

## SAMPLE PAPER

Class: IX Time allowed: 2 hours Maximum Marks: 340

## Please read the instructions in Question Booklet before answering the question paper.

## **INSTRUCTIONS**

- 01. The question paper has **'10'** printed pages. Please ensure that the copy of the question paper you have received contains all pages.
- 02. Before starting the paper, fill up the required details in the blank space provided in the answer sheet.
- 03. Write your name and Seven digit **Reg. No.** in the space provided at the top of this booklet.
- 04. The question paper consists of **'85'** objective type questions. Each question carry **4** *marks* and all of them are compulsory.
- 05. Each question contains four alternatives out of which only **ONE** is correct.
- 06. There is **NO NEGATIVE** marking.
- 07. Indicate the correct answer for each question by filling appropriate bubble in your answer sheet.
- 08. The answers of the questions must be marked by shading the circle against the question by dark **Black Ball point Pen** only.
- 09. For rough work, use the space provided at the bottom of each page. No extra sheet will be provided for rough work and you are not supposed to bring the same.
- 10. Use of blank papers, clip boards, log tables, calculator, slide rule, mobile or any other electronic gadgets in any form is "NOT PERMISSIBLE".
- 11. You must not carry mobile phone even if you have the same, give it to your Invigilator before commencement of the test and take it back from him/her after the exam.
- 12. The Answer Sheet will be checked through computer hence the answer of the questions must be marked by shading the circles against the question by dark **Black Ball point Pen** only.

For example if only 'C' choice is correct then, the correct method for filling the bubble is

A
B
C
D

the wrong me	thod for f	illing the	bubble a	ire	
(a)	Α	В	С	D	
	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	Tick Mark
(b)	Α	В	С	D	
	$\bigcirc$	$\bigcirc$	$\otimes$	$\bigcirc$	Cross Mark
(c)	Α	В	С	D	
	$\bigcirc$	$\bigcirc$		$\bigcirc$	Half filled or Semi Dark

The answer of the questions in wrong or any other manner will be treated as wrong.

**USEFUL DATA** 

Take  $g = 10 \text{ m/s}^2$  wherever required.

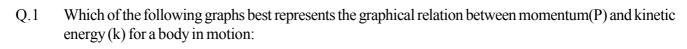


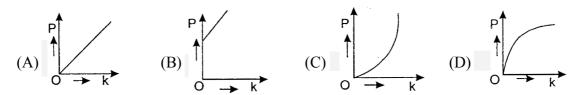
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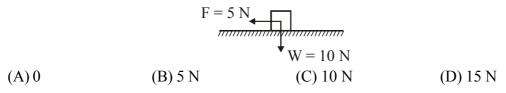
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- Q.2 A cluster of clouds at a height of 1000 m above the earth burst and enough rain fell to cover an area of 10<sup>6</sup> m<sup>2</sup> with a depth of 2 cm. How much work have been done in raising water of the height of clouds. (Take  $g = 9.8 \text{ ms}^{-2}$  and density of water =  $10^3 \text{ kg m}^{-3}$ )
  - (A)  $1.96 \times 10^{11} \,\mathrm{J}$

- (B)  $1.96 \times 10^9 \text{ J}$  (C)  $1.5 \times 10^{11} \text{ J}$  (D)  $2.5 \times 10^{13} \text{ J}$
- Q.3 A body of 10 N weight is resting on a plane surface. If external force of 5N is exerted on the body as shown in the figure, then friction force acting on the body by surface is:



