



Question Booklet Sr. No.

220940

Exam Date: 07/04/2024 Time: 02.30 pm to 05.00 pm Max. Marks: 400

Important Instructions:

- 1. Immediately fill the particulars on this page of The Booklet as well as Answer-sheet with Black or Blue Ball Pen. *Use of Pencil is strictly prohibited.*
- 2. Do not open this Test Booklet until you are asked to do so.
- 3. This Test Booklet contains four sections A, B, C & D.
- 4. The Section-A contains 25 questions of Physics.
- 5. The Section-B contains 25 questions of Chemistry.
- 6. The Section-C contains 25 questions of Mathematics
- 7. The Section-D contains 25 questions of Basic Mathematics & Mental ability.
- 8. This Test Booklet contains 100 questions.
- 9. There are **four** choices for every question out of which only one choice is most correct (MCQ). Dark the appropriate circle on the OMR Answer-sheet with Blue/Blak Ball pen.
- 10. Each question carries 4 marks. There is negative marking system. For each wrong answer 1 mark will be deducted from obtained marks.
- 11. Filling up more than one responses in any question will be treated as wrong response and marks for this will be deducted according to negative system.
- 12. No candidates is allowed to carry any printed or written textual material, bits of paper, cell phone and any other electronic devices.
- 13. Rough work is to be done on the space provided in the Test Booklet only.
- 14. On completion of the test, the candidate must hand over the Answer-sheet to the Invigilator on duty. *However, candidates are allowed to take away this Question paper with them.*
- 15. Do not fold or make any stray marks on the Answer-sheet.

Name of Candidate (In capital letters)	•	 	 		
Seat No. : In figures					

Section-A: Physics

01. Two identical plano convex lenses (μ = 1.5) each have radius of curvature of 20 cm are placed with their convex surfaces in contact at the centre. The intervening space is filled with oil (μ = 1.7). The focal length of combination, is

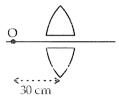
1) -25 cm

2) 50 cm

3) -50 cm

4) -20 cm

02. A convex lens of focal length 20 cm is cut into two halves. Each of which is placed 0.5 mm away from the principal axis and a point object is placed at a distance of 30 cm from lens, as shown in figure. The image is at what distance from the lens?



1) 60 cm

2) 30 cm

3) 70 cm

4) 50 cm

03. Which of the following power in diopter is preferred to read small letters in News paper?

1) P = +1/4

2) P = +2

3) P = -2

4) P = -1

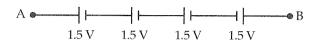
04. A convex mirror has focal length 20 cm. Object kept at distance 10 cm, from pole then, the image formed

1) At 20 cm from pole

- 2) At 10 cm from pole
- 3) At a distance less than 20 cm from pole
- 4) At a distance more than 20 cm from pole
- 05. The magnetic field produced due to a circular wire at its centre is
 - 1) At 45° to the plane of the wire
 - 2) At 60° to the plane of the wire
 - 3) In the plane of the wire
 - 4) Perpendicular to the plane of the wire

- 06. If two bulbs of rated power 25 W and 30 W, having rated voltage 220 volts are connected in series with a 440 volt supply. Which bulb will fuse earlier?
 - 1) 25 W bulb will fuse first

- 2) 30 W bulb will fuse first
- 3) 25 W and 30 W bulb will fuse
- 4) 25 W and 30 W bulb will not fuse
- 07. What is net e.m.f. of combination.



