

MULTIPLE CHOICE QUESTION EXAMINATION - 4 (31.10.2023)

Time Allowed : 3 hours

CLASS : IX

Maximum Marks : 120

Attempt all questions.

Section A - Mathematics		
1	If $x = \frac{\sqrt{7}}{5}$ and $\frac{5}{x} = p\sqrt{7}$ then the value of p is a) $\frac{15}{7}$ b) $\frac{25}{7}$ c) $\frac{7}{15}$ d) $\frac{7}{25}$	[1]
2	$\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$ is equal to a) 8 b) 2 c) 4 d) $\sqrt{2}$	[1]
3	$(125)^{-1/3} = ?$ a) $-\frac{1}{5}$ b) - 5 c) $\frac{1}{5}$ d) 5	[1]
4	If $x - 2$ is a factor of $x^2 + 3ax - 2a$, then a = a) 1 b) - 1 c) 2 d) - 2	[1]
5	The value of $(\sqrt{x} + \sqrt{y})(\sqrt{x} - \sqrt{y})(x + y)(x^2 + y^2)$ is a) $(x^4 + y^4)$ b) $(x^4 - y^4)$ c) $(x + y)^4$ d) $(x - y)^4$	[1]
6	The value of $x^3 - 8y^3 - 36xy - 216$, when $x = 2y + 6$ is a) 0 b) 3 c) 1 d) 2	[1]
7	$\sqrt{2}$ is a polynomial of degree a) 0 b) 1 c) $\sqrt{2}$ d) 2	[1]
8	The points (other than the origin) for which the abscissa is equal to the ordinate lie in a) quadrants I and III b) quadrant I only c) quadrant III only d) quadrants II and IV	[1]
9	The point whose ordinate is 6 and which point lies on the y - axis? a) (0, 6) b) (6, 6) c) (6, 0) d) none of these	[1]
10	The point whose abscissa and ordinate have different signs will lie in a) II and III quadrants b) I and II quadrants c) II and IV quadrant d) I and III quadrants	[1]
11	The line represented by the equation $x + y = 16$ passes	[1]

	through (2, 14). How many more lines pass through the point (2, 14) a) 10 b) 2 c) many d) 100	
12	Which of the following points lie on the line $y = 3x - 4$? a) (2, 2) b) (4, 12) c) (5, 15) d) (3, 9)	[1]
13	The value of k if $x = 3$ and $y = -2$ is a solution of the equation $2x - 13y = k$ is a) 31 b) 23 c) 32 d) 30	[1]
14	Which of the following needs a proof? a) Postulate b) Axiom c) Theorem d) Definition	[1]
15	The basic facts which are taken for granted, without proof, are called a) theorems b) axioms c) propositions d) lemmas	[1]
16	A polygon is a closed figure made up of a) three line segments only b) two line segments c) three or more line segments d) none of these	[1]
17	Two straight lines AB and CD intersect one another at the point O . If $\angle AOC + \angle COB + \angle BOD = 274^\circ$, then $\angle AOD =$ a) 86° b) 137° c) 94° d) 90°	[1]
18	The number of line segments determined by three given non - collinear points is: a) infinitely many b) two c) three d) four	[1]
19	An angle is one - fifth of its supplement. The measure of the angle is : - a) 15° b) 75° c) 150° d) 30°	[1]
20	Two complementary angles are such that twice the measure of the one is equal to three times the measure of the other. The larger of the two measures. a) 54° b) 63° c) 72° d) 36°	[1]
21	In an isosceles triangle, if the vertex angle is twice the sum of the base angles, then the measure of vertex angle of the triangle is a) 100° b) 130° c) 110° d) 120°	[1]
22	The side BC of $\triangle ABC$ is produced to a point D . The bisector of $\angle A$ meets side BC in L . If $\angle ABC = 30^\circ$ and $\angle ACD = 115^\circ$, then $\angle ALC =$	[1]