- Q.4 The mains power supply of a house is through a 20 A fuse. When a 1500 W heater is used in this house, how many 100 W bulbs can be used simultaneously? (The supply is at 220 V and the appliances are rated for 220 V)
  - (A) 27
- (B) 29
- (C) 30
- (D) 33
- Q.5 Two masses of 1 kg and 4 kg are moving with equal kinetic energies. the ratio of the magnitudes of linear momentum of 1 kg mass to the linear momentum of 4 kg mass is
  - (A) 4:1
- (B)  $\sqrt{2} \cdot 1$
- (C) 1:2
- (D) 1:16
- An iceberg is floating in ocean. What fraction of its volume is above the water? Q.6 (Given: density of ice =  $900 \text{ kg/m}^2$  and density of ocean water =  $1030 \text{ kg/m}^3$ )
  - (A) 90/103
- (B) 13/103
- (D) 10/103
- (D) 1/103
- Q.7 If the density of iron is 7900 km m<sup>-3</sup>, then its relative density is
  - (A) 790
- (B) 79
- (C) 7.9
- (D) 0.79
- Q.8 An athlete is doing push-up. He applies force of 300 N as he pushes up a distance of 0.5 m. He does 10 push-ups in 30s. Find his average power output during this time interval.
  - (A) 5 W
- (B) 15 W
- (C) 50 W
- (D) 500 W
- 0.9 A particle of mass m at rest is acted upon by a force F for a time t. Its kinetic energy after an interval t is:
  - (A)  $\frac{F^2t^2}{m}$  (B)  $\frac{F^2t^2}{2m}$  (C)  $\frac{F^2t^2}{3m}$  (D)  $\frac{Ft}{2m}$

- 0.10If a body is thrown up with an initial velocity u and covers a maximum height of h, then h is equal to:
  - (A)  $\frac{u^2}{2g}$
- (B)  $\frac{u}{2g}$
- $(C) 2u^2g$
- (D) None of these

Q.11	A basel (A) zer		rown v	-	into the air. The down	accelera (C) g,		the ball a	-	ghest point is g, down	
Q.12		and com	_		ng horizontally 2 s. The distanc 60 m		etration		ullet int		•
Q.13	If a for	ce F is a	pplied	on a boo	ly and it moves	with velo	ocity v,	hen pov	ver will	be:	
	(A) F	× v		(B) $\frac{1}{v}$	$\frac{7}{2}$	(C) v	F		(D) I	$F \times V^2$	
Q.14	If the li (A) 50		omentu	m of a b (B) 10	ody is increased	1 by 50 % (C) 12		K.E. of tl	hat bod (D) 2		by:
Q.15	-	-			nted on the three object A are form		_	ın isoscl	es right	triangle as sho	own in the
					45°	•					
						45°					
	(A) 5			(B) 6		(C) 7			(D) 8	:	
Q.16	Galvar (A) Hg		n is pro	otected f (B) Si	rom rust because	e it has a (C) Cı	_	of:	(D) Z	'n	
Q.17	Which	is the co	orrect co	olour se	quence of iron fi	lings, sul	phur an	d iron sı	ulphide	?	
			Col	louless	Pink	III	Gre	en [		Blue	
		eyish bla own, yel				(B) Bla		low, bro low, gre	wn	ack	
Q.18	Match given c	1 2	mers g	iven in c	olumn I with the	eir uses in	colum	n II and s	select th	ne correct option	n from the
	P. Q. R. S.	Colum Nylon Teflon Melam PET				(i) (ii) (iii) (iv)	Makii Non-s	ng bottle ng fire-pi	roof uni ating on	forms cookwares	
	<b></b>	p	Q	R	S	, ,	p	Q	R	S	
	(A) (C)	(i) (iv)	(iv) (ii)	(iii) (iii)	(ii) (i)	(B) (D)	(iv) (i)	(iii) (iii)	(ii) (ii)	(i) (iv)	
Q.19	Which	ofthe fo	llowing	ghave lo	w melting and bo	oiling poi	nts?				