1) 6 V

2) 3 V

3) 4.5 V

- 4) 1.5 V
- 08. The internal resistance of a cell of emf 2V is 0.1Ω . It is connected to a resistance of 3.9 Ω the voltage across the cell will be
 - 1) 0.5 V

2) 1.5 V

3) 1.95 V

- 4) 2.0 V
- 09. The amount of ice, which is sufficient to cool 45g water, contained at 30° C, such that the final temperature of mixture becomes 10° C. (The specific latent heat of fusion of ice is 336 J/g)
 - 1) 1g

2) 5g

3) 10g

- 4) 8g
- 10. A metallic bar is heated form 0° C to 100° C. The coefficient of expansion is 10^{-5} K⁻¹. The percentage increase in length shall be
 - 1) 0.01%

2) 0.1%

3) 1%

- 4) 10%
- 11. A uniform rope of length L and mass m_1 , hangs vertically from a rigid support. A block of mass m_2 to the end of the rope. A transverse pulse of wavelength λ , is produced at lower end of rope. The

wavelength of rope when it reached top of rope is $\lambda_{2'}$ then $\;\frac{\lambda_2}{\lambda_1}$ is

1) $\sqrt{\frac{m_1}{m_2}}$

 $\sqrt{\frac{m_2}{m}}$

 $3) \qquad \sqrt{\frac{m_1 + m_2}{m_1}}$

 $4) \qquad \sqrt{\frac{m_1 + m_2}{m_2}}$

12.	Wh	When we tighten (Increase Tension) the string of guitar, its pitch will be						
	1)	Increase	2)	Decrease				
	3)	Remains same	4)	Can't be predicted				
13.	If he	e ratio of height of mercury column in barome	ter at	a place to the height of liquid column at the				
	sam	ne place is $1:4$, the density of liquid is $ ho_{_{ m Hg}}$ (13.6	g/cm	3)				
	1)	54.4 g/cm ³	2)	3.4 g/cm ³				
	3)	1 g/cm³	4)	6.8 g/cm ³				
14.	A sl	nip going from sea water to river water has to	displa	ce more water to				
	1)	Change the buyont force	2)	Decrease the buyont force				
	3)	Maintain same buyont force	4)	None of these				
15.	Wh	When you put an object on a spring balance, what do you measure?						
	1)	Weight	2)	Inertia				
	3)	Mass	4)	Acceleration				
16.	If the radius of the earth would be, 12800 km, then for the same weight of any object the mass of earth							
	wou	uld have been.						
	1)	$6 \times 10^{21} \mathrm{kg}$	2)	$12 \times 10^{24} \text{ kg}$				
	3)	$18 \times 10^{24} \text{ kg}$	4)	$24 \times 10^{24} \mathrm{kg}$				
17.	The	The acceleration due to gravity near the surface of a planet of radius R and density d, is proportional						
	to							
	1)	$\frac{d}{R^2}$	2)	dR^2				
	3)	dR	4)	$\frac{d}{R}$				
18.	The	law of conservation of energy implies that						
	1)	Energy can be created as well as destroyed						
	2)	Energy can be created but not destroyed						
	3)	Energy can not be created but can be destro	yed					
	4)	Energy can neither be created nor destroyed						

19.	If a	force F is applied on a body and it moves with	ı veloc	ity V, in the direction of applied force then the
		tantaneous power will be		
	1)	FV	2)	$\frac{\mathrm{F}}{\mathrm{V}}$
	3)	FV^2	4)	$\frac{\mathrm{F}}{\mathrm{V}^2}$
20.	If th	he linear momentum is increased by 5%, the l	kinetic	energy will be increased by
	1)	50%	2)	100%
	3)	125%	4)	10%
21.	The	e direction of impulse is		
	1)	Same as that of the net force	2)	Opposite to that of the net force
	3)	Same as that of the final velocity	4)	Same as that of the initial velocity
22.	The	e same amount of force is acting on two bodies	of diff	erent masses 2kg and 4kg initially at rest. The
	rati	o of the times required to acquire same final v	velocit	y is
	1)	1:1	2)	1:2
	3)	2:1	4)	4:16
23.	A v	rehicle moving on a circular path with incr	easing	g speed, with respect to time then the net
	acce	eleration will have		
	1)	Only centripetal acceleration		
	2)	Only tangential acceleation		
	3)	Centripetal and tangential accelerations		
	4)	Radial, normal and tangential accelerations	;	
24.	A ca	ar moving with a speed of 40 km/h can be stopp	oed by	applying brakes after at least 2m. If the same
	car i	is moving with a speed of 80 km/h, what is the	e mini	mum stopping distance?
	1)	8 m	2)	6 m
	3)	4 m	4)	2 m
25.	A m	noving train is brought to rest within 20 seco	nds by	applying brakes. If the retardation due to
	brak	ses is 2 m/s^2 , then the initial velocity was		
	1)	10 m/s	2)	20 m/s
	3)	30 m/s	4)	40 m/s
		Space for rou	gh wo	ork

