



ATOMIC ENERGY CENTRAL SCHOOL - 5, MUMBAI
MCQ TEST, JUNE 2024

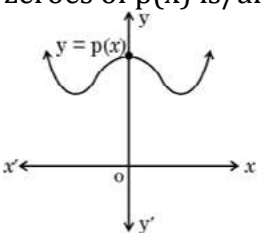
CLASS: X

Time Allowed : 2 Hrs.

Maximum Marks : 100

Section A - English		
1	“For months they had barely kept themselves alive.” This means that: a. They had no desire to live b. They were weak willed c. They had great difficulties during the war d. They were lazy	[1]
2	The boys had kept alive by : a. Eating a lot b. Begging for work and alms c. Building a house of the rubble d. Taking people for sightseeing and looting them	[1]
3	The above reflects on the qualities of boys like: a. Diligence b. Perseverance c. Compassion d. Determination	[1]
4	“They had always known a comfortable and cultured life.” Identify ‘they’: a. The narrator and his friend b. Nicolo and Jacopo c. Some tourists d. The guide at Juliet’s tomb	[1]
5	By ‘comfortable life’ means: a. Inherited money b. Lot of salary c. Parents were reasonably well off d. Parents were musicians	[1]
6	What kind of reaction did the animals display to the frog’s songs? a. They hated it b. They adored it c. They ignored it d. They tried to improve it	[1]
7	Why were the creatures of the Bog dumbstruck? a. The frog sang very well b. The nightingale sang melodiously c. The moon shone brightly d. All the animals came to the same place	[1]
8	What did the frog claim to be? a. A publisher b. A king of the bog c. A writer d. The owner of the sumac tree	[1]
9	Who was Mozart? a. A famous artist b. A famous singer and musician c. Writer of ‘Bog Trumpet’ d. Owner of the tree	[1]
10	‘you must aim for better billings’ the poetic device used here is: a. Alliteration b. Simile c. Metaphor d. Onomatopoeia	[1]
11	What caused the death of the nightingale ? a. She was unhappy b. Her throat got choked c. A vein burst by too much exhaustion d. She had a high fever	[1]
12	_____ man that we saw turned out to be thief. a. A b. The c. That d. This	[1]
13	There isn’t _____ cash left with us. a. Some b. so c. More d. much	[1]
Section B - Hindi		
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Section C - Mathematics		
26	_____ is neither prime nor composite. a) 4 b) 1 c) 2 d) 3	[1]
27	The sum of the exponents of the prime factors in the prime factorisation of 196, is a) 5 b) 3 c) 4 d) 2	[1]
28	If a is rational and \sqrt{b} is irrational, then $a + \sqrt{b}$ is: a) an irrational number b) an integer c) a natural number d) a rational number	[1]
29	The number $(5 - 3\sqrt{5} + \sqrt{5})$ is: a) an integer b) an irrational number c) a whole number d) a rational number	[1]
30	The LCM and HCF of two rational numbers are equal, then the numbers must be a) equal b) prime c) co - prime d) composite	[1]
31	According to the Fundamental Theorem of Arithmetic, if p (a prime number) divides b^2 and b is positive, then _____. a) p divides b b) b divides p c) p^2 divides b d) b^2 divides p	[1]
32	(HCF \times LCM) for the numbers 70 and 40 is: a) 280 b) 2800 c) 10 d) 70	[1]
33	If 3 is the least prime factor of number 'a' and 7 is the least prime factor of number 'b', then the least prime factor of a + b, is a) 3 b) 10 c) 5 d) 2	[1]
34	If $n = 2^3 \times 3^4 \times 5^4 \times 7$, then the number of consecutive zeros in n, where n is a natural number, is a) 2 b) 3 c) 7 d) 4	[1]
35	LCM of $(2^3 \times 3 \times 5)$ and $(2^4 \times 5 \times 7)$ is a) 560 b) 1120 c) 1680 d) 40	[1]
36	A quadratic polynomial the sum and product of whose zeroes are - 3 and 2 respectively, is: a) $x^2 + 3x - 2$ b) $x^2 - 3x - 2$ c) $x^2 - 3x + 2$ d) $x^2 + 3x + 2$	[1]
37	If α, β are the zeros of $kx^2 - 2x + 3k$ such that $\alpha + \beta = \alpha\beta$ then $k = ?$ a) $\frac{-1}{3}$ b) $\frac{1}{3}$ c) $\frac{2}{3}$ d) $\frac{7}{2}$	[1]
38	If one root of the polynomial $p(y) = 5y^2 + 13y + m$ is reciprocal of other, then the value of m is a) 6 b) $\frac{1}{5}$ c) 5 d) 0	[1]