(A) Phosphorus

(B) Sodium

(C) Iron

(D) Both A and B

Q.20	produc	ct was formed. S	She cooled the t	est tube a	nd then	added 2 ml of	abe for some time till a grey-black carbon disulphide in it and shook to be shown as:
	(A) I		(B) II		(C) II	•	(D) IV
Q.21	Arrang		ven in the box in	n order of	their re	activity and fill	in the blanks with an appropriate
		Copper	_	nesium	Iron		
	1.						r salt solutions is (i).
	2.		_	-	_		m its salt solution is (ii)
	3.				_		eir salt solutions is (iii)
	4.		_		f the giv		its salt solution is (iv).
	(4)	(i) Zina	(ii)	(iii)		(iv)	
	(A)	Zinc	Copper Iron	Iron	. r	Magnesium Zinc	
	(B)	Magnesium Iron	Zinc	Coppe Magne			
	(C) (D)	Magnesium	Iron	Zinc	Siuiii	Copper Copper	
	(D)	Magnesium	11011	ZIIIC		Соррсі	
Q.22	Which	among the foll	OWing has stro	ng forces	of attra	ction?	
χ.==		drogen chloride	•	118 101 40		ourine	(D) Chlorine
	( ) 3	S	( )		( )		
Q.23	Which	of the following	g are physical cl	nanges :			
		ting of iron meta				isting of iron me	
		ending of an iron			` /	rawing a wire o	
	(A)(i)	, (ii) and (iii)	(B)(i),(ii) an	d(iv)	(C)(i)	), (iii) and (iv)	(D) (ii), (iii) and (iv)
Q.24	(A) Bir (B) Co (C) Co	oal tar is used in	n place of coal to e extraction of r the manufactur	ar for met nany met re of deter	alling that als and rgent, fi	he roads. also in the man bres, polythene	ect?  aufacture of steel.  and other man-made plastics.  ined from coal tar.
Q.25		a gas is compre		-	e const	ant, it results in	:
	` /	crease in speed o	_				
		rease in collisio			ıles		
		crease in speed	•		1.a		
	(D) de	crease in collision	on among gasec	ous moiec	ules		
Q.26	Which	of the followin	g is not the attri	bute of a	good fu	el?	
		w calorific valu	-	•	_	loderate rate of	combustion
	(C) Fa	irly cheap and e	asily available		(D) S	afe to handle, s	tore and transport
Q.27			m byproduct us	ed in mak	_		
	(A) Pa	raffin wax	(B) Bitumen		(C) Li	ubricating oil	(D) Coal
Q.28	Which	one is called bl	ack gold?				
Q.26	(A) silv		(B) platinum		(C) ne	etroleum	(D) coal
	(11)311	V C1	(D) Piannum		(C) pc	MOICUIII	(D) cour
Q.29	Volum	e of gas at cons	tant pressure				
		creases with inc	-	ature	(B) de	ecreases with in	crease in temperature
	(C) rer	naine constant a	at all temperatur	re	(D) in	creaces with de	ecreace in temperature

Q.30	If a person is caught in (A) Raising the ignition (B) Absence of non-co (C) Cutting the supply (D) All of these	temperature ombustible ubstance	pped around him the fire	e will extinguish by:	
Q.31	Ribosomes are made u	up of (B) Proteins	(C) Lipoprotein	(D) Both A and B	
	(A) KNA	(D) Flotenis	(C) Lipoprotein	(D) Bottl A alid B	
Q.32	Organelle covered by o	double membrane is:			
	(A) Nucleus	(B) Mitochondria	(C) Plastid	(D) All of the above	
Q.33	Match the following a	nd select the correct answ	wer.		
	1. Mitochondria	a.	Helps in synthesis of fo	ood.	
	2. Chloroplast	b.	Cotrols all the activities	s of the cell.	
	3. Nucleus	c.	Gives shape to the cell		
	4. Cell wall	d.	Provide energy.		
	(A) 1-d, 2-a, 3-c, 4-b		(B) 1-d, 2-c, 3-a, 4-b		
	(C) 1-d, 2-a, 3-b, 4-c		(D) 1-d, 2-c, 3-b, 4-a		
Q.34	Cell body of a nerve ce (A) Nucleus (C) Nissl granules and		(B) Cytoplasm (D) All the above		
Q.35	Cells found in pulp and (A) Fibres	l skin of fruits : (B) Grit cells	(C) Epithelial cells	(D) All of the above	
Q.36	Fish meat is considere (A) it has more protein (C) it has lesser carbol	S	(B) it has more fats (D) none of the above		
Q.37	Vessles and Companio	on cells occur in:			
	(A) Angiosperm	(B) Gymnosperm	(C) Pteridophytes	(D) Bryophytes	
Q.38	Rhizobium bacteria (A) help in digestion (C) cause various disea	ases	(B) help in nitrogen fixa (D) All of above	ation	
Q.39	Silver Revolution is rel (A) Egg production	ated to (B) Milk production	(C) Grain production	(D) Meat production	
Q.40	Vermicompost is produ (A) Fungus (C) Earthworm	uced by	(B) Bacteria like Rhizo (D) None	bium	
Q.41	Which one of the follow (A) Loosens the soil (C) Makes the soil har	wing is not true about plo	(B) Aerates the soil	ration of roots into the soil.	

