

ALPHA +1, +2 SCIENCE INTEGRATED HIGHER SECONDARY SCHOOL

SCREENING EXAMINATION FOR HSE 2023-25

Duration : 1 Hr 45 Mins

Maximum Marks : 400

➤ ***PART - 1 to IV***

➤ **OBJECTIVE TYPE**

(Each question carries 4 marks and negative 1 mark for each Wrong Answer)

Total Questions : 100

Total Marks : 400

➤ **SUBJECTS (BASED ON 10th SYLLABUS)**

◆ **Physics - 25 questions**

◆ **Chemistry - 25 questions**

◆ **Mathematics - 25 questions**

◆ **Biology - 25 questions**

Name of Student :

Name of School (studied 10th) :

Syllabus :


Contact Number : 1. Father :

2. Mother :

Date :

Signature of student

**PART - II
PHYSICS**

1. S.I unit of electric current is _____
2. No. of electrons constituting 1 Columb is _____
3. S.I unit of electric charge is _____
4. Symbol of resistor of resistance R is _____
5. Write ohm's law using appropriate symbols
6. Magnetic field lines emerge from _____ pole and merge at _____ pole
7. In India , Frequency of AC is _____ Hz
8. Name device used to produce electric current _____
9. Black insulation wire in our houses (AC Supply) is _____ wire
10. The phenomenon production of induced current in a coil placed in a region where magnetic field changes with time is called _____
11. A compass needle is a small magnet. It's one end, which points towards north is called _____ pole.
12. Far- sightedness is also called _____
13. Human eye can see objects clearly that are between _____ cm and least distance of distinct vision is _____
14. Myopia can be corrected using _____ lens
15. Splithing of white light into its components is called _____
16. Blue colour of sky is due to _____
17. Human eye forms image of an object at its _____
18. SI units of power of a lens is _____
19. Write mirror formula _____
20. Speed of light in vacuum is _____
21. Lateral inversion is a property of _____ mirror
22.  figure represent a _____ mirror (covex/concave)

23. Centre of the reflecting surface of a spherical mirror is called _____
24. Relationship between radius of curvature and focal length (write equation) is _____
25. Power of a lens is +2.0 D means the lens is _____

**PART - II
CHEMISTRY**

26. The reaction of hydrogen gas with oxygen gas to form water is an example of _____ reaction.
27. The chemical formula of lead sulphate is _____
28. Electronic configuration of Al^{3+} is _____
29. Chemically rust is _____
30. The properties of eka-aluminium predicted by Mendeleev are the same as the properties of later discovered element.
31. A metal M is in the first group of the periodic table. What will be the formula of its oxide?
32. An element A belongs to the third period and group 16 of the periodic table. Find the valency of A.
33. Fatty foods become rancid due to the process of _____
34. The group number and period number respectively of an element with atomic number 8 is _____
35. Upto which element, the Law of octaves was found applicable.
36. The concept of grouping elements into triads was given by _____
37. The general formula of alkyne is _____
38. _____ are sweet smelling substances which are used in making perfumes.
39. Halogens belonging to the group....of the periodic table.
40. Amalgam is an alloy of _____
41. Galvanisation is a method of protecting iron from rusting by coating with a thin layer of.....
42. _____ is an allotrope of carbon and is the hardest natural substance.
43. The process in which a carbonate ore is heated strongly in the absence of air to convert it into metal oxide is called _____
44. The most abundant metal in the earth crust is _____

45. Copper objects lose their shine and form green coating of _____
46. Metals which are so soft that they can be cut with a knife are _____ , _____
47. Non-metals are located on the..... side of the periodic table.
48. Name the functional group present in CH_3COCH_3 .
49. A hydrocarbon has for carbon atoms. Give its molecular formula if it is an alkene.
50. Oxidation is a process which involves _____ of oxygen.

PART - III
MATHEMATICS

51. If a cone is cut parallel to the base of it by a plane in two parts, then the shape of the top of the cone will be -----
52. Surface area of sphere = -----
53. Two identical solid cubes of side 'a' are joined end to end. then the total surface area of resulting cuboid is -----
54. Two identical solid hemisphere of equal base radius 'r cm' are struck together along their bases. Then total surface area of the combination -----
55. What is the common difference of AP in which $a_{18} - a_{14} = 32$
56. The sum of 16 terms of an AP 10,6,2, is
57. In an AP if $d = -4$, $n = 7$ and $a_n = 4$ then a is
58. The 10th terms of an AP 5,8,11,14,..... is
59. In ΔABC , right angled at B, $AB = 24$ cm, $BC = 7$ cm Then value of $\tan C$ is
60. $(\sin 30 + \cos 60) - (\sin 60 + \cos 30) =$
61. $2 \tan 30^\circ / (1 + \tan^2 30) =$
62. The value of the expression $\sin^6\theta + \cos^6\theta + 3 \sin^2\theta \cos^2\theta =$
63. If $\sin 2A = 2\sin A$ is true then $A =$ -----
64. The sum of 2 numbers is 27 and product is 182. Then the numbers are -----
65. The roots of $100x^2 - 20x + 1 = 0$ is -----
66. If $1/2$ is a root of the quadratic equation $x^2 - mx - 5/4 = 0$ then m is
67. If one root of equation $4x^2 - 2x + k - 4 = 0$ is reciprocal of the other, the value of k is

68. Class mark of a class is obtained by

69. The mode of the following data is

xi	10	14	18	21	25
fi	10	15	7	9	9

70. The algebraic sum of deviations of a frequency distribution from its mean is

71. Mean of 100 items is 49. It was discovered that 3 items which should have been 60,70,80 were wrongly read as 40,20,50 respectively. The correct mean is

72. If $P(E) = 0.07$, then probability of not E is

73. A bag contains 3 red and 5 green balls. If one ball is drawn from the bag then what is the probability of getting red ball

74. A die is thrown in air. The probability of getting odd number is

75. A card is drawn from the set of 52 cards. Find the probability of getting a queen is

PART - IV BIOLOGY

76. Most of the digestion and absorption of food takes place in

77. Finger like projection in small intestine?

78. Which gland is present in the wall of stomach

79. Equation of photosynthesis

80. What is autotrophic Nutrition ?

81. Name three type of blood vessels?

82. Two conducting system in plants?

83. Oxygenated blood is carried by _____

84. Pulmonary vein carries which type of blood

85. Structural and functional unit of kidney?

86. Name any two human excretory organs other than kidney?

87. _____ is the largest part of brain?

88. Structural and functional unit of nervous system

89. Which are the three regions of brain

90. 3 plant growth regulators?

91. Plant inhibitory hormones?
92. Movement of plants towards sunlight is called
93. Name the hormones secreted by thyroid gland?
94. Deficiency of growth Hormme.
95. Over secrecin of growth Hormme.
96. Full form of DNA
97. Division of Nucleus is called
98. Mode of reproduction in yeast?
99. The male sex hormone is -----
100. The basic structual and functional unit of an organ is -----