistry

CLASS – VI – E1 TO E3

VI MPC E1 to E3 SHP
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MATHEMATICS

1. The product of 20 and fourth power of $x - y$ is
 1) $20(x - y)^4$ 2) $20 + (x - y)^4$ 3) $20(x + y)^4$ 4) $4(x - y)^{20}$
2. $x^7 y^{-5} \times x^{-5} y^3$
 1) $x^{12} y^8$ 2) $x^2 y^8$ 3) $x^2 y^{-2}$ 4) $x^{12} y^{-2}$
3. Simplify: $\left(\frac{27}{125}\right)^{-\frac{2}{3}} =$
 1) $\frac{3}{5}$ 2) $\left(\frac{3}{5}\right)^{-1}$ 3) $\left(\frac{5}{3}\right)^2$ 4) $\left(\frac{3}{5}\right)^2$
4. If $3a = 27^6$, then the value of 'a' is
 1) 16 2) 17 3) 18 4) 19
5. The value of $a^2 + 2ab + b^2$ when $a = -6$, $b = 4$ is
 1) 8 2) 4 3) 10 4) 12
6. Simplify $2ab(a + b) - 3ab(a - b)$ when $a = -1$, $b = -2$
 1) 24 2) 18 3) 12 4) -18
7. Value of the polynomial $p(x) = 5x - \pi$ at $x = \frac{8\pi}{5}$
 1) π 2) 22 3) $-\pi$ 4) -22
8. The degree of the constant polynomial is
 1) 1 2) 2 3) 3 4) 0
9. Find value of m if, $7(m-9)=35$.
 1) 12 2) 13 3) 14 4) 11
10. Zeros of the polynomial $p(x) = 3x^2 - 1x$ is
 1) 0 2) $\frac{1}{\sqrt{3}}$ 3) $\frac{1}{3}$ 4) Both 1&3
11. Value of the polynomial $\frac{n^4}{6} + \frac{n^3}{3} + \frac{n^2}{3}$ at $n = 6$ is _____.
 1) 296 2) 306 3) 294 4) 300
12. The length of the rectangle is 5m less than its breadth. If the breadth is 'a' meters, then its area is
 1) $(a - 5)m^2$ 2) $(a + a - 5)m^2$ 3) $a - (a + 5)m^2$ 4) $(a^2 - 5a)m^2$
13. If $p = -2$, $q = -1$, $r = 3$ the value of $3p^2q + 5pq^2 + 2pqr$ is
 1) -10 2) -25 3) 24 4) 10
14. $(-4)^x = -\frac{1}{64}$ then x,
 1) -64 2) 3 3) -3 4) $-\frac{1}{64}$
15. $7^{-3} \times 7^4 =$
 1) 0 2) 1 3) -1 4) 7
16. Multiplicative identity of 10^{-5} is
 1) 10^5 2) 1 3) 5^{10} 4) 5^{-10}
17. In $5x^2$, the index of the base 'x' is
 1) 5 2) X 3) x^2 4) 2

18. The value of 10^0 is

- 1) 0 2) 1 3) 10 4) 100

19. The exponential form of $7 \times 7 \times 7 \dots \times 7$ (10 times)

- 1) 10^7 2) 7^{10} 3) 70 4) 7^3

20. Evaluate $3^{-3} = ?$

- 1) 27 2) $\frac{1}{27}$ 3) $\frac{1}{9}$ 4) $\frac{3}{3^3}$

21. $\frac{1}{2^x} = 16$ then $x =$

- 1) -4 2) $\frac{1}{4^2}$ 3) 16 4) 4

22. The zero of the polynomial $2x - 3$ is

- 1) $\frac{2}{3}$ 2) $\frac{3}{2}$ 3) 0 4) 3

23. If $2^a = 8^6$, then the value of 'a' is

- 1) 16 2) 17 3) 18 4) 19

24. The value of $a^2 + 2ab + b^2$ when $a = -4$, $b = 3$ is

- 1) 8 2) 9 3) 10 4) 1

25. $\{(q+p)(q-p) + p^2\} \div q =$

- 1) q^2 2) p^2 3) q 4) p

26. $(x-3)(x+3)(x^2+9)(x^4+81) =$

- 1) $x^4 - 9$ 2) $x^8 - 9^2$ 3) $x^4 - 6561$ 4) $x^8 - 6561$

27. Product of $\frac{7}{2}s^2t$ and $s+t$ for $s = \frac{1}{2}$ and $t = 5$

- 1) $\frac{132}{17}$ 2) $\frac{115}{19}$ 3) $\frac{385}{16}$ 4) $\frac{285}{37}$

28. $A = (x-9)(x+4)$ and $B = (3x+4)(2x-3)$, then $4(B+A) - 3(B-A)$ is

- 1) $13x^2 - 36x - 264$ 2) $13x^2 - 36x + 264$
3) $13x^2 + 36x + 264$ 4) $13x^2 + 36x - 264$

29. Using the identity the value of $(599)^2$ is

- 1) 358081 2) 350881 3) 358801 4) 359901

30. $(3x-y)(3x+y)(9x^2+y^2) =$

- 1) $81x^4 - y^4$ 2) $81x^2 - y^2$ 3) $81x^4 - y$ 4) $81x^2 + y^2$

31. $\left(2a + \frac{4}{b}\right)\left(2a - \frac{4}{b}\right) =$

- 1) $4a^2 - \frac{16}{b^2}$ 2) $4a^2 + \frac{16}{b^2}$ 3) $2a^2 - \frac{4}{b^2}$ 4) $2a^2 + \frac{4}{b^2}$