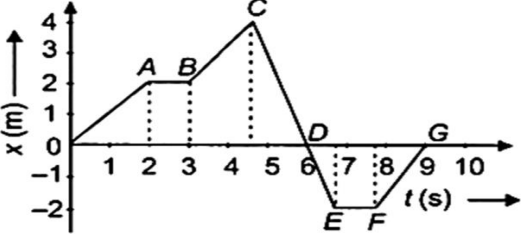
	a) 85° b) $72\frac{1}{2}^\circ$ c) 145° d) None of these	
23	If two acute angles of a right triangle are equal, then each acute is equal to a) 45° b) 60° c) 30° d) 90°	[1]
24	PQR is a right - angled triangle in which $\angle P = 90^\circ$ and $PQ = PR$. What is the value of $\angle Q$ and $\angle R$ a) $45^\circ, 45^\circ$ b) $30^\circ, 60^\circ$ c) $40^\circ, 50^\circ$ d) $20^\circ, 60^\circ$	[1]
25	In triangles ABC and PQR, $AB = AC, \angle C = \angle P$ and $\angle B = \angle Q$. The two triangles are a) isosceles but not congruent b) isosceles and congruent c) congruent but not isosceles d) neither congruent nor isosceles	[1]
26	In Triangle ABC which is right angled at B. Given that $AB = 9\text{cm}$, $AC = 15\text{cm}$ and D, E are the mid - points of the sides AB and AC respectively. Find the length of BC? a) 13cm b) 13.5cm c) 12cm d) 15cm	[1]
27	The figure forms by joining the mid - points of the sides of a Rhombus, taken in order are: a) Rhombus b) Rectangle c) Triangle d) Parallelogram	[1]
28	A diagonal of a Rectangle is inclined to one side of the rectangle at an angle of 25° . The Acute Angle between the diagonals is : a) 115° b) 40° c) 50° d) 25°	[1]
29	If APB and CQD are 2 parallel lines, then the bisectors of the angles APQ, BPQ, CQP and PQD form, square only if a) Diagonals of ABCD are equal b) ABCD is a Rhombus c) Diagonals of ABCD are unequal d) None of these	[1]
30	In a parallelogram ABCD, if $\angle DAB = 75^\circ$ and $\angle DBC = 60^\circ$, then $\angle BDC =$ a) 75° b) 65° c) 45° d) 50°	[1]
31	A diagonal of a rectangle is inclined to one side of the rectangle at 35° . The acute angle between the diagonals is a) 55° b) 45° c) 50° d) 70°	[1]
32	The lengths of the diagonals of a rhombus are 16 cm and 12 cm. The length of each side of the rhombus is a) 9 cm b) 12 cm c) 8 cm d) 10 cm	[1]

33	If a chord of a circle is equal to its radius, then the angle subtended by this chord in major segment is a) 30° b) 90° c) 45° d) 60°	[1]
34	ABC is a triangle with B as right angle, AC = 5 cm and AB = 4 cm. A circle is drawn with A as centre and AC as radius. The length of the chord of this circle passing through C and B is a) 5 cm b) 3 cm c) 4 cm d) 6 cm	[1]
35	A chord of length 14 cm is at a distance of 6 cm from the centre of a circle. The length of another chord at a distance of 2 cm from the centre of the circle is a) 12 cm b) 16 cm c) 14 cm d) 18 cm	[1]
36	The area of an isosceles right angled triangle of equal side 30 cm, is given as a) 45 cm^2 b) 900 cm^2 c) 450 cm^2 d) $225\sqrt{3} \text{ cm}^2$	[1]
37	If the area of an isosceles right triangle is 8 cm^2 , what is the perimeter of the triangle? a) $8 + 4\sqrt{2} \text{ cm}^2$ b) $8 + \sqrt{2} \text{ cm}^2$ c) $12\sqrt{2} \text{ cm}^2$ d) $4 + 8\sqrt{2} \text{ cm}^2$	[1]
38	The sides of a triangle are 325 m, 300 m and 125 m. Its area is a) 48750 m^2 b) 18750 m^2 c) 97500 m^2 d) 37500 m^2	[1]
39	The length of each side of an equilateral triangle of area $4\sqrt{3} \text{ cm}^2$, is a) 4cm b) 3 cm c) 5 cm d) 6 cm	[1]
40	An isosceles right triangle has area 8 cm^2 . The length of its hypotenuse is a) $\sqrt{32} \text{ cm}$ b) $\sqrt{24} \text{ cm}$ c) $\sqrt{16} \text{ cm}$ d) $\sqrt{48} \text{ cm}$	[1]
Section B - Science		
41	On the basis of composition, matter is classified as a) Metal, non metal and metalloid b) Solution, suspension and colloid c) Element, metal and compound d) Element, compound and mixture	[1]
42	When water boils its temperature a) keeps on increasing as long as heating is continued. b) may decrease or increase depending on the place	[1]