Q.42	Seeds are put in a bea (A) It helps in cleanin	_	_	ting good quality seed.
	(C) It increases moist	C	(D) All of them	ing good quanty seed.
Q.43	Best source of dietary (A) Soyabean	protein for a vegeta (B) Gram	rian is : (C) Groundnut	(D) Milk

Q.44 Process of cross-breeding two individuals of different variety is
(A) Hybridisation (B) Feeding (C) Intermixing (D) None

Xylem & Phloem belong to the group of:

Identify the zeros of the given polynomial.

- (A) Simple tissue (B) Latex tissue (C) Complex tissue (D) None of these  $Q.46 \quad \frac{\sqrt[3]{8}}{\sqrt{16}} \div \frac{\sqrt{100}}{\sqrt{49}} \times \frac{\sqrt[3]{125}}{\sqrt{49}} \text{ is equal to}$ (A) 7 (B)  $\frac{1}{4}$  (C)  $\frac{7}{100}$  (D)  $\frac{4}{7}$
- Q.47 If 0 < y < x, which statement must be true? (A)  $\sqrt{x} - \sqrt{y} = \sqrt{x - y}$  (B)  $\sqrt{x} + \sqrt{x} = \sqrt{2x}$  (C)  $x\sqrt{y} = y\sqrt{x}$  (D)  $\sqrt{xy} = \sqrt{x} \sqrt{y}$
- Q.48 Multiplicative inverse of '0' is:  $(A) \frac{1}{0}$  (B) 0 (C) does not exist (D) none of these
- $p(z) = 4z^{2} 15 z\pi 4\pi^{2}$ (A)  $4\pi$ ,  $-\frac{\pi}{4}$  (B)  $-4\pi$ ,  $\frac{\pi}{4}$  (C)  $4\pi$ ,  $\frac{\pi}{4}$  (D)  $-4\pi$ ,  $\frac{\pi}{4}$
- Q.50 If x + y + z = 0, then  $\frac{x^2}{yz} + \frac{y^2}{xz} + \frac{z^2}{xy}$  is (A)  $3x^2y^2z^2$  (B) 3 (C)  $3x^3y^3z^3$  (D) x + y + z
- Q.51 The distance of the point (2, 0) from the origin is

  (A) 1 unit (B) 2 units (C) 4 units (D) 0 units

To locate a point (-a, -b) in the third quadrant if a > 0, b > 0.

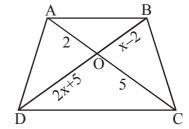
- (A) Move only in the negative direction of x-axis.(B) Move 'a' units in the negative direction of x-axis then b units vertically downward in the negative
  - direction of y-axis parallel to the y-axis.
  - (C) Move 'b' units along the x-axis
  - (D) None of these.

Q.52

Q.45

0.49

- Q.53 Factorize:  $a^{2x} b^{2x}$
- (A)  $(a^x + b^x)(a^x b^x)$  (B)  $(a^x b^x)^2$  (C)  $(a^x + b^x)(a^2 b^2)$  (D)  $(a^x + b^x)(a^2 + b^2)$
- Q.54 If two circles are congruent, then their \_\_\_\_\_ are equal
  - (A) radii
- (B) diameters
- (C) circumferences
- (D) All of these
- In a given figure in trapezium ABCD if AB || CD then value of x is:
  - (A)  $\frac{29}{0}$
- (B)  $\frac{8}{20}$
- (C) 20
- (D)  $\frac{1}{20}$