32. $(ab+7)(ab-7) =$

- 1) $a^2b^2 - 49$ 2) $a^2b^2 + 49$ 3) $a^2b^2 - 7$ 4) $a^2b^2 + 7$

33. $[2(x+y)]^2 - 28y(x+y) + (7y)^2 =$

- 1) $(2x+5y)^2$ 2) $(2x-5y)^2$
3) $(5x+2y)^2$ 4) $4x^2 + 25y^2$

34. Using the identity $(a+b)(a-b) = a^2 - b^2$, the value obtained from the product $\left(\frac{2}{5}+x\right)\left(\frac{2}{5}-x\right)\left(\frac{4}{25}+x^2\right)$ is
- 1) $\frac{16}{625} - x^4$ 2) $\frac{16}{625} + x^4$ 3) $x^4 - \frac{16}{625}$ 4) $x^4 - \frac{16}{25}$
35. If $\left(3\frac{7}{12}\right)^2 - \left(2\frac{5}{12}\right)^2 = A$ and $B = (3.2)^2 - (1.8)^2$, then $A^2 + B^2 + 2AB =$
- 1) 14^2 2) 16^2 3) 12^2 4) 18^2
36. Without actual multiplication the value of $688 \times 688 - 312 \times 312$ is
- 1) 376000 2) 367000 3) 376×100 4) 367×1000
37. If $(2a + 3b) = 8$ and $ab = 2$, then $8a^3 + 27b^3 =$
- 1) 222 2) 228 3) 224 4) 226
38. If $x + \frac{1}{x} = 4$, then $x^2 + \frac{1}{x^2} =$
- 1) 12 2) 14 3) 16 4) 18
39. If $x - \frac{1}{x} = 8$, then the value of $x^2 + \frac{1}{x^2} =$
- 1) 62 2) 60 3) 66 4) 68
40. $(3x - 2y)^3 =$
- 1) $27x^3 + 8y^3 + 54x^2y + 36xy^2$ 2) $27x^3 - 8y^3 - 54x^2y + 36xy^2$
 3) $27x^3 + 8y^3 - 54x^2y + 36xy^2$ 4) $27x^3 + 8y^3 + 54x^2y - 36xy^2$
41. If $a^2 + b^2 = 24$ and $ab = 6$, then $a + b =$
- 1) 6 2) 5 3) 7 4) 8
42. If $\left(x + \frac{1}{x}\right) = 4$, then the value of $x^3 + \frac{1}{x^3} =$
- 1) 58 2) 52 3) 55 4) 56
43. If $\left(x - \frac{1}{x}\right) = 7$, then the value of $x^3 - \frac{1}{x^3} =$
- 1) 364 2) 365 3) 362 4) 363
44. If $a^3 + b^3 + c^3 = 3abc$ then
- 1) $a + b + c = 0$ 2) $a = b + c$
 3) $a^2 + b^2 + c^2 = ab^2 + bc^2 + ca^2$ 4) $a + b = c$
45. If $9x^2 + 48x + p$ to be a perfect square, then the value of p is
- 1) 8 2) 64 3) 36 4) 16
46. If $x + \frac{1}{x} = 2$ and $x - \frac{1}{x} = \frac{1}{2}$ then
- 1) $x^2 - \frac{1}{x^2} = 1$ 2) $x^2 + \frac{1}{x^2} = 4$ 3) $x^2 + \frac{1}{x^2} = 8$ 4) $x^2 - \frac{1}{x^2} = 2$
47. Find the value of $58^3 - 24^3 - 34^3$
- 1) 141984 2) 149184
 3) 411984 4) 141948

48.
$$\frac{(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3}{(a - b)^3 + (b - c)^3 + (c - a)^3} =$$

- 1) $(a+b)(b+c)(c+a)$ 2) $(a+b)^2(b+c)(c+a)$ 3) $(a+b)(b+c)^2(c+a)$ 4) $(a+b)(b+c)(c+a)^2$

49. If $a + b + c = 0$ then $\frac{a^2}{bc} + \frac{b^2}{ac} + \frac{c^3}{ab} =$

- 1) 3 2) 4
3) 1 4) Not possible to find

50. If $(3a + 4b)^2 + (3a - 4b)^2 =$

- 1) $18a^2 + 32b^2$ 2) $9a^2 - 16b^2$ 3) $48ab$ 4) $-48ab$

51.. If $x - \frac{1}{x} = 2$, then $x^4 + \frac{1}{x^4} =$

- 1) 36 2) 34 3) 35 4) 738

52. $\left(x - \frac{1}{x}\right) = \frac{15}{4}$, then $\left(x + \frac{1}{x}\right)^2 =$

- 1) $\left[\frac{15}{4}\right]^2$ 2) $\left[\frac{19}{4}\right]^2$ 3) $\left[\frac{17}{4}\right]^2$ 4) $\left[\frac{13}{4}\right]^2$

53. If $(a^2 + b^2) = 100$, $ab = 48$, then $(a + b)^2 =$

- 1) 17^2 2) 16^2 3) 14^2 4) 20^2

54.
$$\frac{5178 \times 5178 - 4315 \times 4315}{5178 + 4315} =$$

- 1) 865 2) 863 3) 869 4) 867

55. If $x + \frac{1}{x} = 12$, then $x^2 + \frac{1}{x^2} =$

- 1) 146 2) 142 3) 140 4) 144

56. $(2a + 3b)(4a^2 - 6ab + 9b^2) =$

- 1) $8a^3 + 27b^3$ 2) $125a^3 - 27$ 3) $27x^3 + 64y^3$ 4) $64a^3 + 27$

57. If $p(x) = x^2 - 2x + 1$ and $q(x) = x^3 - 3x^2 + 2x - 1$. Find $p(x) \times q(x)$ and the degree of $p(x) \times q(x)$.

- 1) $(x^5 + 5x^4 + 9x^3 + 5x^2 + 4x - 1) \& 9$ 2) $(x^5 - 9x^4 + 5x^3 - 4x^2 + 5x - 4) \& 9$
3) $(x^5 - 5x^4 + 9x^3 - 5x^2 + 4x - 4) \& 5$ 4) $(x^5 - 5x^4 + 9x^3 - 8x^2 + 4x - 1) \& 5$

58. If $P = 24t^3 - 18t^2 + 12$, $Q = t^4 - 2t^3 + 6$ and $R = 4t^3 - 3t^2 + 2$. Find the value of

$$Q - \frac{P}{R}$$

- 1) $t^3(t - 2)$ 2) $t^4 - 2t^3 + 12$
3) $t^4 - 2t^3 - 12$ 4) Can't be determined

59. The sum of the algebraic expressions $9xy + 7yz - 4zx$; $5yz + 11zx - 8xy$ and $6zx - 9yz + 13xy$ is

- 1) $14yz + 3zx + 13xy$ 2) $3yz - 13zx + 14xy$
3) $3yz + 13zx + 14xy$ 4) $3yz + 13zx - 14xy$

60. What must be subtracted from $a^2 + b^2 + c^2 - 3abc$ to get $2a^2 - b^2 - 3c^2 + abc$

1) $3a^2 - 2c^2 - 2abc$

2) $a^2 - 2b^2 - 4c^2 + 4abc$

3) $-a^2 + 2b^2 + 4c^2 + 4abc$

4) $-a^2 + 2b^2 + 4c^2 - 4abc$

61. $\frac{1}{3}(-2p + 6q - 9r) - \frac{1}{6}(-4p - 18q + 24r) =$

1) $-\frac{4}{3}p$

2) $5q$

3) $-7r$

4) $5q - 7r$

62. $-\frac{32}{5}x^3y^2 + \frac{56}{3}x^2y^3 - \frac{72}{7}x^2y^2$ divide by $8x^2y^2$ is