	<p>where the experiment is being carried out. c) remains constant d) keeps decreases then increases.</p>	
43	<p>The process of a gas changing directly into a solid is known as: a) Freezing b) Condensation c) Sublimation d) Deposition</p>	[1]
44	<p>Which of the following statements are correct?</p> <ol style="list-style-type: none"> 1. Temperature changes during the change of a state. 2. Dry ice gets converted directly into gaseous state under normal atmospheric conditions. 3. Higher boiling point of liquid indicates weaker intermolecular forces. 4. Latent heat of vapourisation is generally higher than the latent heat of fusion for a substance. <p>a) 2 and 3 only b) 1 and 4 only c) 2 and 4 only d) 3 and 4 only</p>	[1]
45	<p>Which of the following settles down when allowed to stand undisturbed doe sometimes? a) Copper sulphate solution b) Blood c) Muddy water d) Solution of egg albumin in water</p>	[1]
46	<p>Tincture of iodine has antiseptic properties. This solution is made by dissolving a) iodine in Vaseline b) iodine in potassium iodide c) iodine in water d) iodine in alcohol</p>	[1]
47	<p>Which type of solution is formed when sand and water are mixed thoroughly and then kept undisturbed for some time? a) True solution b) Mixture c) Colloidal d) Suspension</p>	[1]
48	<p>Which one of the following will result in the formation of a mixture? a) Breaking of ice cubes into small pieces b) Adding sodium metal to water c) Agitating a detergent with water in a washing machine d) Crushing of a marble tile into small particles</p>	[1]
49	<p>Which of the following elements are present in Quick lime?</p>	[1]

	<p>1. Calcium, Oxygen 2. Sodium, Hydrogen, Oxygen 3. Calcium, Bromine 4. Calcium chloride</p> <p>a) (2) b) (4) c) (3) d) (1)</p>	
50	<p>An element X is divalent and another element Y is tetravalent. The compound formed by these two elements will be:</p> <p>(a) XY (b) XY₂ (c) X₂Y (d) XY₄</p>	[1]
51	<p>What is the chemical formula of sodium carbonate?</p> <p>(a) Na₂CO₃ (b) NaHCO₃ (c) NaCO₃ (d) Na₂HCO₃</p>	[1]
52	<p>A change in the physical state can be brought about</p> <p>a) when energy is either given to, or taken out from the system b) without any energy change c) only when energy is taken out from the system d) only when energy is given to the system</p>	[1]
53	<p>Which of the following statements are incorrect?</p> <p>i. Dichromate ion is a divalent and positive ion. ii. Barium ion is trivalent and positive. iii. Solid sulphur is a polyatomic molecule. iv. Ammonium ion is divalent and positive.</p> <p>a) i, ii and iv only b) i, ii and iii only c) iii and iv only d) i and ii only</p>	[1]
54	<p>Which of the following statements is incorrect regarding endoplasmic reticulum?</p> <p>a) None of these b) SER helps in detoxification in the liver of vertebrates. c) ER helps in the transport of materials from one part of the cell to another. d) RER helps in the synthesis of proteins.</p>	[1]
55	<p>The most abundant material on the plant cell wall is:</p> <p>a) proteins b) lipids c) wax d) cellulose</p>	[1]
56	<p>Lysosomes are formed by:</p> <p>a) SER b) Golgi apparatus c) Plasma membrane d) RER</p>	[1]
57	<p>Chromosomes are made up of</p>	[1]

	a) RNA b) DNA c) DNA and protein d) Protein	
58	Most of the substances in the living world are transported across the cell membrane by the process of: a) osmosis b) diffusion c) endocytosis d) plasmolysis	[1]
59	The major function of the Golgi apparatus is: a) secretion b) detoxification c) fermentation d) translocation	[1]
60	Lysosomes are the reservoirs of: a) steroid hormones b) glycogen c) digestive enzymes d) oxidising enzymes	[1]
61	Which of the following tissues has dead cells? a) Collenchyma b) Epithelial tissue c) Parenchyma d) Sclerenchyma	[1]
62	Nerve cell does not contain: a) Axon b) Nerve endings c) Tendons d) Dendrites	[1]
63	The extremely thin and flat cells forming a delicate lining in the lung alveoli constitute a) stratified squamous epithelium b) simple squamous epithelium c) ciliated epithelium d) simple cuboidal epithelium	[1]
64	Roshini is making a temporary mount of onion peel. What precautions should be taken to avoid the entry of air bubbles in the slide? a) Coverslip should be gently dropped over the peel b) Peel should be immersed in stain for over an hour c) Peel should be allowed to fold over itself once or twice d) Coverslip should be dropped on to the peel from a certain height	[1]
65	_____ in the cell wall of cork/bark makes it impervious to water. a) Cellulose b) Lignin c) Suberin d) Pectin	[1]
66	The epithelium is separated from the underlying connective tissue by a) thick deposition of fat b) mucosa c) vesicles d) basement membrane	[1]

