



Question Booklet Sr. No.

112473

Exam Date: 07/04/2024

Time: 10.00 am. to 12.00 pm.

Max. Marks: 400

### **Important Instructions:**

- 1. Immediately fill the particulars on this page of The Test 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 Biology
- 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 answer1 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 Test Booklet with them.*
- 15. Do not fold or make any stray marks on the Answer-sheet.

Name of Candidate (In capital letters)	0		
Seat No. : In figures			1



			Section-A : Physic		
01	Αr	acing car has a uniform a	acceleration of 8 m/s	<sup>2</sup> . The distance covered by the car in	
	5 se	conds after the start is			
	1)	100 m	2)	200 m	
	3)	300 m	4)	400 m	
02.	Ab	us travels one third of the total	distance with a speed	of 12 km/h and remaining distance with the	
	spe	ed of 20 km/h. The average sp	eed of the bus is nearly	in km/h.	
	1)	14	2)	20	
	3)	12	4)	16	
03.	Αn	nonkey is climbing up a massl	ess rope, then the tensi	on in the rope	
	1)	Must be equal to the force a	applied by the monkey	on rope	
	2)	Must be less than the force	applied by the monkey	on rope	
	3)	Must be greater than the for	rce applied by the mon	key on rope	
	4)	Must be equal to or less tha	n or greater the force a	pplied by the monkey on the rope	
04.	The	average force necessary to sto	op a hammer having m	omentum 25 Ns in 0.05 second is	
	1)	25 N	2)	50 N	
	3)	1.25 N	4)	500 N	
05.	A ca	ar weighing 1000 kg was movi	ng with a velocity of 50	km/h on smooth horizontal rails. A mass of	
	250	kg is dropped into it. The velo	ocity with which it will	move just after the mass is dropped,	
	1)	2.5 km/h	2)	20 km/h	
	3)	40 km/h	4)	22.5 km/h	
06.	Ass	ertion : A force applied on the	body always does wor	rk on the body	
	Reason: If a force applied on a body displaces the body along the direction of force, workdone will				
	be r	naximum.			
	1)	Both Assertion & Reason ar	e correct and Reason is	s correct explanation of Assertion	
	2)	Both Assertion & Reason ar	re correct and Reason is	not correct explanation of Assertion	
	3)	Assertion is correct but Reas	son is incorrect		
	4)	Assertion is incorrect but Re	eason is correct		
07.	The	power of an engine is 19.6 kW	7. The capacity of water	it can lift up per second from a well of 40 m	
	dep	th is			
	1)	48 kg	2)	50 kg	
	3)	52 kg	4)	54 kg	

08. A house hold consumes 1 kWh of energy per day. This energy consumption in joule is

1)  $3.6 \times 10^5 \,\mathrm{J}$ 

2)  $6.3 \times 10^5 \text{ J}$ 

3)  $6.3 \times 10^6 \,\mathrm{J}$ 

4)  $3.6 \times 10^6 \,\mathrm{J}$ 

09. The weight of a body at the centre of the earth is

1) Zero

- 2) Infinite
- 3) Same as on the surface of the earth
- 4) None of these

10. A hypothetical planet has a mass of half that of the earth and the radius of twice that of the earth. What is acceleration due to gravity on the surface of the planet in terms of g (where g is acceleration due to gravity on the surface of earth)

1) g

2) g/4

3) g/2

4) g/8

11. A body weighs 72 N on the surface of the earth. What is the gravitational force on it, at a height equal to half of the radius of the earth?

1) 32 N

2) 30 N

3) 24 N

4) 48 N

12. A metal block of volume 500 cm<sup>3</sup> and density 2 g/cm<sup>3</sup> is suspended from a spring balance vertically and one fourth of its volume is immersed in water. The spring balance now reads, \_\_\_\_\_ N.

