



Sample Paper

For Class - X

Time: 90 Min.		TEST PATTERN		Max. Marks: 70	
Total Questions	Subject	Type	Marks Criteria (Total 45 Marks)		
70	Physics (1-10), Chemistry (11-20), Biology (21-30) Mathematics (31-45), Social Science (46-55) Mental Ability (56-65), English (66-70)	Objective Question	Correct (+1) Mark	Incorrect (–0.25) Mark	

1. PHYSICS

Straight Objective

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

1. Image formed in a concave lens is :
(A) Real and of same size. (B) Real and enlarged.
(C) Virtual and diminished. (D) Virtual and enlarged image.
2. The angle of deviation between incident ray & reflected ray , if light strikes to a surface along the normal is
(A) 0° (B) 90° (C) 180° (D) Depends on type of surface.
3. SI unit of potential difference is
(A) Ampere (B) Volt (C) Joule (D) Newton
4. Three resistances of magnitude 2, 3 and 5 ohm are connected in parallel to a battery of 10 volts and of negligible resistance. The potential difference across 3Ω resistance will be
(A) 2 volts (B) 3 volts (C) 5 volts (D) 10 volts
5. 62.5×10^{18} electrons per second are flowing through a wire of area of cross-section 0.1m^2 , the value of current flowing will be
(A) 1 A (B) 0.1 A (C) 10 A (D) 0.11 A
6. The refractive index of water with respect to air is $5/3$ and the refractive index of air with respect to glass is $2/3$. The refractive index of water with respect to glass is
(A) $9/10$ (B) $10/9$ (C) $3/2$ (D) $2/3$
7. If I is the current through a wire and e is the charge of electron, then the number of electrons in the second will be given by :
(A) Ie/t (B) Ite (C) e/It (D) It/e
8. Electrical conductivity is :
(A) To measure of the ability of a substance to resist electric current.
(B) To measure of the ability of a substance to oppose electric current.
(C) To measure of the ability of a substance to carry electric current.
(D) To measure of the ability of a substance to stop electric current.
9. The focal length of a concave mirror is 30cm. Where an object be placed so that its image is erect.
(A) 75 cm (B) 40 cm (C) 20 cm (D) 60 cm
10. Light enter from a medium of RI $5/3$ to a medium of RI $4/3$, what is the value of critical angle for these mediums.
(A) 37° (B) 45° (C) 53° (D) 60°

2. CHEMISTRY

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

11. Neutralization reaction is an example of
(A) Exothermic reaction (B) Endothermic reaction
(C) Oxidation reaction (D) None of these
12. The reaction in which two compounds exchange their ions to form two new compound is
(A) Displacement reaction (B) Decomposition reaction
(C) Addition reaction (D) Double displacement
13. In the reaction $\text{Mg} + \text{Cl}_2 \longrightarrow \text{MgCl}_2$ chlorine may be regarded as
(A) Oxidising agent (B) Reducing agent (C) A catalyst (D) Providing an inert medium
14. Oxidation is a process which involves
(A) Addition of oxygen (B) Removal of hydrogen
(C) Loss of electron (D) All of above

15. Which of the following salts has no water of crystallization?
 (A) Blue vitriol (B) Washing soda (C) Baking soda (D) Gypsum
16. The metals that float when treated with water are:
 (A) Manganese and sodium (B) Sodium and calcium
 (C) Magnesium and sodium (D) Magnesium and calcium
17. Which of the following is the most reactive halogen?
 (A) F (B) Cl (C) Br (D) I
18. Which of the following is the weakest base?
 (A) NaOH (B) NH_4OH (C) KOH (D) $\text{Ca}(\text{OH})_2$
19. Nature of methyl orange is
 (A) Acidic (B) Basic (C) Neutral (D) None of these
20. Which of the following is/are oxide ore(s)?
 (A) Bauxite (B) Cuprite (C) Haematite (D) All of these