67	<p>A nail is inserted in the trunk of a tree at a height of 1 metre from the ground level. After 3 years the nail will</p> <p>a) move downwards b) remain at the same position c) move sideways d) move upwards</p>	[1]
68	<p>Which of the following is a correct statement?</p> <ol style="list-style-type: none"> Distance is the magnitude of displacement in all cases. When a body moves with uniform speed, then the average speed is same as instantaneous speed. Average speed is greater than the average velocity if a body is moving in a straight line without reversing its direction. When a body moves with constant velocity, the average velocity is zero. <p>a) Statement (1) is correct. b) Statement (4) is correct. c) Statement (3) is correct. d) Statement (2) is correct.</p>	[1]
69	<p>After jumping out from the plane, a parachutist falls 80 m without friction. When he opens up the parachute, he decelerates at 2 m s^{-2}. He reaches the ground with a speed of 4 m s^{-1}. How long did the parachutist spend his time in the air? (Take $g = 10 \text{ m s}^{-2}$)</p> <p>a) 18 s b) 16 s c) 4 s d) 22 s</p>	[1]
70	<p>A dancer is demonstrating dance steps along a straight line. The position - time graph of the dancer is given here.</p>  <p>The average velocity of the dancer during time interval $t = 2 \text{ s}$ to $t = 9 \text{ s}$ is</p> <p>a) 2.75 m s^{-1} b) -0.29 m s^{-1} c) -0.57 m s^{-1} d) 1 m s^{-1}</p>	[1]
71	<p>A 20 kg gun fires a bullet of mass 20 g with a velocity of 400 m/s. The action on the shoulder of the person per second by the gun is:</p> <p>a) 8000 N b) 8 N c) 4000 N d) 4 N</p>	[1]
72	<p>The acceleration of a body has to be doubled without any</p>	[1]

	change in force. Then one has to a) decrease the mass to half b) increase the mass by half c) double the mass d) cannot be made	
73	While catching a stone thrown by your friend you pull the hands back to a) avoid the breaking of the stone b) avoid getting hurt c) increase the time to slow down d) decrease the time to slow down	[1]
74	The gravitational force between two masses kept at a certain distance is p N. The same two masses are now kept in water and the distance between them is kept same. The gravitational force between these two masses in water is q N. Then a) $p > q$ b) $p < q$ c) $p = q$ d) None of these	[1]
75	Two bodies, one held 1 m vertically above the other, are released simultaneously and fall freely under gravity. After 2 second, the relative separation of the bodies will be a) 4.9 m b) 19.6 m c) 9.8 m d) 1 m	[1]
76	Two objects of different masses falling freely near the surface of the moon would a) Have different acceleration b) Have same velocities at any instant c) Undergo a change in their inertia d) Experience forces of same magnitude	[1]
77	A boy is whirling a stone tied with a string in a horizontal circular path the string breaks, the stone a) Will continue to move in the circular path b) Will move along a straight line towards the centre of the circular path c) Will move along a straight line perpendicular to the circular path away from the boy. d) Will move along a straight line tangential to the circular path	[1]
78	If we want to determine the volume of a solid by immersing it in water, the solid should be	[1]