SCSS-ST-24-PCM-(SET-B)

Section-B: Chemistry

- 26. The conversion of wood into coal is known as
 - 1) Catenation

2) Catalysis

3) Carbonisation

- 4) Pyrolysis
- 27. Match the following Column-I with Column-II and select the most appropriate option given below:

	Column-I		Column-II
A)	Natural fibre	i)	Terylene
B)	Synthetic fibre	ii)	Raincoats
C)	Semisynthetic fibre	iii)	Silk
D)	Rubber	iv)	Terycott
1)	A-iii; B-i; C-iv; D-ii	2)	A–ii; B–i; C–iv; D–iii
3)	A–iii; B–ii; C–i; D–iv	4)	A-iv; B-i; C-ii; D-iii

- 28. The compound which forms the strongest hydrogen bond is?
 - 1) CH₃CH₂OH

 $C_2H_5NH_2$

 C_6H_5OH

- 4) CH₃COOH
- 29. When ethyl chloride and alcoholic KOH are heated, the compound obtained is
 - 1) C_2H_4

2) C_6H_6

3) C_2H_2

- 4) C_2H_6
- 30. How many primary, secondary, tertiary and quaternary carbons are present in the following hydrocarbon?

 ${\rm CH_3-CH(CH_3)-C(CH_3)_2-CH_2-CH(CH_3)-CH_2-CH_3}$

**************************************	Primary	Secondary	Tertiary	Quaternary
1)	6	2	2	1
2)	2	6	3	0
3)	2	4	3	2
4)	2	2	4	3

Correct structure of 3-ethyl-3,4-dimethylpent-1-yne is 31.

1)
$$CH_3 - CH_3 = CH_3$$

 $CH_3 - CH - CH = CH$
 C_2H_5

2)
$$CH = C - CH - C - CH_3$$

 $C_2H_5 CH_3$

3)
$$CH = C - CH_3 CH_3 CH_3 CH_3 CH_3 CH_3$$

4)
$$CH = C - C - CH - CH$$
, $CH_3 C_2H_5$

- Classify the following compounds and select the correct pair. 32.
 - Acetic anhydride A)

B) Methyl acetate

C) Diethyl ether D) Acetyl chloride

1) Acetic anhydride - Ester 2) Methyl acetate - Ether

Diethyl ether - Acid anhydride 3)

4) Acetyl chloride - Acid halide

33. Some rocket engines use a mixture of hydrazine N₂H₄ and hydrogen peroxide, H₂O₅ as propellant. The reaction is given by following equation

$$N_2H_4(l) + 2H_2O_2(l) \rightarrow N_2(g) + 4H_2O(g)$$

How much of the excess reactant, remains unchanged when 0.750 mol of N₂H₄ is mixed with 17g of H,O,?

