

Physics (8/10/21)

1. a) 6.25×10^{18}
2. c) An acceleration of constant magnitude
3. c) Angular momentum
4. a) Perpendicular
5. c) $M^{-1}L^3T^{-2}$
6. d) Quadrupled
7. (a) Temperature
8. c) Newton's 3rd law of motion

9. (d) Electrons
10. c) $W/4$
11. c) 20 cm away from the lens
12. a) Surface tension of the liquid
13. b) $R_s = \frac{R_B}{\sqrt{2}}$
14. c) Length is doubled and radius is halved
15. a) A high resistance in series
16. a) Charles law
17. c) The atmospheric pressure
18. c) $\frac{r_1}{r_2}$
19. c) 8
20. a) Paramagnetic substance
21. b) A varying magnetic field
22. c) Microwaves
23. b) Concave, 7.5 cm
24. b) 10cm
25. b) 500 years

CHEMISTRY (8/10/21)

26. a) 6.023×10^{22}

27. (a) 1
28. b) Maximum
29. b) Covalent bond
30. c) Mass of solvent and mole of solute

31. a) $\alpha \propto \sqrt{\frac{1}{c}}$
32. c) 6
33. (d) third
34. c) Reduction with carbon
35. a) Acetone
36. c) Tritium
37. c) $(CaSO_4)_2 \cdot H_2O$
38. b) sp^3 hybridised


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- 39. b) Lower than its critical temperature
- 40. c) $\Delta H < 0, \Delta S > 0$
- 41. d) Kraft temperature
- 42. b) Hypertonic solution
- 43. b) Chemical energy changes into electrical energy
- 44. b) E_{red} of Zn $<$ E_{red} of iron
- 45. a) Activation energies are higher
- 46. d) $[Ar] 4s^2 3d^7$
- 47. b) The energy required to remove the most loosely bound electron from the gaseous atom
- 48. c) +6
- 49. b) It contains unpaired electrons
- 50. c) Flocculation value

Biology (8/10/21)

- 51. (b) Chiropterophily
- 52. (a) class
- 53. (c) Hydra
- 54. (c) Turnip
- 55. (c) Auxin
- 56. (a) Bile
- 57. (a) Eosinophils
- 58. (c) iris
- 59. (b) layering
- 60. (a) Restriction endonucleases
- 61. (b) DNA Amplification
- 62. (a) gel electrophoresis
- 63. (b) Fusion of one male gamete with egg and the other one with secondary nucleus
- 64. (d) FSH
- 65. (c) Epididymis
- 66. (a) Parturition
- 67. (d) Preventing ovulation
- 68. (b) Intra uterine transfer (IUT)
- 69. (a) Epistatic
- 70. (b) TtXTt
- 71. (c) Down's syndrome
- 72. (a) 3.3×10^9 base pairs
- 73. (c) DNA Ligase
- 74. (c) AUG
- 75. (b) Darwin
- 76. (a) small population
- 77. (a) Active immunity
- 78. (d) T-helper cells
- 79. (c) Outcrossing
- 80. (c) a bacterium
- 81. (d) Bioethics
- 82. (a) Synergids

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- 83.(a) Potato and Tomato
- 84.(c) Tissue culture
- 85. (a) Ciliated columnar epithelium
- 86. (d) Lack Pili
- 87. (b) Glycosidic bond
- 88. (b) Imbibition
- 89. (c) Pyruvic acid
- 90.(b) Breeding of high yielding dwarf wheat varieties
- 91.(C) Vitamin B₁₂ content
- 92. (c) Azolla
- 93. (d) CH₄
- 94. (b) Biotic Potential
- 95.c) Commensalism
- 96. (b) 50%
- 97. (b) Habitat Loss
- 98.(c) Biosphere Reserves
- 99.(c) decreased O₂ content
- 100.b) It traps infrared radiations

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