

ANSWER KEY -PHYSICS & CHEMISTRY

1. c . mass of the object
2. c. change of momentum
3. c. Both a & b
4. c.Forc
5. c.Cycling
6. b.Nkg<sup>-1</sup>
7. c.98 × 10<sup>4</sup> dyne
8. d.M
9. d.Increase by 300%
10. d.Both a and c
11. a. A
12. b. 2f
13. c. Parallel beam of light
14. c. either positive or negative
15. b. Infinity
16. c.-0.25m
17. c. In front of the retina
18. d. Bi focal lenses
19. a. A convex lens of focal length 5 cm
20. c.V<sub>B</sub><V<sub>G</sub><V<sub>R</sub>
21. d. 8.31 mol<sup>-1</sup> K<sup>-1</sup>
22. c. Zero
23. c. Both a and b
24. c.Difference in TE and PE
25. a.A← B,A←C, B←
26. b. Rate of change of charge is current
27. c. ohm
28. b. Closing the switch complete the circuit
29. c. Electrical energy
30. a. vibrate along the direction of the wave motion
31. a. 330ms<sup>-1</sup>
32. b. 20KHz
33. c. 330× √ 2ms<sup>-1</sup>
34. c. 0.02752m
35. d. None of these
36. c. 25m
37. d. a & c
38. d. all the above
39. b. Irene curie
40. b. (ii) and (iii) are correct
41. b. Radio Cobalt
42. c. It produces genetic disorder
43. c. Lead
44. d. (iii) and ( iv) are correct
45. c. Nuclear fusion
46. b. 8,4
47. a. Kalpakkam
48. b. (i) & (ii) are correct

49. c. 2g of He
50. c. Carbon dioxide
51. b. 2.24 litre
52. d. 14g
53. c. 1/12th of the mass of a C-12 atom
54. c. One mole of hydrogen gas contains Avogadro's number of atoms
55. c. 22.4 litre
56. b. 20 protons and 20 neutrons
57. a. 16g
58. a.  $6.023 \times 10^{23}$
59. d. 7,18
60. a. atomic number
61. a. 17<sup>th</sup>
62. d. Electro negativity
63. c.  $\text{Fe}_2\text{O}_3 \times \text{H}_2\text{O}$
64. b. Reducing agent
65. c. Galvanization
66. a. He
67. b. Stable configuration of electrons
68. b. Hg
69. a. Homogeneous
70. a. 2
71. c. Water
72. a. Saturated solution
73. d. Sulphur in carbon di sulphide
74. b. Increases
75. b. 11g
76. c. 25 ml alcohol in 75 ml of water
77. a. Strong affinity to water
78. c. Silica Gel
79. b. Combination reaction
80. c. Light
81. d. i, ii and iv
82. c. Precipitation
83. a. i, ii and iii
84. d. i and iv
85. c.  $2\text{CO}_{(g)} + \text{O}_{(g)} \rightarrow 2\text{CO}_{2(g)}$
86. c.  $\text{A}_{(aq)} + \text{B}_{(aq)} \rightarrow \text{C}_{(s)} + \text{D}_{(aq)}$
87. c.  $1 \times 10^{-11}\text{M}$
88. a. Large surface area
89. b. alkane
90. d. Alcohol
91. c. - al
92. a.  $\text{C}_3\text{H}_8$  and  $\text{C}_4\text{H}_{10}$
93. b. Combustion of ethanol
94. a. 95.5%
95. b. Ethers
96. c. Fatty acid
97. a. It is a sodium salt of long chain fatty acid

## ANSWER KEY - BIOLOGY

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1. d. Endodermis
2. b. Stem
3. c. Conjoint
4. b. Ethyl alcohol
5. b. Mitochondrial matrix
6. c. When H<sub>2</sub>O is splitted
7. d. Contraction and relaxation of muscles
8. a. Metameres ( somites)
9. b. Nervous system
10. c. Pharynx
11. b. 33 segments
12. b. Warm blooded
13. d. All the above
14. d. Xylem
15. c. Water
16. d. Both b and c
17. a. Active transport
18. d. All the above
19. c. Atrium - ventricle – arteries - vein
20. a. O group
21. a. SA node
22. d. Blood - plasma+ RBC+ WBC +platelets
23. a. Retina of eye
24. c. Brain
25. d. Receptor,spinal cord, muscle
26. b. Towards away from
27. c. duramater
28. a. 12,31
29. c. Efferent neuron
30. c. Corpus Callosum
31. b. Axons
32. a. Medulla oblongata
33. b. Sarcolemma
34. d. Hypothalamus
35. b. Elantation of dwarf plants
36. b. Auxin
37. a. 2,4-D
38. d. F.W.Went
39. c. Anterior pitutary
40. c. Salivary gland
41. a. Pancreas
42. b. Pitutory gland
43. d. Bryophyllum
44. B. Yeast
45. c. Zygote
46. d. Androecium and gynoecium
47. d. Large feathery Stigma
48. a. Generative cell
49. d.They are formed from gonads
50. a. Epididymis

51. b. Sertoli cells
52. c. Graafian follicle
53. a. Copper -T
54. b. Responsible for character
55. c. Independent assortment
56. c. Centromere
57. b. Metacentric
58. d. Sugar phosphate
59. d. DNA ligase
60. a. 22 pairs of autosomes and 1 pair of sex chromosomes
61. b. Aneuploidy
62. b. Ontogeny recapitulates phylogeny
63. c. Jean Baptiste Lamarck
64. b. Fossil evidences
65. a. Radio-carbon method
66. b. J. W. Harsberger
67. b. Mass selection
68. c. Cow pea
69. d. Wheat
70. a. IR 8
71. d. Both a and b
72. b. Restriction endonucleases
73. c. Recombinant of vector DNA and desired DNA
74. d. Repetitive
75. d. Both a and b
76. d.  $n = 21$  and  $x = 7$
77. a. Nicotine
78. a. May 31
79. d. Undergoing rapid division
80. d. Lymphoma
81. b. Cirrhosis of liver
82. d. Insufficient blood supply to heart muscles
83. c. Carcinoma
84. a. Malignant tumour
85. b. Diabetes mellitus
86. d. Central nervous system
87. c. ii and iii
88. d. All of the above
89. d. i, ii and iii
90. b. Afforestation
91. d. Trees
92. c. Rain fall is high
93. a. Wind power
94. d. Wood and animal dung
95. d. Warming of earth
96. c. Wind energy
97. d. All of these
98. b. The Blades of windmill are operated with the help of electric motor
99. d. Scratch
100. a. Folder
101. a. Script area
102. b. Script editor
103. a. Block palette