	a) heavier than water and insoluble in it b) lighter than water c) heavier than water d) insoluble in water	
79	The weight of an object at the center of the earth of radius R is a) $\frac{1}{R^2}$ times the weight at surface of the earth b) Zero c) Infinite d) R times the weight at the surface of the earth	[1]
80	A ball is thrown up and attains a maximum height of 100 m. It is thrown upwards with a speed of a) 9.8 ms^{-1} b) 19.69 ms^{-1} c) 98 ms^{-1} d) 44.2 ms^{-1}	[1]
Section C - Social Science		
81	Which group opened their minds to the need for change? a) Kulaks b) Radicals c) Conservatives d) Liberals	[1]
82	Bolsheviks were also called as? a) Feudals b) Social Revolutionaries c) Peasants d) Social Democrats	[1]
83	The event, 'Bloody Sunday' was later on called: a) 1905 Revolution b) 1917 February Revolution c) 1917 October Revolution d) 1917 Revolution	[1]
84	Who in France, wanted the government to encourage cooperatives and replace capitalist enterprises? a) Robert Owen b) Louis Blanc c) Rousseau d) Karl Marx	[1]
85	Who were kulaks? a) Businessmen of Russia b) Philosophers of Russia c) Women of Russia d) Well to - do farmers of Russia	[1]
86	The Jadidists were those who: a) Followed Judaism b) Formed a socialist party c) Were social democrats d) Were Muslim reformers in Russia	[1]
87	What does the word Soviet mean? a) Governing council b) Security police c) Duma d) An autonomous organisation of Russia	[1]
88	Which demands of the following were not included in April Theses of Lenin? a) Formation of Duma b) Transfer of land to peasants	[1]

	c) End of World War - I d) Nationalization of banks	
89	Who was the writer of the books The Communist Manifesto and Das Capital? a) Rasputin b) Karl Marx c) Julius Martov d) Vladimir Lenin	[1]
90	Which of the following refers to women's right to vote? a) Suffragette b) Jadidist c) April Theses d) Universal suffrage	[1]
91	Who is known as the Father of Communism? a) Father Gapon b) Robert Owen c) Lenin d) Karl Marx	[1]
92	What was the name of the Russian Parliament? a) Reichstag b) City hall c) National Guard d) Duma	[1]
93	Who was the emperor of Russia at the start of the First World War? a) Carl Marx b) Tsar Nicholas II c) Valdimir Lenin d) Louis XVI	[1]
94	Which of the following group of people are prone to food Insecurity? i. SC ii. ST iii. OBC iv. Landless a) Only iii b) Only i and iii c) All of these d) Only i and ii	[1]
95	The poorest states in India are i. Orissa ii. Bihar iii. Punjab iv. Haryana a) (i) and (ii) b) (i) and (iv) c) (ii) and (iii) d) All of these	[1]
96	Which of the following are the components of human poverty? i. Education ii. Health iii. Shelter a) Only (ii) and (iii) b) Only (i) and (iii) c) All of these d) Only (i) and (ii)	[1]
97	Which of the following social group has not seen a decline in poverty ratio? a) Scheduled Caste b) Backward Class c) Urban Casual Laborers d) Scheduled Tribes	[1]
98	In which region of the world poverty has risen up? a) Asia b) Europe c) Sub Saharan Africa d) None of these	[1]
99	What is MNREGA? a) Marginal National Rural Employment Guarantee Act. b) Mahatama Gandhi National Rural Employment	[1]

	Guarantee Action. c) Marginal Natural Rural Employment Guarantee Act. d) Mahatama Gandhi National Rural Employment Guarantee Act.	
100	Which of the following state has focused more on human resource development? a) Madhya Pradesh b) Kerala c) Uttar Pradesh d) Orissa	[1]
101	Which of the following state has the lowest poverty rate? a) Madhya Pradesh b) Jammu and Kashmir c) Goa d) Orissa	[1]
102	What is NSSO? a) Nation's Sample Survey Organisation b) National Sarva Siksha Organisation c) National Sample Survey Organisation d) National Statistics Survey Organisation	[1]
103	Which of the following yojna provide additional central assistance to states for basic services such as primary education, health, etc.? a) PMGY b) AAY c) SGSY d) NREGA	[1]
104	For how many days NREGA provide employment? a) 100 b) 90 c) 70 d) 80	[1]
105	Which of the following group is not a vulnerable group to poverty? a) Scheduled Tribes b) Urban casual labourers c) Rural agriculturalist d) Upper Caste	[1]
106	Which of the following states has shown a significant decline in poverty ratio ? a) Punjab and Haryana b) Kerala and Andhra Pradesh c) Punjab and Bihar d) Orissa and Bihar	[1]
107	Which of the following has the power to bring No - confidence motion ? a) Rajya Sabha b) Lok Sabha c) Opposition d) Lok Sabha and Rajya Sabha	[1]
108	Which one among the following is not an important power of the President of India? i. The President is the Chairperson of the Planning Commission.	[1]