- Q.56 The value of  $\sqrt{3-2\sqrt{2}}$  is
  - (A)  $\sqrt{2} 1$
- (B)  $\sqrt{2} + 1$
- (C)  $\sqrt{3} \sqrt{2}$  (D)  $\sqrt{3} + \sqrt{2}$
- Q.57 If n is a natural number, then  $\sqrt{n}$  is
  - (A) always a natural number
  - (B) always an irrational number
  - (C) always an rational number
  - (D) sometimes a natural number and sometimes an irrational number
- All linear pairs are: Q.58
  - (A) Supplementary
- (B) Vertically opposite (C) Right angles
- (D) None of these
- If the ratio of the interior angles of a triangle is 2:4:9, then the difference between smallest and middle Q.59 exterior angles is:
  - $(A) 20^{\circ}$
- (B) 44°
- $(C) 50^{\circ}$
- (D)  $60^{\circ}$
- If X is a point on the line AB and Y, Z are points outside such that  $\angle AXY = 45^{\circ}$  and  $\angle YXZ = 60^{\circ}$ , Q.60then ∠BXZ is equal to
  - (A)  $120^{\circ}$
- $(B)75^{\circ}$
- (C)  $150^{\circ}$
- (D)  $105^{\circ}$

- Which of the following statements is true? Q.61
  - $(A) \frac{2}{3} < \frac{4}{-9} < \frac{-5}{12} < \frac{7}{-18}$
- (B)  $\frac{7}{-18} < \frac{-5}{12} < \frac{4}{-9} < \frac{-2}{3}$
- (C)  $\frac{4}{-9} < \frac{7}{-18} < \frac{-5}{12} < \frac{-2}{3}$
- (D)  $\frac{-5}{12} < \frac{-2}{3} < \frac{4}{-9} < \frac{7}{-18}$
- The sum of two number is 45 and their ratio is 7:8. The numbers are Q.62
  - (A) 28:32
- (B) 35:40
- (C) 21:24
- (D) none of these

Q.63	If $x + y = 2013$ and $\frac{1}{x}$	$+\frac{1}{y} = 2013$ , what is the	ne value of xy?	
	(A) $\frac{1}{2013}$	(B) 4026	(C) 0	(D) 1
Q.64	The point $(2, -3)$ below $(A) Q_1$	ngs to quadrant (B) $Q_2$	(C) Q <sub>3</sub>	(D) Q <sub>4</sub>
Q.65	exceeds the original nu	umber by 18. Find the ori	iginal number.	rsed, then the number so formed
	(A) 57	(B) 85	(C) 75	(D None
	tion (Q.67 & 68): Rean coding system, 816321 means "The brown dog fright 64851 means "The frightened cat rar 7621 means "The cat was brown" 341 means "The dog r	ened the cat" n away"	mation carefully and	answer these questions. In a
Q.66	What is the code for 'a (A) 5	away'? (B) 7	(C) 6	(D) 1
Q.67	What is the code for 't (A) 8263	he dog was frightened' (B) 8731	(C) 5438	(D) none of these
Q.68	Rahul told Anand, "Ye did Rahul defeat?	esterday I defeated the or	nly brother of the daugh	ter of my grandmother." Whom
	(A) Son	(B) Father	(C) Brother	(D) Father-in-law
Q.69	Rajani says to Shushm (A) Cousin (brother/si (C) Daughter-in-law		usband of my sister'. Ho (B) Sister (D) None of these	w is Rajni related to Shushmita?
Q.70		Alka is daughter of Amai is Zamir related to Moh		e. Mohan is Sheela's son. Atul is ther
Q.71	25 metres straight. Aga	_	l walks a distance of 40 r	s he turns to the left and walks metres straight. Again he turns to ing point? (D) 115 metres
Q.72	•	ars to Govind. After 16 ye esent age. How old is Go (B) 8 years	-	his present age and Govind will (D) 16 years

Q.74	If GO = 32, SHE = 49	, then SOME will be ed	qual to	
	(A) 56	(B) 58	(C) 62	(D) 64
Q.75	If PEN is written writt same code?	en as '+X' and ENT is w	ritten as 'X-' in a certain	code, how is TEN written in the
	(A) –X	(B) X	(C) –X–	(D) X
Q.76	Roshan ranked 11th fr in the class?	om the top and thirty one	e from the bottom in a cla	ss. How many students are there
	(A) 42	(B) 43	(C) 41	(D) 40
Q.77	Find the missing numb	oer.		
	4 58	8 9 ?	8	
	10 (A) 117	10 (B) 100	(C) 78	(D) 63
Q.78	Find the odd one out:			
	(A) <b>T</b>	(B) <b>V</b>	(C) X	(D) L
Q.79	If ÷ means +, – means	$s \div$ , × means – and + mo	eans $\times$ , then $\frac{(36\times4)-3}{4+8\times2+3}$	$\frac{8\times4}{16\div1}=?$
	(A) 0	(B) 8	(C) 12	(D) 16
Q.80	A die is thrown four ti	mes and its different pos	itions are recorded as fol	llow.
	6 $3$ $1$ $2$	4 5 1	3 6	
	(i) (ii)	• •	(iv)	
	What number is opport (A) 2	site 3? (B) 3	(C) 4	(D) 6
Q.81	Choose the best suita relationship amongest Snakes, Land creature	the given group.	marked A, B, C and D,	the one that represent the best
	(A) (O)	(B)	(C)	(D)