1) 16g N₂H₄ 2) 0.25 mol H₂O₂
 4) 8.5 g N₂O₂

0.25 mal N₂H₄

- 34. If three gases X, Y and Z are arranged in increasing order of their relative molecular mass and the mass of each gas is 10g at STP state, which gas will contain least number of molecules and which will contain the most?
 - 1) X least and Y maximum

2) X maximum and Z least

Y maximum and Z least

- 4) Y least and Z maximum
- 35. The ratio of rates of diffusion two gases (X) and (Y) is $4:\sqrt{11}$. If molecular mass of (Y) is double to the molecular mass of oxygen, then (X) is
 - 1) CO

SO₃ 2)

CO, 3)

NO 4)

36.	At constant temperature, a gas is at a pressure of 940 mm Hg. At what pressure its volume decreases
	by 40%

1) 564 mmHg

2) 1860 mmHg

3) 2350 mmHg

4) 1567 mmHg

37. Which of the following sets of atomic numbers corresponds to elements belonging to s–, d–, f–, p– blocks, respectively

1) 35, 37, 29, 70

2) 35, 29, 70, 37

3) 37, 29, 70, 35

4) 37, 29, 35, 70

38. A part of modern periodic table is presented below in which the alphabets represent the symbols of elements

Group	P. mail	12	14	15	16	17
2				М	Q	V
3	А	J			R	W
4	Е		L			Т
5	G					Х

Consult the above periodic table to predict which of the following is a covalent compound.

1) RQ₂

2) AT

3) JQ

4) JX₂

39. $2\text{Al}(\text{OH})_3 \xrightarrow{\Delta} X + 3\text{H}_2\text{O}$

The name and formula of X is

1) Alumina, Al₂O₃

2) Cryolite, Al₂O₃

3) Bauxite, Al₂O₃

4) Dolomite, Al₃O₂

40. In the absence of oxygen if concentrated ore is strongly heated is called

1) Calcination

2) Roasting

3) Reduction

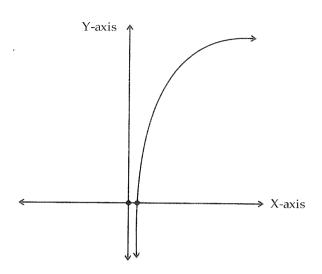
4) Benefaction

District Control	SUPPRINCIPAL PROPERTY AND ADDRESS OF THE PARTY			,			
41.	When the gases sulphur dioxide and hydrogen sulphide mixed in the presence of water, the reaction						
		$O_2 + 2H_2S \rightarrow 2H_2O + 3S$. Here hydrogen sulp					
	1)	An oxidising agent	2)	A reducing agent			
	3)	Both of these	4)	None of these			
42.	Identify the substance which is reduced in the given reaction						
	Pbs	$S_{(s)} + 4H_2O_{2(aq.)} \longrightarrow PbSO_{4(s)} + 4H_2O_{(l)}$					
	1)	Hydrogen peroxide					
	2)	Lead sulphate					
	3)	Both hydrogen peroxide and lead sulphate					
	4)	Water					
43.	NaI	HCO ₃ reacts with moist litmus paper and					
	1)	Red litmus turns blue confirms it as acidic i	n natu	ıre			
	2)	Red litmus turns blue, confirms it as basic is	n natu	re			
	3)	Red litmus do not change its colour					
	4)	It is neutral in nature					
44.	Wh	Which of the following compound(s) do not contain covalent bond(s)?					
		, PH ₃ , O ₂ , B ₂ H ₆ , H ₂ SO ₄		,,			
	1)	KCl, B ₂ H ₆ , PH ₃	2)	KCl, H ₂ SO ₄			
	3)	KCl	4)	KCl, B ₂ H ₆			
45.	Ider	ntify the species that can give both conjugate a	icid an	d conjugate base?			
	1)	NH_4^+	2)	$H_2PO_4^-$			
	3)	PO_4^{3-}	4)	H_3O^+			
46.	Whi	ich of the following has highest value of pH?					
	1)	1 M HCl	2)	1 M NaOH			
	3)	1 M NH ₄ OH	4)	1 M CH ₃ COOH			
47 .	Har	mful gases like SO ₂ are present in					
	1)	Industrial areas	2)	Highly populated areas			
	3)	Forests	4)	Hills			
4 8.	Whi	ch of the following is least malleable?					
	1)	Aluminium	2)	Silver			
	3)	Gold	4)	Carbon			