	Which of the following is a polynomial? i. $x^2 - 5x + 4\sqrt{x} + 3$ ii. $x^{3/2} - x + x^{1/2} + 1$ iii. $\sqrt{x} + \frac{1}{\sqrt{x}}$ iv. $\sqrt{2}x^2 - 3\sqrt{3}x + \sqrt{6}$	
39	a) Option (iv) b) Option (ii) c) Option (i) d) Option (iii)	[1]
40	If α, β are zeroes of the polynomial $x^2 - 1$, then value of $(\alpha + \beta)$ is: a) 0 b) 1 c) - 1 d) 2	[1]
41	If p, q are the zeroes of the polynomial $f(x) = x^2 + k(x - 1) - c$, then $(p - 1)(q - 1)$ is equal to _____. a) c b) c - 1 c) 1 - c d) 1 + c	[1]
42	A quadratic polynomial whose sum and product of zeroes are 2 and - 1 respectively is: a) $x^2 + 2x + 1$ b) $x^2 - 2x - 1$ c) $x^2 + 2x - 1$ d) $x^2 - 2x + 1$	[1]
43	The zeroes of the quadratic polynomial $x^2 + kx + k, k \neq 0$, a) cannot be both negative b) cannot be both positive c) are always equal d) are always unequal	[1]
44	What should be added to the polynomial $x^2 - 5x + 4$, so that 3 is the zero of the resulting polynomial? a) 4 b) 2 c) 5 d) 1	[1]
45	Which of the following is a quadratic polynomial having zeroes $-\frac{2}{3}$ and $\frac{2}{3}$? a) $4x^2 - 9$ b) $\frac{4}{9}(9x^2 + 4)$ c) $5(9x^2 - 4)$ d) $x^2 + \frac{9}{4}$	[1]
46	If α, β are the zeros of the polynomial $f(x) = x^2 + x + 1$, then $\frac{1}{\alpha} + \frac{1}{\beta} =$ a) - 1 b) 1 c) 2 d) 0	[1]
47	If one zero of the polynomial $6x^2 + 37x - (k - 2)$ is reciprocal of the other, then what is the value of k? a) 6 b) - 4 c) - 6 d) 4	[1]
48	If the zeroes of the quadratic polynomial $x^2 + (a + 1)x + b$ are 2 and -3, then a) $a = 0, b = -6$ b) $a = 5, b = -1$ c) $a = -7, b = -1$ d) $a = 2, b = -6$	[1]
49	The graph of $y = p(x)$ is shown in the figure for some polynomial $p(x)$. The number of zeroes of $p(x)$ is/are: 	[1]
50	The zeroes of the polynomial $p(x) = x^2 + 4x + 3$ are given by: a) - 1, 3 b) 1, - 3 c) 1, 3 d) - 1, - 3	[1]
Section D - Science		
51	Which of the reaction is used in black and white photography? a) Combination reaction b) Decomposition reaction c) Displacement reaction d) Oxidation reaction	[1]
52	Choose a displacement reaction: a) Burning of metals b) Addition of more active metal to a solution of a less active metal compound. c) Extraction of metals d) Electrolysis	[1]