1) $-\frac{4}{5}x + \frac{7}{3}y - \frac{9}{7}$

2) $\frac{4}{5}x + \frac{7}{3}y - \frac{9}{7}$

3) $\frac{4}{5}x - \frac{7}{3}y + \frac{9}{7}$

4) $-\frac{4}{5}x + \frac{7}{3}y + \frac{9}{7}$

63. Simplify $\frac{6m-3}{2mn} \div \frac{(2m-1)(2m+1)}{8m^2}$

1) $\frac{6m}{2m+1}$

2) $\frac{12m}{n(2m+1)}$

3) $\frac{12m}{2m+1}$

4) $\frac{6m}{n(2m+1)}$

64. The product of $-27x^3y^2$, $-\frac{5}{9}x^2y^3z$, $\frac{7}{25}xyz^2$ and $-\frac{1}{6}x^2y^2z$ is

1) $-\frac{7}{10}x^{12}y^{12}z^2$

2) $-\frac{63}{10}x^8y^8z^4$

3) $\frac{63}{10}x^{12}y^{12}z^2$

4) $-\frac{7}{10}x^8y^8z^4$

65. If $P = (3a - 2b) - (4a + 7b)$ and $Q = (3a + 7b) + (8a - 7b)$, then $(-P + Q) + (-P - Q)$ is

1) $2(a + 9b)$

2) $4(a - 5b)$

3) $-4(a + 5b)$

4) $-4(a - 5b)$

66. $(x - 3)(x + 3)(x^2 + 9)(x^4 + 81) =$

1) $x^4 - 81$

2) $x^8 - 81$

3) $x^4 - 6561$

4) $x^8 - 6561$

67. Simplify $\{(x - 2)(x + 5)\} + 3x + 10 =$

1) $x^2 + 6x$

2) $x^2 - 9x + 20$

3) x^2

4) $x^2 - 10x$

68. $A = (x - 9)(x + 4)$ and $B = (3x - 3)(2x + 4)$, then $4(B + A) - 3(B - A)$ is

1) $13x^2 + 29x - 264$

2) $13x^2 - 29x + 264$

3) $13x^2 - 29x - 264$

4) $13x^2 + 29x + 264$

69. $\{5(3x - 4) - \overline{74 - 3x}\} + 10x + 37 =$

1) $28x - 57$

2) $18x - 57$

3) $28x + 57$

4) $18x + 57$

70. $\{(p+q)(p-q)+q^2\} \div p$

- 1) p^2 2) p 3) q^2 4) q

71. If $A = -4(x+y) + 2(5x-3y) - (x-7y)$ and $B = 5(x-y) - 3(2x-4y) + (x+4y)$, then $A - [2A + (A - B)] =$

- 1) $-7x-10y$ 2) $7x+10y$ 3) $-7x+10y$ 4) $17y-10x$

72. The expansion of $\left(\frac{1}{2}xy^2 + \frac{1}{3x^2y}\right)^2$ is

- 1) $\frac{1}{4}x^4y - \frac{x}{3y} + \frac{1}{9x^2y^4}$ 2) $\frac{1}{4}x^4y^2 + \frac{x}{3y} + \frac{1}{9x^2y^4}$
 3) $\frac{1}{4}x^4y^2 - \frac{x}{3y} - \frac{1}{9x^2y^4}$ 4) $\frac{1}{4}x^2y^4 + \frac{1}{9x^4y^2} + \frac{y}{3x}$

73. $(bx^2 - ay)^2 =$

- 1) $bx^4 - a^2y^2 - 2xaby$ 2) $b^2x^4 + a^2y^2 - 2abxy$
 3) $b^2x^4 - a^2y^2 + 2abx^2y$ 4) $b^2x^4 + a^2y^2 - 2abx^2y$

74. Using the identity the value of $(498)^2$ is

- 1) 247006 2) 248004 3) 257006 4) 2578009

75. Without actual multiplication, the value of $(79.01 \times 79.01) + 2 \times 79.01 \times 20.99 + (20.99 \times 20.99)$ is

- 1) 10009 2) 10000 3) 1000.05 4) 10007

76. Using the identity the value of $(398)^2$ is

- 1) 158404 2) 154804 3) 154808 4) 154408

77. $(x^2 - 2y)^2 =$

- 1) $x^4 - 4y^2 - 4xy$ 2) $x^4 - 4y^2 + 4x^2y$
 3) $x^4 + 4y^2 - 4x^2y$ 4) $x^4 + 4y^2 - 4xy$

78. $(x-4)(x+9)$

- 1) $x^2 + 5x + 36$ 2) $x^2 - 5x - 36$ 3) $x^2 - 5x + 36$ 4) $x^2 + 5x - 36$

79. $\left(\frac{7}{9}ab^2\right) \times \left(\frac{15}{7}ac^2b\right) \times \left(\frac{-3}{5}a^2c\right)$

- 1) $a^4b^3c^3$ 2) $-a^4b^3c^3$ 3) $a^4b^4c^3$ 4) $-a^4b^4c^3$

80. Multiply $\left(\frac{1}{5}x - \frac{1}{4}y\right)$ and $(5x^2 - 4y^2)$

- 1) $x^3 + \frac{4}{5}xy^2 - \frac{5}{4}x^2y + y^3$ 2) $x^3 + \frac{4}{5}xy^2 + \frac{5}{4}x^2y + y^3$
 3) $x^3 - \frac{4}{5}xy^2 - \frac{5}{4}x^2y + y^3$ 4) $x^3 - \frac{4}{5}xy^2 + \frac{5}{4}x^2y + y^3$

PHYSICS

1. **A running boy falls in the forward direction if he is tripped by a stone because**
 - 1) Inertia of rest
 - 2) Inertia of motion
 - 3) Inertia of direction
 - 4) Force
2. **A whirled stone tries to maintain its direction**
 - 1) Inertia of rest
 - 2) Inertia of motion
 - 3) Inertia of direction
 - 4) Force
3. **Which law of Newton defines an 'inertial frame of reference'?**
 - 1) First law of motion
 - 2) Second law of motion
 - 3) Third law of motion
 - 4) Law of gravitation
4. **There are two spheres of equal mass, made of iron and wood. Which will have more inertia?**
 - 1) iron
 - 2) wood
 - 3) Both have same inertia
 - 4) can't say
5. **The behavior of a body under zero resultant force is given by**
 - 1) Newton's third law of motion
 - 2) Newton's second law
 - 3) Newton's first law of motion
 - 4) Newton's law of gravitation
6. **Under zero resultant force**
 - 1) Body remains in rest
 - 2) Body is accelerated
 - 3) Both in non-uniform motion
 - 4) both (1) & (2)
7. **The inertia of an object tends to cause the object**
 - 1) To increase its speed
 - 2) To decrease its speed
 - 3) To resist any change in its state of motion
 - 4) None of these
8. **The statement "acceleration is zero if and only if the net force is zero" is valid in**
 - 1) non-inertial frames
 - 2) inertial frames
 - 3) both in an inertial frames and non-inertial frames
 - 4) neither inertial frames nor non-inertial frames
9. **The passengers sitting in a stationary bus tend to fall backward, when the bus accelerates suddenly on account**
 - 1) sitting carelessly
 - 2) inertia of rest
 - 3) inertia of motion
 - 4) none of these
10. **According to Newton's first law of motion, unless some external force acts, a body will continue in its _____**
 - 1) state of rest
 - 2) state of motion in a straight line
 - 3) both (1) and (2)
 - 4) none of these
11. **The tendency of a body to maintain its direction of motion is_____.**
 - 1) Inertia of rest
 - 2) Inertia of motion
 - 3) Inertia of direction
 - 4) Force
12. **A particle starts with a velocity of 10m/s and moves with acceleration 2.5m/s^2 after sometime its velocity become 15m/s then what is the time taken**
 - 1) 2s
 - 2) 3s
 - 3) 4s
 - 4) 5s