3. BIOLOGY

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

21. The dark reaction in photosynthesis is called so because it
 (A) Cannot occur during day time (B) Is light dependent
 (C) Is light independent (D) Occurs rapidly at night
22. For the process of photosynthesis all except one of the following items are essential. Point out the exception
 (A) CO_2 , optimum temperature (B) Glucose and oxygen
 (C) Water and minerals (D) Light and chlorophyll
23. Dental formula of an adult man is
 (A) $\frac{2,1,2,3}{2,1,2,3}$ (B) $\frac{2,1,2,3}{2,1,2,2}$ (C) $\frac{2,1,2,3}{2,1,2,4}$ (D) $\frac{2,1,3,2}{2,1,3,2}$
24. Bilirubin and biliverdin are found in
 (A) Blood (B) Bile (C) Saliva (D) None of these
25. Rate of respiration is directly affected by
 (A) CO_2 concentration (B) O_2 in trachea (C) Concentration of O_2 (D) Diaphragm expansion
26. When CO_2 concentration in blood increases, breathing becomes
 (A) Slow and deep (B) Faster and deeper
 (C) Shallower and slow (D) There is no effect on breathing
27. A respiratory pigment is absent in
 (A) Bird (B) Frog (C) Rabbit (D) Cockroach
28. The basic functional unit of human kidney is
 (A) Henle's loop (B) Nephron (C) Nephridia (D) Pyramid
29. All veins have deoxygenated blood except
 (A) Renal artery (B) Hepatic vein (C) Hepatic portal vein (D) Pulmonary veins
30. Residual air mostly occurs in
 (A) Alveoli (B) Bronchus (C) Nostrils (D) Trachea

4. MATHEMATICS

Straight Objective Type

This section contains 15 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

31. For any two positive integers a and b , there exist unique integer q and r such that $a = bq + r$. If $b = 4$ then which is not the value of r ?
(A) 1 (B) 2 (C) 3 (D) 4
32. If $f(x) = x^3 + px + q$ is divisible by $x^2 + x - 2$, then the remainder when $f(x)$ is divided by $(x + 1)$
(A) 4 (B) 3 (C) -4 (D) 1
33. Which of the following is a trinomial ?
(A) $x^2 + 2x + x$ (B) $3x^3 + 2x^2 - x^2$ (C) $(x + 2)^2 - x^2$ (D) $x^2 + x + 1$
34. Two numbers are in the ratio of 9 : 5. If their LCM is 900, then HCF is :
(A) 30 (B) 20 (C) 15 (D) 60
35. If $abx^2 = (a - b)^2(x + 1)$, then the value of $1 + \frac{4}{x} + \frac{4}{x^2}$ is :
(A) $\left(\frac{a-b}{a+b}\right)^2$ (B) $\left(\frac{a+b}{a-b}\right)^2$ (C) $\left(\frac{a}{a+b}\right)^2$ (D) $\left(\frac{b}{a+b}\right)^2$
36. If 1 is a zero of the polynomial $p(x) = ax^2 - 3(a - 1)x - 1$, then the value of a is
(A) 0 (B) 1 (C) 2 (D) 3
37. Zeroes of which quadratic polynomial are 4 and 3.
(A) $x^2 + 7x + 12$ (B) $x^2 - 7x + 12$ (C) $x^2 + 7x - 12$ (D) $x^2 - 7x - 12$
38. If two zeroes of the polynomial $x^4 + x^3 - 9x^2 - 3x + 18$ are $\sqrt{3}$ and $-\sqrt{3}$, then the other zeroes are
(A) -3, 2 (B) -3, -2 (C) 3, 2 (D) -2, 3
39. If $P(A)$ denotes the probability of an event then:
(A) $P(A) < 0$ (B) $P(A) > 0$ (C) $0 \leq P(A) \leq 1$ (D) $-1 \leq P(A) \leq 0$
40. The probability that a non-leap year selected at random will contain 53 Sundays is:
(A) $\frac{1}{7}$ (B) $\frac{2}{7}$ (C) $\frac{3}{7}$ (D) $\frac{5}{7}$
41. When a die is thrown, the probability of getting an odd number less than 3 is:
(A) $\frac{1}{6}$ (B) $\frac{1}{3}$ (C) $\frac{1}{2}$ (D) 0
42. 5.2463636363..... is
(A) An integer (B) A rational number (C) An irrational (D) None of these
43. The decimal expansion of the rational number $\frac{31}{2^2 \times 5}$ will terminate after
(A) One decimal place (B) Two decimal places
(C) Three decimal places (D) More than three decimal places
44. Raj wanted to type 200 natural numbers, how many times does he have to press the keys
(A) 489 (B) 492 (C) 400 (D) 365
45. If α, β, γ are the zeroes of $x^3 - 5x^2 + 6x - 1$, then value of $\alpha^3 + \beta^3 + \gamma^3 = ?$
(A) 38 (B) -38 (C) 19 (D) -19