53	In the double displacement reaction between aqueous potassium iodide and aqueous lead nitrate, a yellow precipitate of lead iodide is formed. While performing the activity if lead nitrate is not available, which of the following can be used in place of lead nitrate? a) Ammonium nitrate b) Potassium sulphate c) Lead acetate d) Lead sulphate (insoluble)	[1]
54	The pale green colour of the solution after half an hour when iron nails are dipped in copper sulphate solution is due to the formation of a) FeS b) FeS ₂ c) FeSO ₃ d) FeSO ₄	[1]
55	The reaction between calcium oxide and water is: a) Displacement reaction b) Decomposition reaction c) Combination reaction d) Double - decomposition reaction	[1]
56	A small amount of a light green coloured compound X is heated in a test tube. In the beginning, it loses some water and then gas(es) Z with a suffocating smell come(s) out. The vapours of gas(es) are collected and dissolved in water. The solution turns blue litmus red. The residue Y left in the test tube turns reddish brown. X, Y and Z could be respectively a) PbSO ₄ , Pb ₂ O ₃ and SO ₃ b) FeSO ₄ · 7H ₂ O, Fe ₂ O ₃ and SO ₂ , SO ₃ c) Pb(NO ₃) ₂ , PbO ₂ and NO ₂ , N ₂ O ₄ d) Na ₂ SO ₄ · 10H ₂ O, Na ₂ SO ₄ and SO ₂	[1]
57	Keeping food in air - tight containers helps to slow down: a) Decomposition reaction b) Reduction c) Redox reaction d) Oxidation	[1]
58	Which of the following is an exothermic reaction? a) Reactants + heat → Products b) Reactants - heat → Products c) Reactants → Products - heat d) Reactants → Products + heat	[1]
59	The reaction between barium chloride and sodium sulphate is called Double Decomposition reaction because: a) the reactants interchange their ions to form two new compounds b) All of these c) a precipitate is formed d) two new compounds are formed	[1]
60	When iodine was added to a particular vegetable that had been crushed into a paste, blue - black colour was obtained. This indicates the presence of a) protein b) glucose c) starch d) sugar	[1]
61	During deficiency of oxygen in tissues of human beings, pyruvic acid is converted into lactic acid in the a) Golgi body b) Mitochondria c) Chloroplast d) Cytoplasm	[1]
62	Opening and closing of stomata is due to a) Movement of water in and out of the guard cells. b) Stimulus of light in the guard cells. c) Diffusion of CO ₂ in and out of the guard cells. d) High pressure of gases inside the cells.	[1]
63	Cramps are caused by heavy exercise resulting in the accumulation of a) Heat b) Ethanol c) Carbon dioxide d) Lactic acid	[1]
64	Each nephron has a cup shaped upper end called _____, which contains a _____. a) Bowman's capsule, Glomerulus b) Bowman's capsule, Ampulla c) Capillaries, Bowman's capsule d) Ampulla, Glomerulus	[1]
65	Which component of blood transports, carbon dioxide, and nitrogenous wastes in dissolved form? a) RBC b) Plasma c) Platelets d) WBC	[1]

66	The internal (cellular) energy reserve in autotrophs is a) Glycogen b) Starch c) Protein d) Fatty acid	[1]
67	In the experiment to show that carbon dioxide is released during respiration the small test tube of KOH solution is suspended inside the conical flask to absorb the: a) Oxygen of the flask. b) Moisture of the flask. c) Air of the flask. d) Carbon dioxide of the flask released by the seeds.	[1]
68	If R is the radius of curvature of a spherical mirror and f is its focal length then: a) $R = f$ b) $R = \frac{f}{2}$ c) $R = 3f$ d) $R = 2f$	[1]
69	In torches, search lights and head lights of vehicles, the bulb is placed : a) At the centre of curvature b) Very near to the focus c) Between the pole and the focus d) Between the focus and the centre of curvature	[1]
70	The refractive index of water with respect to air is $\frac{4}{3}$. The refractive index of air with respect to water will be: a) 0.50 b) 0.75 c) 0.25 d) 1.75	[1]
71	The angle of incidence for a ray of light passing through the centre of curvature of a concave mirror is: a) 45 degree b) 90 degree c) 180 degree d) 0 degree	[1]
72	You are given water, mustard oil, glycerine and kerosene. In which of these media a ray of light incident obliquely at same angle would bend the most? a) Glycerine b) Kerosene c) Water d) Mustard oil	[1]
73	As the incident angle is increased for a given pair of the medium, the refraction angle will a) decrease b) remains same c) zero d) increase	[1]
74	Four optical media W, X, Y and Z have optical densities 1.35, 1.21, 1.58 and 1.002 respectively. In which optical medium will the light travel fastest? a) W b) Y c) Z d) X	[1]
75	With an increase in the thickness glass slab the lateral displacement: a) remains same b) increases c) decreases d) zero	[1]
Section E – Social Science		
76	In which part of SriLanka are the SriLankan Tamils concentrated? a) North and East b) South and East c) South and West d) North and West	
77	Name the headquarters of the European Union. a) Brussels b) Amsterdam c) London d) Germany	
78	Which two languages among the following are prominently spoken by Belgium Nationals? a) Russian and French b) French and English c) Dutch and French d) Russian and Dutch	
79	Under which of the following is power shared in the Community Government of Belgium? a) Different social groups b) State government and Community government c) Central and State government d) Different organs of government	
80	Suppose in country A, 2 million children were born in 2017 and 80,000 died before the age of one? Then, What is the infant mortality rate of country A? a) 30 b) 60 c) 80 d) 40	
81	Which one of the following organizations prepares the World Development Report ? a) World Bank b) International Monetary Fund c) World Health Organisation d) International Labour Organisation	
82	According to 2011 census which of the following state has highest literacy rate (%)? a) Haryana b) J&K c) Kerala d) Bihar	
83	Which of the following revolutions is called as the first expression of Nationalism? a) French Revolution b) Glorious Revolution	