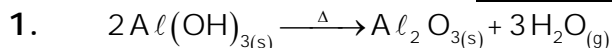
13. If a body have initial velocity of 10.0 m/s and it attains a velocity of 30 m/s in 5 seconds then its acceleration is _____m/s²
1) 1 2) 2 3) 3 4) 4
14. A passenger in a moving train tosses a coin if the coin falls in his hand, the train must be moving with
1) an acceleration 2) a retardation
3) an uniform velocity 4) non uniform velocity
15. A speeding car changes its velocity from 108 km/h to 54 km/h in 5s the deceleration in m/s²)
1) 6 2) 3 3) 4 4) 5
16. A car moving along a straight line at a speed of 54 km/h stops in 4 seconds after brakes are applied (assume constant acceleration) then the magnitude of acceleration is
1) 3 m/s² 2) 8 m/s² 3) 2.75 m/s² 4) 3.75 m/s²
17. If the acceleration of particle is the same every instant in a given time interval, then its acceleration is called _____ in that interval of time
1) uniform speed 2) non uniform acceleration
3) uniform acceleration 4) non uniform speed
18. The velocity of a car at 10.50 a.m is 60 km/h and at 10.52 a.m. it is 80 km/h. Assuming constant acceleration in the given period, finds its value.
1) 200 km/h² 2) 600 km/h² 3) 800 km/h² 4) 900 km/h²
19. An object is moving along straight-line with constant velocity changes from 10 cm/s to 15 cm/s in 2sec. What is its acceleration?
1) 2.5 cm/s² 2) 4.5 cm/s² 3) 3.5 cm/s² 4) 5.5 cm/s²
20. From rest a car is accelerating at 8 m/s² for 10 seconds. What is the final velocity of the car at the end of 10seconds?
1) 8 m/s 2) 80 m/s 3) 90 m/s 4) 100 m/s
21. If a scooter acquires a velocity of 90 km/h in 10s just after its start, then the acceleration of scooter is _____
1) 2m/s² 2) 2.5 m/s² 3) 1m/s² 4) 0.5m/s²
22. With an initial velocity of 20 km/h a car accelerated at 8 m/s² for 10 seconds. Then find the final velocity at the end of 10 seconds.
1) 85.6 m/s 2) 70 m/s 3) 100 m/s 4) None of these
23. How much acceleration in cm/s², is produced in a body of mass 10 kg acted upon by a force of 10 kgf
1) 98 2) 980 3) 9800 4) 9.8
24. If no force acts on a body it will
1) get displaced
2) move with increasing speed
3) move with decreasing speed
4) either remain at rest or move in a straight line
25. A force 500 dynes acts on a body for 0.2 sec, then impulse ____ Ns.
1) 0.1 2) 0.01 3) 0.0001 4) 0.001

26. **A car accelerates on a horizontal road due to the force exerted by the**
 1) road on the car
 2) engine of the car
 3) car on the earth
 4) driver of the car
27. **The velocity of a body moving along a straight line is 5m/s. After 3 sec at a particular instant its velocity is 20m/s then its acceleration is**
 1) 15m/s^2
 2) 5m/s^2
 3) 6m/s^2
 4) 8m/s^2
28. **When a knife is sharpened by placing it on a rotating iron disc, the sparks more tangentially to the disc due to ____.**
 1) Inertia of rest
 2) Inertia of motion
 3) Inertia of direction
 4) Force
29. **A force of 40 N is applied on a body which moves with an acceleration of 4 m/s². Then the mass of the body is ____ g**
 1) 1000
 2) 10000
 3) 500
 4) 100
30. **When a fruit falling from a tree which force acting in this process?**
 1) muscular force
 2) magnetic force
 3) electrostatic force
 4) gravitational force
31. **Which is a suitable method to decrease friction?**
 1) ball bearing
 2) lubrication
 3) polishing
 4) all of the above
32. **Irregularities or interlocking of the two surfaces in contact ____.**
 1) magnetic force
 2) frictional force
 3) electrical force
 4) mechanical force
33. **In order to increase friction between two bodies**
 1) their surface of contact should be rough
 2) the weight of the body should be more
 3) both (1) and (2)
 4) none of these
34. **The maximum value of static friction is called**
 1) Limiting friction
 2) Static friction
 3) Kinetic friction
 4) Rolling friction
35. **Friction between two flat surfaces can be reduced**
 1) greasing
 2) polishing
 3) both (1) and (2)
 4) neither (1) nor (2)
36. **The force which opposes the relative motion of a body over another is called**
 1) Force of friction
 2) Electrostatic force
 3) Magnetic force
 4) None of these
37. **The force of friction is always**
 1) Parallel to the two surfaces of contact
 2) Perpendicular to the two surfaces.
 3) Both (1) & (2)
 4) Neither (1) nor (2)
38. **Machine oil is put between moving parts of a machine to**
 1) reduce the friction
 2) increase the friction
 3) does not effect
 4) none of these
39. **Force of friction increases with the**
 1) increase in the weight of a body
 2) decrease in weight of a body
 3) either (1) or (2)
 4) none of these
40. **The work done by gravity when a body is dropped from certain height.**
 1) $+ve$
 2) $-ve$
 3) zero
 4) none

41. **M.K.S unit of work is**
 1) $kg.m^2.s^{-2}$ 2) $kg.m^2$ 3) $kg.m^2.s^{-1}$ 4) $kg.m^{-2}.s^{-2}$
42. **C.G.S unit of work is**
 1) $g.cm.s^{-2}$ 2) $g.cm^2.s^{-2}$ 3) $g.cm.s^1$ 4) $g.cm^{-2}.s^{-2}$
43. $1kg.m^2.s^{-2} = \underline{\hspace{2cm}}g cm^2s^{-2}$.
 1) 10^5 2) 10^4 3) 10^6 4) 10^7
44. $1 J =$
 1) $1 N \times 1 m$ 2) 10^5 dyne 3) 10^7 dyne 4) 10^6 erg
45. **When a body lifts school bag of weight 80N to 10m height work done by him**
 1) 80T 2) 800J 3) 8J 4) 8000J
46. **How much work is done by a force of 20N in moving a body through a distance of 2m in its own direction?**
 1) 40J 2) 10J 3) 46J 4) 30J
47. **Number of erg contained in one Joule is 10^x then, x is _____?**
 1) 9 2) 8 3) 6 4) 7
48. **Friction opposes the _____ between the surfaces in contact with each other**
 1) Motion 2) Rest 3) Heat 4) None of these
49. **In case of negative work the angle between the force and displacement is**
 1) 0° 2) 45° 3) 90° 4) 180°
50. **The work done on an object does not depend upon the**
 1) displacement
 2) force applied
 3) angle between force and displacement
 4) initial velocity of the object
51. **A girl is carrying a school bag of 3 kg mass on her back and moves 200 m on a leveled road. The work done against the gravitational force will be($g=10 ms^{-2}$).**
 1) $6 \times 10^3 J$ 2) 6 J 3) 0.6 J 4) Zero
52. **If 'u' and 'v' are the initial and final velocity of a body of mass 'm' then the change in momentum is given by**
 1) mv 2) mu 3) mv - mu 4) mu - mv
53. **Choose the correct option**
 1) $p = v/m$ 2) $p = mv$ 3) $p = m/v$ 4) $m = pv$
54. **A body of mass 400 g moving with an acceleration of $10m/s^2$ then force acting on the body is _____ $\times 10^5$ dynes.**
 1) 40 2) 4 3) 0.4 4) 400
55. **1gm.weight is_____.**
 1) $9800gm.cm/s^2$ 2) 980 dyne 3) 98 dyne 4) 9.8 dyne
56. **A body of mass 40 kg moving with an acceleration $2 m/s^2$ then force on the body is _____dyne.**
 1) 8×10^5 2) 80×10^5 3) 0.8×10^5 4) 0.8×10^6