SCSS-ST-24-PCM-(SET-B)

49.	If 18	g of glucose ($C_6H_{12}O_6$) is present in 1000g of a	n aque	eous solution of glucose is said to be
	1)	1 molal	2)	1.1 molal
	3)	0.5 molal	4)	0.1 molal
50.	The r	maximum number of electrons can be accomr	nodate	ed in third shell $(n = 3)$ is
	1)	2	2)	8
	3)	18	4)	10

51. The below graph represents



1)
$$y = a^x, 0 < a < 1$$

2)
$$y = \log_a x, a > 1$$

3)
$$y = a^x, a > 1$$

4)
$$y = \log_a x$$
, $0 < a < 1$

52. If $\log_a ab = x$ then the value of $\log_b ab$ is

1)
$$\frac{x-1}{x}$$

$$2) \qquad \frac{x}{x-1}$$

3)
$$\frac{x}{x+1}$$

4)
$$\frac{x+1}{x}$$

53. Vishnu sells a bike at a profit of 5% for Rs. 10,500. If he decreases the selling price to Rs. 9000 then will he gain or lose and by how much percentage?

1) Gain, 15%

2) Loss, 10%

3) Loss, 15%

4) Gain, 10%

The mean of above data is 5.5. Find the missing frequencies in the above distribution

1) 6

2) 4

3) 3

4) 2

- 55. From a pack of 52 cards, face club cards are removed. The remaining cards are well shuffled and a card is drawn at random. Find the probability that the card drawn is a heart card
 - 1) $\frac{1}{4}$

2) $\frac{13}{49}$

3) $\frac{3}{52}$

- 4) $\frac{9}{52}$
- 56. If the image of point (-6, 1) with respect to line L = ax + by + c = 0, is (2, 3) then the equation of line L
 - 1) x 4y + 10 = 0

2) 4x + y + 10 = 0

3) x - 4y + 6 = 0

- 4) 4x + y + 6 = 0
- 57. Circum radius of the triangle formed by the lines x + 4y = 7, 5x + 3y = 1 and 3x 5y = 21 is $\sqrt{\frac{a}{b}}$ then
 - a + b =
 - 1) 18

2) 16

3) 17

- 4) 9
- 58. A vessel is in the form of an inverted cone. Its height is 8 cm and radius of its top which is open is 5 cm. It is filled with water upto the brim. When lead shots each of which is sphere of radius 0.5 cm are dropped into the vessel, one-fourth of the water flows out. Find the number of lead shots dropped in the vessel
 - 1) 90

2) 150

3) 200

- 4) 100
- 59. The height of a cone is 40 cm. A small cone is cut at the top by a plane parallel to the base. If the volume of the small cone is $\frac{1}{64}$ of the volume of the given cone, at what height above the base is the section made?
 - 1) 30

2) 10

3) 15

4) 25

- 60. If $x = 1 + \tan \theta$, $y = 2 + \cot \theta$, then
 - $1) \qquad xy + 1 = x + y$

2) xy + 2 = 2x + y

3) xy + 1 = 2x + y

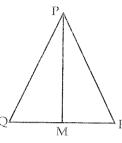
4) xy + 1 = 2y + x

- 61. $a = \frac{1 + \sin x}{1 \cos x + \sin x} \text{ then } \frac{2\sin x}{1 + \cos x + \sin x} = \frac{1 + \sin x}{1 + \cos x + \sin x}$
 - 1) a

 $2) \qquad \frac{1}{a}$

3) a²

- $4) \qquad \frac{1}{a^2}$
- 62. In figure, segment PM is a median of ΔPQR , PM = 9 and PQ² + PR² = 290, then QR is



1) 8

2) 16

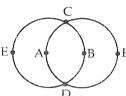
3) 25

- 4) 9
- 63. Two sides of triangle are 5 cm and 12 cm long. The measure of third side is an integer in cm. If the triangle is obtuse angled triangle, then how many such triangle are possible
 - 1) 9

2) 8

3) 7

- 4) 6
- 64. A and B are the centre of the circles as shown in given figure. The circles intersect at C and D then which of the following is true statement?