Five boys are standing in a row facing East. Deepak is to the left of Sameer, Tushar and Shailendra. Sameer, Tushar and Shailendra are to the left of Sushil. Shailendra is between Sameer and Tushar. If

(C) Third

(D) Fourth

Tushar is fourth from the left, how far is Sameer from the right?

(B) Second

(A) First

**Directions (Q.82 & 84):** In the following questions, there is a relationship between the numbers on the left of the sign (::), of which one is missing. Find the missing term from the alternatives.

Q.82 7:42::9:?

(A) 51

(B)65

(C) 72

(D) 90

Q.83 0.16:0.0016::1.02:?

(A) 0.0102

(B) 0.102

(C) 1.020

(D) 10.20

Q.84 81:3:27::?:125

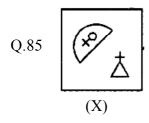
(A) 225:25

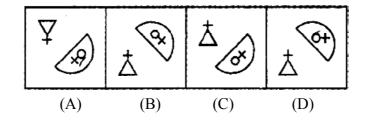
(B) 5:25

(C) 150:15

(D) 625:5

Direction (Q.85): Find the mirro image of figure (X).





## **ANSWER KEY**

Q.27 A

Q.28 C

Q.29 A

Q.30 C

Class	: IX				SAMPLE PAPER
Q.1	D	Q.31	D	Q.61	A
Q.2	A	Q.32	D	Q.62	С
Q.3	В	Q.33	С	Q.63	D
Q.4	В	Q.34	D	Q.64	D
Q.5	A	Q.35	В	Q.65	A
Q.6	В	Q.36	A	Q.66	A
Q.7	C	Q.37	A	Q.67	В
Q.8	C	Q.38	В	Q.68	В
Q.9	В	Q.39	A	Q.69	D
Q.10	A	Q.40	C	Q.70	В
Q.11	В	Q.41	C	Q.71	C
Q.12	В	Q.42	В	Q.72	В
Q.13	A	Q.43	A	Q.73	D
Q.14	C	Q.44	A	Q.74	A
Q.15	C	Q.45	C	Q.75	A
Q.16	D	Q.46	В	Q.76	C
Q.17	A	Q.47	D	Q.77	C
Q.18	В	Q.48	C	Q.78	D
Q.19	D	Q.49	A	Q.79	A
Q.20	A	Q.50	В	Q.80	C
Q.21	D	Q.51	В	Q.81	A
Q.22	A	Q.52	В	Q.82	C
Q.23	C	Q.53	A	Q.83	A
Q.24	C	Q.54	D	Q.84	D
Q.25	В	Q.55		Q.85	В
Q.26	A	Q.56	A		

Q.57 D

Q.58 A

Q.59 D

Q.60 B

From Class 9th to 10th Moving										
Current Class	Physics	Chemistry	Chemistry Mathematics		Mental Ability					
	Physics Chemistry Mathematics Biology Mental Ability  100 % Previous Class (VIII) Syllabus									
IX	Motion, Force & Newton's Laws of motion, Gravitation, Floatation, Work, Energy & Power, Sound	Matter in our Surroundings, Is Matter Around Us Pure, Atoms And Molecules, Structure of atom	Number system, Polynomials, Lines & Angles, Triangles, Coordinate Geometry, Linear equation in two variable, quadrilatreal, Circle, Statistics, Probability, Mensuration - Areas,	Fundamental Unit of Life, Tissues, Improvement in Food Resources, Why do we fall ill, Diversity of living organism, Natural resources	Verbal and Non-Verbal Reasoning					