57. A body of mass 200g is moving with a velocity of 5 m/s. If the velocity of the body changes to 17 m/s. Calculate the change in linear momentum of the body.
- 1) 2.4 Ns 2) 24 Ns 3) 240 Ns 4) 0.24 Ns
58. A car accelerates on a horizontal road due to the force exerted by the
- 1) road on the car 2) engine of the car
3) car on the earth 4) driver of the car
59. When a horse pulls a cart, the force which helps the horse to move forward is the force exerted by
- 1) cart on the ground 2) ground on the cart
3) horse on the ground 4) ground on the horse
60. A force 9N acts on a body for 0.2 sec, then impulse is _____. (dyne sec)
- 1) 1800 2) 180000 3) 180 4) 18
61. A force 100 dynes acts on a body for 0.2 sec, then impulse ____ Ns.
- 1) 0.2 2) 0.02 3) 2 4) 0.0002
62. What will be the impulse on a body at rest when acted upon by a force 6 N for 0.1 sec is ____ Ns
- 1) 16 2) 0.6 3) 6 4) 40
63. A force of 4.5 N acts on a body 0.01 sec what is the impulse acting on the body is ____ Ns
- 1) 45 2) 450 3) 0.045 4) 0.45
64. How much force will require to produce 20 m/s change in velocity of a body of mass 2 kg if it acts for 0.1 secs is ____N
- 1) 40 2) 400 3) 4000 4) 4
65. A force of 100 dynes acts on a body of mass 100g for 5sec. What is the change in momentum _____(dyne sec)
- 1) 5×10^2 2) 5×10^{-3} 3) 5×10^3 4) 5×10^{-2}
66. A force of 100 dynes acts on a body of mass 100g for 5sec. What is the change in velocity _____(cm/s)
- 1) 2 2) 5 3) 50 4) 500
67. How much force will produce an impulse of 200dyne sec, if it acts 0.1 sec on a body
- 1) 2000 dyne 2) 200 dyne 3) 20 dyne 4) 2dyne
68. How much force will produce an impulse of 20 NS, and acts for 0.5 sec on a body
- 1) 1N 2) 4 N 3) 20 N 4) 40 N
69. What will be the impulse on a body at rest when acted upon by a force of 5N for 3sec is ____ Ns
- 1) 10 2) 16 3) 8 4) 15
70. A force of 40 dyne acts on a body for 0.1 sec, what is the change in momentum _____dyne sec.
- 1) 40 2) 20 3) 4 4) 2

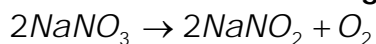
71. A force of 3.5 N acts on a body for 0.1 sec what is the change in momentum?
1) 3.5 Ns 2) 0.35 Ns 3) 35 Ns 4) 350 Ns
72. The force exerted by the second body on first body is called ____
1) action 2) reaction 3) both (1) & (2) 4) None
73. Which of the following are works on the principle of Newton's III law
1) Rowing a boat 2) Moving fan
3) A man sitting on a chair 4) A man standing in a bus
74. Rocket derives the necessary thrust to move forward according to Newton's
1) I law 2) III law 3) II law 4) none of these
75. According to the third law of motion, action and reaction
1) always act on the same body
2) always act on different bodies in opposite directions
3) have same magnitude and directions
4) act on either body at normal to each other
76. Why is it difficult for a fireman to hold a hose, which ejects large amounts of water at a high velocity?
1) Due to the forward reaction of the water being ejected
2) Due to the upward reaction of the water being ejected
3) Due to the downward reaction of the water being ejected
4) Due to the backward reaction of the water being ejected
77. A batsman hits a cricket ball which then rolls on a level ground. After covering a short distance, the ball comes to rest. The ball slows to a stop because
1) The batsman did not hit the ball hard enough.
2) Velocity is proportional to the force exerted on the ball.
3) There is a force on the ball opposing the motion.
4) There is no unbalanced force on the ball, so the ball would want to come to rest.
78. A force of 5 N produces an acceleration of 8 ms^{-2} on a mass m_1 and an acceleration of 24 ms^{-2} on a mass m_2 . What acceleration would the same force provide if both the masses are tied together?
1) 60 ms^{-2} 2) 6 ms^{-2} 3) 70 ms^{-2} 4) 7 ms^{-2}
79. An automobile vehicle has a mass of 1500 kg. What must be the force between the vehicle and road if the vehicle is to be stopped with a negative acceleration of 1.7 ms^{-2} ?
1) -2650 N 2) -2540 N 3) -255 N 4) -2550 N
80. Jennifer, who has a mass of 50.0 kg, is riding at 35.0 m/s in her red sports car when she must suddenly slam on the brakes to avoid hitting a deer crossing the road. She strikes the air bag, that brings her body to a stop in 0.500 s. What average force does the seat belt exert on her?
1) 3500 N 2) 350 N 3) 35 N 4) 35000 N

CHEMISTRY

Which of the following statements is true for the above reaction?

- 1) A compound decomposes to form two elements.
 - 2) A compound decomposes to form two new compounds.
 - 3) A compound decomposes to form two compounds and elements.
 - 4) A compound decomposes to form another compound and an element.
2. **The combination reactions may involve in the combination of:**
- 1) Elements with other elements.
 - 2) Compounds with another compound.
 - 3) Element with a compound.
 - 4) All the above.
3. **Which of the following reactions illustrates a chemical combination between an element and a compound?**
- | | |
|---|---|
| 1) $2HgO_{(s)} \xrightarrow{\Delta} 2Hg_{(l)} + O_{2(g)}$ | 2) $2Pb_3O_{4(s)} \xrightarrow{\Delta} 6PbO_{(s)} + O_{2(g)}$ |
| 3) $2CO_{(g)} + O_{2(g)} \longrightarrow 2CO_{2(g)}$ | 4) Both 1 and 2 |
4. $2Pb_3O_{4(s)} \xrightarrow{\Delta} 6PbO_{(s)} + O_{2(g)}$ **Illustrates a:**
- | | |
|-------------------------|----------------------------------|
| 1) Chemical combination | 2) Chemical de combination |
| 3) Chemical composition | 4) Chemical double decomposition |
5. **Identify the decomposition reactions from the following**
- | | |
|---|--|
| 1) $FeSO_4 \longrightarrow Fe_2O_3 + SO_2 + SO_3$ | 2) $KMnO_4 \longrightarrow K_2MnO_4 + MnO_2 + O_2$ |
| 3) $Fe_2(SO_4)_3 \xrightarrow{\text{heat}} Fe_2O_3 + 3SO_3$ | 4) All of these |
6. **When two or more elements or compounds react chemically to form one new product only, then the reaction which takes place is called_____.**
- | | |
|---------------------------|----------------------------------|
| 1) Chemical decomposition | 2) Chemical combination |
| 3) Chemical displacement | 4) Chemical double decomposition |
7. $2NaHSO_4 \longrightarrow Na_2S_2O_7 + H_2O$ **Which of the following are correct for above chemical reaction?**
- | | |
|---------------------------|--------------------------|
| 1) Chemical combination | 2) Chemical displacement |
| 3) Chemical decomposition | 4) none |
8. $2SO_2(g) + O_2(g) \longrightarrow 2SO_3(g)$
- Which of the following statements is/are true for the above reaction?**
- 1) In this reaction a compound reacts with an element to form a new compound.
 - 2) It is a combination reaction.
 - 3) The new product formed is sulphur trioxide.
 - 4) All the above
9. **When electric current is passed through molten sodium chloride, it decomposes to give sodium metal and chlorine gas:**
- Which of the following is true for the above reaction?**
- 1) It is a electrolytic combination.
 - 2) It is a chemical decomposition of a compound to form two compounds.
 - 3) It is also called electrolysis of molten sodium chloride.
 - 4) The above reaction is used to obtain molten sodium chloride.