1) $\angle ACB + \angle ADB = 180^{\circ}$

2) $\angle CED + \angle CFD = 120^{\circ}$

3) $\angle CAD + \angle CBD = 270^{\circ}$

- 4) None of these
- 65. The interior angles of a convex polygon are in arithmetic progression. The smallest angle is 120° and the common difference is 5°, find the number of sides of the polygon
 - 1) 9

2) 6

3) 16

4) 12

If $\frac{S_m}{S} = \frac{m^2}{n^2}$, where S_m and S_n are sum of first m and n terms of an A.P. respectively and $m \ne n$ then,

 $\frac{a_5}{a_{..}}$ is, where a_1 , a_2 , a_3 , are terms of A.P.

1)
$$\frac{11}{41}$$

2)
$$\frac{3}{7}$$

3)
$$\frac{9}{11}$$

4)
$$\frac{83}{121}$$

67. If $\frac{x}{a} = \frac{y}{b} = \frac{z}{c} = \lambda$ then value of $\left(\frac{3x^3 - 11y^3 + 13z^3}{3a^3 - 11b^3 + 13c^3}\right)^{-\frac{1}{3}} =$

2)
$$\lambda^{-1}$$

1)
$$\lambda$$
 3) $-\lambda^{-1}$

68.
$$\left(\frac{1}{a^{x-y}+1} + \frac{1}{a^{y-x}+1}\right)^{-2025} =$$

The sum of cube of first 'n' natural number is given by $\left(\frac{n(n+1)}{2}\right)^2$.

 $\left[\text{ i.e. } 1^3 + 2^3 + 3^3 + 4^3 + \dots + n^3 = \left(\frac{n(n+1)}{2} \right)^2 \right] \text{ using this result find } 9^3 + 10^3 + 11^3 + 12^3 + \dots + 19^3$

The graphs of $x^2 = 4y$ and y = mx + c intersect at two points (2, 1) and (6, 9) find the quadratic equation 70. in x whose roots are (m+1) and $\left(4+\frac{2c}{3}\right)$

1)
$$x^2 - 11x - 126 = 0$$

$$2) x^2 - 9x + 18 = 0$$

3)
$$x^2 + 5x + 6 = 0$$

71. If $lx^2 + mx + n$ is the remainder when x^5 is divided by $x^3 - 9x$ then l + m + n = 1

1) 80

2) 81

3) 82

4) 83

72. If α , β , γ are zeros of cubic polynomial $x^3 + 5x - 2$, then find the value of $\alpha^3 + \beta^3 + \gamma^3$

1) (

-2

3) 5

4) 6

73. If $x = 1 + 2^{\frac{1}{3}} + 2^{\frac{2}{3}}$, then find the value of $x^3 - 3x^2 - 3x + 8 =$

1) 9

2)

3) 6

4) 8

74. The area above x-axis bounded by y-axis, 4x + 3y = 12 and x - y = 1 is

1) $\frac{6}{7}$

2) $\frac{8}{7}$

3) $\frac{24}{7}$

4) $\frac{34}{7}$

75. If $\sqrt{x + \sqrt{20x - 100}} + \sqrt{x - \sqrt{20x - 100}} = ax + b\sqrt{c}$, then a + b + c =

1) 5

2) 7

3) 9

4) 12

SCSS-ST-24-PCM-(SET-B)