5. SOCIAL SCIENCE

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

46. The store-house of minerals in India is
(A) Deccan plateau. (B) Northern plains (C) Himalayan mountains. (D) Thar desert.
47. The land left without cultivation is
(A) gross cropped area (B) fallow land (C) barren land (D) net sown area
48. The state with black soil is
(A) Rajasthan. (B) Gujrat. (C) Bihar. (D) Delhi
49. In Belgium, 40% people living in the Wallonia region speaks
(A) French language (B) German language (C) English language (D) Dutch language
50. Which one of the following latitudinal extent is relevant for the extent of India's area ?
(A) $8^{\circ}41'N - 35^{\circ}7'N$ (B) $8^{\circ}4'N - 35^{\circ}6'N$ (C) $8^{\circ}4'N - 37^{\circ}6'N$ (D) $6^{\circ}45'N - 37^{\circ}6'N$
51. Which one of the following countries is larger in area than India ?
(A) China (B) France (C) Egypt (D) Iran
52. Which one of the following countries shares the longest land frontier with India ?
(A) Bangladesh (B) Pakistan (C) China (D) Myanmar
53. The Anai Mudi is located in the
(A) Western Ghats. (B) Central Highlands. (C) Chotanagpur Plateau. (D) Eastern Ghats.
54. Rajasthan receives scanty rainfall because
(A) it has lot of sanddunes.
(B) it is far away from bay of Bengal.
(C) it is closer to tropic of cancer.
(D) the moisture laden winds from the Arabian sea blows parallel to the Aravallis and hence do not shed their moisture over Rajasthan.
55. The temperature decreases from
(A) east to west. (B) west to north. (C) north to south. (D) south to north.

6. MENTAL ABILITY

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

56. Which name will come at 3rd place in a telephone directory from the following given names:
(A) AMIT (B) AMINA (C) ALOK (D) ABHIMAN
57. If the following scrambled letters are rearranged to form the name of a city, which letter will appear in the middle?
WILGARO
(A) R (B) I (C) L (D) W
58. Find the missing number.
1, 2, 2, 4, 16, ?, 65536
(A) 276 (B) 256 (C) 198 (D) 64
59. In the alphabet series which letter is midway between 22nd letter from the left and 21st letter from the right?
(A) L (B) M (C) O (D) None of these

60. How many pairs of letters in the word BRIGHTER have as many letters between them in the word as in the alphabet series?
(A) 2 (B) 3 (C) 4 (D) more than 4

Directions : (61 to 62) Find the missing term.

61. 6C7, 8F10, 11J14, 15O19, ?
(A) 19U24 (B) 20U25 (C) 19U25 (D) 20U24
62. CGJL, FJMO, IMPR, LPSU, ?
(A) ORUW (B) OSVX (C) JMPR (D) KORS
63. BYCXA, EVFUD, HSIRG, KPLOJ, ?
(A) MNLOL (B) NMOLM (C) QJRIP (D) PKQJO
64. UTRQU, QPNMT, MLJIS, IHFER, ?
(A) EDCAQ (B) EDBAQ (C) IHFGP (D) KJHGP
65. ?, DBGI, ZXCE, VTYA, RPUW
(A) HFMK (B) JMO (C) HFKM (D) QTOQ

7. ENGLISH

Straight Objective Type

This section contains 05 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

Fill in the blanks with the correct answer selecting from the given options.

66. Ludhiana on the bank of the Sutlaj.
(A) stand (B) stands (C) stood (D) standing
67. When the siren goes off, he at this machine for four hours at a stretch.
(A) will be working (B) will have been working
(C) will work (D) was working
68. At the foot of the mountain two enormous vineyards, both owned by the same woman.
(A) is (B) are (C) was (D) were
69. Here the papers you required.
(A) is (B) are (C) was (D) were
70. You can give me pen you can spare.
(A) any (B) some (C) few (D) little

CLASS : X
STAR SAMPLE PAPER

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	C	C	B	D	C	B	D	C	C	C	A	D	A	D	C
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	D	A	B	B	D	B	B	B	A	B	C	A	D	C	C
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	D	A	D	B	B	B	B	A	C	A	A	B	B	B	A
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	A	B	B	A	C	A	A	A	D	D	B	C	B	D	B
Ques.	61	62	63	64	65	66	67	68	69	70					
Ans.	B	B	B	B	C	B	B	D	B	A					