10. Which of the following statements are true for below reaction?



- 1) A compound decomposes to two new compounds
 - 2) A compound decomposes to one compound and one element
 - 3) A compound reacts with other element to form a new compound
 - 4) All are correct statements
11. $x \longrightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$ What is x in the above reaction
- 1) $\text{Pb}(\text{NO}_3)_3$
 - 2) $\text{Pb}(\text{NO}_3)_2$
 - 3) PbNO_2
 - 4) PbNO_3
12. Which of the following is not a single displacement reaction?
- 1) $\text{Pb}(\text{NO}_3)_2 + 2\text{KI} \rightarrow \text{PbI}_2 + 2\text{KNO}_3$
 - 2) $\text{CuO} + \text{Mg} \rightarrow \text{MgO} + \text{Cu}$
 - 3) $\text{Cl}_2 + 2\text{KI} \rightarrow 2\text{KCl} + \text{I}_2$
 - 4) All the above
13. When a piece of magnesium metal is placed in copper sulphate solution. The products formed are:
- 1) MgSO_4, Cu
 - 2) MgS, Cu
 - 3) $\text{MgSO}_4, \text{CuS}$
 - 4) MgS, CuS
14. Study the following reaction: $\text{ZnO} + 2\text{HNO}_3(\text{dil}) \rightarrow \text{Zn}(\text{NO}_3)_2 + 2\text{H}_2\text{O}$. Which of the following reactions is true for the above reaction?
- 1) It is a precipitate reaction
 - 2) It is a double decomposition reaction
 - 3) It is a combination reaction
 - 4) It is a catalytic reaction
15. In case one of the two products is insoluble in water the reaction is commonly called_____.
- 1) Precipitation reaction
 - 2) Neutralisation reaction
 - 3) Decomposition reaction
 - 4) Combination reaction
16. Chemical double displacement is also called:
- 1) Chemical decomposition
 - 2) Chemical displacement
 - 3) Chemical double decomposition
 - 4) All the above
17. Colour of BaSO_4 Precipitate which is formed in $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \longrightarrow \text{BaSO}_4 + 2\text{HCl}$ reaction
- 1) Pink
 - 2) Blue
 - 3) Red
 - 4) White
18. Which one of the following is not a permanent change
- 1) Melting ice
 - 2) Magnetisation of iron
 - 3) Powdering of sugar
 - 4) All of these
19. The double displacement reaction in which one of the products is soluble salts and the other is water, is called:
- 1) Combination
 - 2) Precipitation
 - 3) Neutralisation
 - 4) Dissociation
20. $2\text{AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + 2\text{Ag}$, In this reaction,
- 1) Copper displaces silver
 - 2) Silver displaces copper
 - 3) Nitrogen displaces copper
 - 4) Silver displaces nitrogen
21. $\text{AgNO}_3 + \text{NaCl} \longrightarrow \text{P} + \text{NaNO}_3$. What is 'P'?
- 1) AgCl - White precipitate
 - 2) AgCl - Red precipitate
 - 3) AgCl - Pink precipitate
 - 4) AgCl - Blue precipitate
22. $\text{CuSO}_{4(\text{aq})} + \text{Zn}_{(\text{s})} \longrightarrow \text{ZnSO}_{4(\text{aq})} + \text{Cu}_{(\text{s})}$ This equation is an example of:
- 1) Chemical Combination
 - 2) Chemical Decomposition
 - 3) Chemical Displacement
 - 4) Chemical double Decomposition
23. Pick the change that can be reversed from the following
- 1) Cutting of trees
 - 2) Blooming of flower
 - 3) Burning of candle
 - 4) Melting of ghee

24. $2\text{NaHSO}_4 \longrightarrow \text{Na}_2\text{S}_2\text{O}_7 + \text{H}_2\text{O}$. Which of the following are correct for above chemical reaction
- 1) Chemical combination
 - 2) Chemical combination
 - 3) Chemical decomposition
 - 4) None
25. Which of the following is the correct example for oxidizing agent
- 1) MnO_2
 - 2) PbO_2
 - 3) Both 1 and 2
 - 4) NaH
26. In a chemical reaction if both products are soluble i.e., one of the product is soluble salt and the other is water such a reaction is called_____.
- 1) Decomposition reaction
 - 2) Combination reaction
 - 3) Precipitation reaction
 - 4) Neutralisation reaction
27. Baking cake in an oven is what type of change
- 1) Reversible
 - 2) Irreversible
 - 3) Chemical
 - 4) Periodic
28. On _____ Reaction takes place by mixing iron fillings with sulphur
- 1) Electrolysis
 - 2) Heating
 - 3) Crushing
 - 4) None of these
29. Which of the following is correct about photosynthesis
- 1) Photosynthesis takes place in presence of electricity
 - 2) $\text{CO}_2, \text{H}_2\text{O}$ are formed in photosynthesis
 - 3) Glucose and water are reacting to form CO_2 and H_2O in photosynthesis
 - 4) Photosynthesis takes place in the presence of sunlight
30. Which of the following is incorrect statement
- 1) Petrol, Kerosene oil, Alcohol are non-combustible substances.
 - 2) Hydrogen gas burns in the atmosphere of chlorine to form hydrochloric acid
 - 3) Magnesium ribbon on heating catches fire and burns with a dazzling white flame to form magnesium oxide.
 - 4) Both 2 and 3
31. Which of the following are non- periodic changes
- 1) Earthquakes
 - 2) Landslides
 - 3) Both 1 and 2
 - 4) Phases of moon
32. What characteristic best describes what happen during a physical change?
- 1) Composition stays the same
 - 2) Composition changes
 - 3) Mass is lost
 - 4) Physical state stays the same
33. Which of the following is a not a chemical change?
- 1) Glowing of electric bulb.
 - 2) Crushing an ice-cube.
 - 3) Both 1 and 2
 - 4) Burning of a match stick
34. Which is an example of Chemical change?
- 1) Metal rusting
 - 2) Burning of magnesium ribbon
 - 3) Water boiling
 - 4) Both 1 and 2
35. A physical change is:
- 1) Reversible
 - 2) Temporary
 - 3) Both permanent and temporary
 - 4) Both 1 and 2
36. Zinc oxide is yellow when hot and white when cold: This is an example of:
- 1) Chemical change.
 - 2) Physical change.
 - 3) Both physical and chemical change
 - 4) Neither physical nor chemical change