		Section-D : Basic Mathe	matics &	& Mental Ability
76.	his	right. After moving a distance of 20 metres,	he turns	ne left, he walks 20 metres and then moves to to the right and walks 20 metres. Finally, he ow far and in which direction is he from the
		ting point?		
	1)	10 metres North	2)	20 metres South
	3)	20 metres North	4)	10 metres South
77.	If 'A	\$ B' means 'A is the father of B'; 'A* B' mea	ns 'A is th	ne motehr of B' 'A @ B' means 'A is the wife o
		hen which of the following means 'M is the		
	1)	M*T\$N@R	2)	M * T \$ R @ N
	3)	M*R\$T@N	4)	M*R@T@N
78.	If 18	8 th February, 2005 falls on Friday then what	will be tl	ne day on 18 th February, 2007?
	1)	Sunday	2)	Monday
	3)	Tuesday	4)	Wednesday
79.	The	e following question contains three elem	ents. The	ese elements may or may not have some
	inte	er-linkage. Each group of elements may fit	into one (of these diagrams at (1), (2), (3) and (4). You
	hav	e to indicate the group of elements which o	correctly	fits the diagrams.
	Wh	ich of the following diagram indicates the l	oest relati	ion between Leaf, Seed and Root?
	1)	\bigcirc	2)	
	3)		4)	
Dire	ecion	s (Q. No. 80 & 81): Read the following inf	ormation	carefully to answer the given questions :
				es M, N, P, Q, R and S exactly once during the
		rse of one day. She is setting up her schedu		
	i)	She must visit M before N and R		
	ii)	She must visit N before Q		
	iii)	The third company she visits must be P		
80.	If th	ne sales representative visits S first, which o	ompany	must she visit second?
	1)	M	2)	N

Space for rough work

Which of the following must be true of the sales representative's schedule?

3)

3)

81.

P

She visits M and before Q

She visits P and before M

4)

2)

4)

Q

She visits N and before R

She visits P and before S

Directions (Q. No. 82 & 83): Read the following information carefully to answer the given questions: Six people A, B, C, D, E and F are sitting on the ground in a hexagonal shape. All the sides of the hexagon so formed are of same length. A is not adjacent to B or C; D is not adjacent to C or E; B and C are adjacent; F is in the middle of D and C

- 82. Who is placed opposite to E?
 - 1) B

2) C

3) D

4) F

- 83. Which of the following is not a correct neighbour pair?
 - 1) A and F

2) D and F

3) B and E

4) C and F

- 84. Six members of a family namely A, B, C, D, E, F are travelling together, B is the son of C but C is not the mother of B. A and C are married couple. E is the brother of C. D is the daughter of A. F is the brother of B. How many male members are there in the family?
 - 1) 2

2) 3

3) 4

4) 1

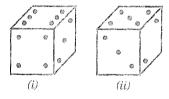
- 85. If 'air' is called 'green', 'green' is called 'blue', 'blue' is called 'sky', 'sky' is called 'yellow', 'yellow' is called 'water' and 'water' is called 'pink', then what is the colour of clear sky?
 - 1) Blue

2) Sky

3) Yellow

4) Water

86. Two positions of a dice are shown below. When 2 is at the bottom, which number will be at the top?



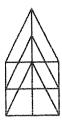
1) 1

2) 4

3) 6

4) Cannot be determined

87. How many triangles and parallelograms are there in the following figure?



1) 21, 17

2) 19, 13

3) 21, 15

- 4) 19, 17
- 88. The value of $\log_2 \log_3 \log_3 (27)^3$ is
 - 1) (

2) 1

3) 2

- 4) 3
- The ratio of present ages of P, Q and R is 3:4:5. After 4 years, the average ages of all the three will be 24 years. What was the difference between ages of Q and R, 6 years before
 - 1) 5 years

2) 6 years

3) 8 years

- 4) 10 years
- 90. The denominator of a fraction is 3 more than the numerator. If the numerator as well as the denominator is increased by 4, the fraction becomes $\frac{4}{5}$. What was the original fraction?
 - 1) $\frac{8}{11}$

2) $\frac{5}{8}$

3) $\frac{10}{13}$

- 4) $\frac{7}{10}$
- 91. The average weight of 100 students is 32 kg. The average weight of first 49 students is 30 kg, and that of last 50 students is 34 kg. What is the weight (in kg) of the 50th student?
 - 1) 25

2) 30

3) 32

- 4) 33
- 92. A sum of money is equally divided among a number of children. Had there been 16 children more, each would have received ₹ 2 less and had there been 16 fewer, each would have received ₹ 3 more. Find the sum of the money distributed.
 - 1) ₹ 880

2) ₹ 896

3) ₹ 928

4) ₹ 960

ENTERNO CONTRACTOR			E CLAR (C	ر مرع علا المراد					
93.	If x	x + y = 15 and $xy = 56$, then what is the value	of $x^2 + y$	2?					
	1)	110	2)	113					
	3)	121	4)	Cannot be determined					
94.	Thi	ree numbers are in the ratio of $3:4:5$ and the	neir LCN	I is 4200. Their HCF is					
	1)	60	2)	20					
	3)	70	4)	15					
95.	The	The sum of the perfect squares between 120 and 300 is							
	1)	1204	2)	1024					
	3)	1296	4)	1400					
96.	The	e two parallel sides of a trapezium are 1.5 m	and 2.5	m respectively. If the perpendicular distance					
		between them is 6.5 metres, the area of the trapezium is							
	1)	10 m^2	2)	13 m ²					
	3)	20 m^2	4)	26 m ²					
97.	A b	A boat goes 15 km upstream and 22 km downstream in 5 hours. It goes 20 km upstream and $\frac{55}{2}$ km							
	dov	vnstream in $\frac{13}{2}$ hours. What is the speed (in	n km/hr)	of stream?					
	1)	3	2)	5					
	3)	8	4)	11					
98.	Atr	ain covers a distance of 10 km in 12 minute. I	If its spee	ed is decreased by 5 km/hr, the time taken by					
		cover the same distance will be							
	1)	10 min	2)	11 min 20 sec					
	3)	13 min	4)	13 min 20 sec					
99.	If se	lling price is doubled, the profit triples. Find	d the pro	ofit percent					
	1)	$66\frac{2}{3}$	2)	100					
	3)	$105\frac{1}{3}$	4)	120					
100.	30%	apples out of 450 are rotten. How many ap	ples are	in good condition?					
	1)	125	2)	180					
	3)	240	4)	315					

Space for rough work

SHIV CHHATRAPATI SHIKSHAN SANSTHA, LATUR RAJARSHI SHAHU MAHAVIDYALAYA, LATUR SHAHU SCREENING TEST - 2024 IMPORTANT DATES

SCREENING TEST - 2024 (OFFLINE MODE ONLY)	PCB GROUP - 10-00 AM TO 12-00 PM
DATE: 07 April 2024	PCM GROUP 02-30 PM TO 05-00 PM
Online Display of Provisional Answer Key	07-Apr-2024 : After 07-00 PM
Objections on Provisional Answer Key	08-Apr-2024 : UPTO 05-00 PM
Online Declaration - 1. Final Answer Key, 2. Copy of Candidate OMR Sheet, 3. Result of SCREENING TEST -2024 (Individual Login)	12-Apr-2024 : After 02-00 PM
Parent Meeting of Selected Candidate (PCB GROUP)	13-Apr-2024 : 11-00 AM
Parent Meeting of Selected Candidate (PCM GROUP)	14-Apr-2024 : 11-00 AM
Admissions :- First Selected List	13 to 16 April 2024
Admisions: Second Selected List (In case of vacancy only)	18 to 20 April 2024
Date of Commencement of Classes will be of	leclared in parent meeting

वरील तारखांमध्ये काही बदल झाल्यास वेबसाईट वर सूचना दिली जाईल.