37. A banana browning in the air is a:

- | | |
|-----------------------|-----------------|
| 1) Chemical change. | 2) Irreversible |
| 3) Reversible change. | 4) Both 1 and 2 |

38. Burning of coal

- | | |
|--------------------|--------------------|
| 1) Chemical change | 2) Physical change |
| 3) Periodic change | 4) All of these |

39. Which among the following is undesirable change

- 1) Flooding of rivers in rainy seasons
- 2) Rusting of articles of iron
- 3) Both 1 and 2
- 4) Melting of snow on the mountains in the summer

40. Which of following is incorrect

- 1) Ripening of fruits is undesirable change
- 2) Changes in the shape of moon is non-periodic change
- 3) Breaking of glass is desirable change
- 4) All of these

41. Digestion of food is

- | | |
|----------------------|--------------------|
| 1) Physical change | 2) Chemical change |
| 3) Reversible change | 4) All of these |

42. Which of the following is not a periodic change?

- | | |
|---------------------------------|----------------------------------|
| 1) Swinging of a clock pendulum | 2) Change of seasons |
| 3) Beating of heart | 4) Falling of leaves from a tree |

43. Sneezing and coughing are example of _____ change

- | | |
|------------------------|---------------------|
| 1) Fast change | 2) Slow change |
| 3) Non-periodic change | 4) Desirable change |

44. Which of the following is not a desirable change

- | | |
|---------------------|---------------------------|
| 1) Burning of house | 2) Occurring of floods |
| 3) Both 1 and 2 | 4) Burning of cooking gas |

45. The heat produced by the burning of petrol in the engines of cars or scooters is a:

- | | |
|------------------------|----------------------|
| 1) Undesirable change | 2) desirable change |
| 3) Irreversible change | 4) reversible change |

46. Give an example of desirable change:

- | | |
|--------------------------------|-----------------------|
| 1) Formation of curd from milk | 2) Ripening of fruits |
| 3) Breaking of glassware | 4) Both 1 and 2 |

47. An example of non-periodic change:

- | | |
|--------------------------|-------------------------|
| 1) Breaking of Glassware | 2) Occurring of tsunami |
| 3) Rusting of articles | 4) All of these |

48. Select the change among the following which will occur with again and again after fixed intervals

- | | |
|-----------------------------------|-------------------|
| 1) High and low tides at a sea | 2) Phases of moon |
| 3) Landslides during rainy season | 4) Both 1 and 2 |

49. _____ changes are generally temporary in nature and no new substances are formed

- | | |
|---------------------|-----------------------|
| 1) Physical change | 2) Chemical change |
| 3) Desirable change | 4) Undesirable change |

50. Chemical changes can be generally:

- 1) Reversible 2) Irreversible 3) Perpendicular 4) Both 1 and 2

51. Zinc oxide on heating changes to ___ colour

- 1) Pink 2) White 3) Yellow 4) Red

52. In which change new substances are formed?

- 1) Physical change 2) Chemical change
3) Periodic change 4) Desirable change

53. Which of the following statement is incorrect regarding catalyst?

- 1) A substance which doesn't take a part in chemical reaction
2) A substance which take a part in a chemical reaction and undergoes permanent chemical change
3) A substance which can enhance the rate of reaction
4) Catalyst doesn't undergoes any permanent chemical change

54. Among the following inhibitor is

- 1) Ni - Mn - CeO₂
2) Arsenic oxide + platinised asbestos
3) MnO₂
4) Mo + Fe

55. Which among are the liquid oxidizing agents?

- 1) H₂O₂, H₂SO₄ 2) H₂, CO
3) NaH, CaH₂ 4) HI, H₂S

56. X, Y and Z are solid, liquid and gas oxidizing agents. Identify the correct among the following.

- 1) X= MnO₂ ; Y=HNO₃ ; Z= O₃ 2) X= SO₂ ; Y= PbO₂ ; Z= MnO₂
3) X= MnO₂ ; Y=HI ; Z=H₂ 4) X=Cl₂ ; Y=H₂SO₄ ; Z= CaOCl₂

57. $2\text{Pb}(\text{NO}_3)_2 \xrightarrow{\text{Heat}} \text{A} + \text{B} + \text{O}_2$; What are A & B in the reaction.

- 1) A = 2PbO, B = 4NO₂ 2) A = 6PbO, B = 3O₂
3) A = 6PbO, B = 2NO₂ 4) A = 2PbO, B = 3O₂

58. $\text{X} \xrightleftharpoons[\text{energy}]{\text{light}} 2\text{C} + \text{H}_2$, what is X in the given reaction.

- 1) C₄H₄ 2) CH₄ 3) C₂H₆ 4) C₂H₂

59. Which of the following chemical reaction takes place under pressure?

- 1) $\text{N}_2 + 3\text{H}_2 \longrightarrow 2\text{NH}_3$ 2) $2\text{KClO}_3 \longrightarrow 2\text{KCl} + 3\text{O}_2$
3) $\text{H}_2\text{O} \longrightarrow 2\text{H}_2 + \text{O}_2$ 4) $\text{C}_2\text{H}_2 \longrightarrow 2\text{C} + \text{H}_2$

60. A close contact is brought between the reactants by

- 1) Rubbing 2) Shaking
3) Both 1 & 2 4) None

61. The gas responsible for burning of candle in air is:

- 1) Cl₂ 2) O₂ 3) H₂ 4) Ar

62. The number of carbon atoms present in glucose is ____

- 1) 12 2) 8 3) 6 4) 10

63. $2\text{HClO}(\text{aq}) \xrightarrow[\text{Uv radiations}]{\text{Sunlight}} 2\text{HCl}(\text{aq}) + \text{O}_2(\text{g})$
Hypochlorous acid Hydrochloric acid Oxygen

The above reaction illustrates:

- 1) Electrolysis 2) Catalysis 3) Photolysis 4) Pyrolysis

64. Hydrogen burns in an atmosphere of chlorine and forms:

- 1) Hydrogen chloride 2) Hydrogen oxide
3) Hydrogen sulphide 4) Both 1 and 2

65. **Photosynthesis takes place in presence of _____**
 1) Sun light 2) Electricity 3) Heat 4) All of these
66. **In which of the following cases combustion is faster. Of combustible substance**
 1) Large size particle 2) Small size particle
 3) Both 1 & 2 4) None of these
67. **Atoms of Oxygen react with each other on absorbing ____ rays present in sunlight to form Ozone.**
 1) Gamma rays 2) Sun rays 3) Ultraviolet rays 4) X-rays
68. **Choose the combustion reaction that occurs in the absence of air**
 1) $2\text{H}_2\text{O} \longrightarrow 2\text{H}_2(\text{g}) + \text{O}_2(\text{g})$ 2) $2\text{Al}_2\text{O}_3 \longrightarrow 4\text{Al} + 3\text{O}_2$
 3) $3\text{Mg} + \text{N}_2 \longrightarrow \text{Mg}_3\text{N}_2$ 4) $\text{C} + \text{O}_2 \longrightarrow \text{CO}_2$
69. $2\text{H}_2\text{O} \xrightleftharpoons[\text{Current}]{\text{Electric}} 2\text{H}_2(\text{g}) + \text{O}_2(\text{g})$
The above reaction is an example of:
 1) Photochemical reaction 2) Electrolytic decomposition
 3) Combination reaction 4) Double decomposition
70. **Which of the following catches fire more rapidly**
 1) Wood 2) Stone 3) Petrol 4) Coal
71. $6\text{CO}_2 + 12\text{H}_2\text{O} \xrightarrow[\text{Sunlight}]{\text{Chlorophyll}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{H}_2\text{O} + 6\text{O}_2$ is a:
 1) Electrolytic decomposition. 2) Redox reaction.
 3) Photochemical reaction. 4) Thermo chemical reaction.
72. $x \rightarrow \text{HCl} + \text{O}_2$, **What is 'x' in this reaction?**
 1) HClO 2) H_2SO_4 3) HNO_3 4) HOH
73. **Which of the following is Non-combustible gaseous substance?**
 1) LPG 2) Coke 3) Water 4) Nitrogen
74. $\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \xrightarrow{\text{Sunlight}} 2\text{HCl}(\text{aq}) + \Delta T$. **The reaction is explosive in nature in**
 1) Diffused sunlight. 2) Absence of light
 3) Electric current 4) Direct sunlight
75. **In the upper region of atmosphere, atoms of oxygen react with each other on adsorbing ultra violet rays present in the sunlight to form ozone gas. The reaction is _____ in nature.**
 1) Inflammable 2) Electrochemical
 3) Thermo chemical 4) Photochemical
76. $\text{H}_2\text{O}(\text{g}) + \text{C}(\text{s}) \xrightarrow{[X]} \text{H}_2(\text{g}) + \text{CO}(\text{g}) - 31.4 \text{ k.cal}$ **What is 'x' in this equation**
 1) $X = 1100^\circ\text{c}$ 2) $X = 2200^\circ\text{c}$ 3) $X = 1200^\circ\text{c}$ 4) $X = 2100^\circ\text{c}$
77. **Photosynthesis is a photochemical process that takes place in green plants, in which CO_2 and water combine together in the presence of sunlight energy and chlorophyll to form:**
 1) $\text{C}_{12}\text{H}_{22}\text{O}_{11}$ and O_2 2) $\text{C}_2\text{H}_5\text{OH}$ and O_2
 3) $\text{C}_6\text{H}_{12}\text{O}_6$ and O_2 4) CH_3COOH and O_2
78. **The substance which do not burn in air even on strong heating are called _____**
 1) Non-combustible substances 2) Inflammable
 3) Combustible 4) All of these
79. **Hydrocarbon (from wax) + Oxygen (air) $\xrightarrow{\text{Combustion}} \text{A} + \text{B} + \text{Heat} + \text{light}$**
 1) $\text{A} \rightarrow \text{CO}$, $\text{B} \rightarrow \text{H}_2$ 2) $\text{A} \rightarrow \text{CO}_3$, $\text{B} \rightarrow 2\text{H}_2$
 3) $\text{A} \rightarrow \text{CO}_2$, $\text{B} \rightarrow \text{H}_2\text{O}$ 4) $\text{A} \rightarrow 2\text{CO}_2$, $\text{B} \rightarrow \text{O}_2$
80. **Which of the following is the example of gaseous inflammable substance**
 1) Methane 2) CNG 3) Both 1 and 2 4) Wood

VI_SHP_Maths_E-1 TO E3 KEY										
Q.NO.	1	2	3	4	5	6	7	8	9	10
KEY	1	3	3	3	2	4	2	4	3	4
Q.NO.	11	12	13	14	15	16	17	18	19	20
KEY	4	4	1	3	4	2	4	2	2	2
Q.NO.	21	22	23	24	25	26	27	28	29	30
KEY	1	2	3	4	3	4	3	1	3	1
Q.NO.	31	32	33	34	35	36	37	38	39	40
KEY	1	1	2	1	1	3	2	3	3	2
Q.NO.	41	42	43	44	45	46	47	48	49	50
KEY	1	2	1	1	2	1	1	1	4	1
Q.NO.	51	52	53	54	55	56	57	58	59	60
KEY	2	3	3	2	2	1	4	1	3	4
Q.NO.	61	62	63	64	65	66	67	68	69	70
KEY	4	1	2	4	1	4	1	3	1	2
Q.NO.	71	72	73	74	75	76	77	78	79	80
KEY	4	4	4	2	2	1	3	4	2	3

VI_SHP_Physics_E-1 TO E3 KEY										
Q.NO.	1	2	3	4	5	6	7	8	9	10
KEY	2	3	1	3	3	1	3	2	2	3
Q.NO.	11	12	13	14	15	16	17	18	19	20
KEY	3	1	4	3	2	4	3	2	1	2
Q.NO.	21	22	23	24	25	26	27	28	29	30
KEY	2	1	2	4	4	1	2	3	2	4
Q.NO.	31	32	33	34	35	36	37	38	39	40
KEY	4	2	3	1	3	1	1	1	1	1
Q.NO.	41	42	43	44	45	46	47	48	49	50
KEY	1	2	4	1	1	3	2	1	4	4
Q.NO.	51	52	53	54	55	56	57	58	59	60
KEY	4	3	2	2	2	2	1	4	4	2
Q.NO.	61	62	63	64	65	66	67	68	69	70
KEY	2	2	3	2	1	2	1	4	4	3
Q.NO.	71	72	73	74	75	76	77	78	79	80
KEY	2	2	1	2	2	4	3	2	4	1

VI_SHP_Chemistry_E-1 TO E3 KEY										
Q.NO.	1	2	3	4	5	6	7	8	9	10
KEY	2	4	3	2	4	2	3	4	3	2
Q.NO.	11	12	13	14	15	16	17	18	19	20
KEY	2	1	1	2	1	3	4	4	3	1
Q.NO.	21	22	23	24	25	26	27	28	29	30
KEY	1	3	4	3	3	4	2	2	4	1
Q.NO.	31	32	33	34	35	36	37	38	39	40
KEY	3	1	3	4	4	2	4	1	3	4
Q.NO.	41	42	43	44	45	46	47	48	49	50
KEY	2	4	3	3	2	4	4	4	1	2
Q.NO.	51	52	53	54	55	56	57	58	59	60
KEY	3	2	2	2	1	1	1	4	1	3
Q.NO.	61	62	63	64	65	66	67	68	69	70
KEY	2	3	3	1	1	2	3	3	2	3
Q.NO.	71	72	73	74	75	76	77	78	79	80
KEY	3	1	4	4	4	1	3	1	3	3