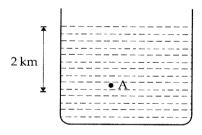
1) 8.575

2) 10.175

3) 500

4) 8.750

13. In the given figure the absolute pressure at point A, below sea level is (The density of sea water =  $1000 \text{ kg/m}^3$ ,  $g = 10 \text{ m/s}^2$ )



1) 155 Kpa

2) 335 Kpa

3) 21325 Kpa

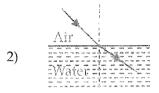
4) 201.325 Kpa

14. Assertion: On rainy day sound travels slower than dry day

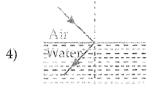
Reason: When moisture present in air the air density decreases

- 1) Both Assertion & Reason are correct and Reason is correct explanation of Assertion
- 2) Both Assertion & Reason are correct and Reason is not correct explanation of Assertion
- 3) Assertion is correct but Reason is incorrect
- 4) Assertion is incorrect but Reason is correct
- 15. While travelling from air to water path of sound beam is likely to be which one of the following?









- 16. The specific heat capacities of two bodies A and B are in the ratio 1:2 and masses are in the ratio 3:4 respectively. Then the ratio of their heat capacities, will be
  - 1) 3:2

2) 2:3

3) 6:16

- 4) 13:8
- 17. 10 g of ice at 20°C is mixed with 10g water at 10°C. What will be the resultant temperature of mixture?
  - 1) 5°C

2) 0°C

3)  $-2^{\circ}$ C

- 4) 10°C
- 18. The potential difference across a resistor of resistance 10  $\Omega$ , if  $10^{20}$  electrons flow through it in one second, is \_\_\_\_\_\_ V.
  - 1) 320

2) 400

3) 80

- 4) 160
- 19. Resistance of  $2\Omega$  and  $3\Omega$  are connected in series. If the potential difference across the  $2\Omega$  resistor is 3V, the potential difference across  $3\Omega$  is
  - 1) 4.5 V

2) 9 V

3) 3 V

4) 2 V

20. A fuse wire should have \_\_\_\_\_

1) High resistance

2) Low-melting point

3) Both 1 and 2

4) None of these

21. Magnetic field is produced by the flow of electric current in a straight wire, this phenomenon was discovered by

1) Coulomb

2) Oersted

3) Faraday

4) Maxwell

22. A virtual image larger than the object can be produced by

1) Concave lens

2) Concave mirror

3) Convex mirror

4) Plane mirror

23. When angle between 2 plane mirrors is 60°, the number of images formed would be

1) 10

2) 12

3) 5

4) 8

24. Two thin lenses of focal length  $f_1$  and  $f_2$  are kept in contact coaxially. The power of combination will be

1)  $\frac{f_1 f_2}{f_1 + f_2}$ 

 $2) \qquad \frac{f_1 + f_2}{f_1 f_2}$ 

3)  $\frac{f_1 f_2}{f_1 - f_2}$ 

4)  $f_1 + f_2$ 

25. An object placed 20 cm in front of a concave mirror whose focal length is 25 cm what will be its magnification

1) +5

2) +2

+0.20

-0.20

### Section-B: Chemistry

4d, 5p, 5f and 6p orbitals are arranged in the order of decreasing energy, the correct option is 26.

1) 5f > 6p > 5p > 4d

6p > 5f > 5p > 4d2)

3) 6p > 5f > 4d > 5p 4) 5f > 6p > 4d > 5p

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

	Column-I		Column-II
A)	Molarity	i)	$n_{eq}/V(lt.)$
B)	Normality	ii)	n/W(kg)
C)	Molality	iii)	$n_A/n_A + n_B$
D)	Mole fraction	iv)	n/V(lt.)
1)	A–iv; B–i; C–iii; D–ii	2)	A–iv; B–i; C–ii; I
•			

D-iii

3) A-i; B-iv; C-iii; D-i A-i; B-iv; C-ii; D-iii

28.  $Zn + H_2O(steam) \longrightarrow A + B$ , in the equation A and B are

Zn, O, 1)

2) ZnH,, O,

3) ZnO,, O, 4) ZnO, H,

29. Which pollutant is harmful for Taj Mahal

> 1) Н,

2) Ο,

3) SO, 4) N,

30. Match the following Column-I with Column-II and select the most appropriate option given below:

	Column-I		Column-II
A)	Monobasic	i)	КОН
B)	Dibasic	ii)	Ca(OH) <sub>2</sub>
C)	Diacidic	iii)	$H_2SO_4$
D)	Monoacidic	iv)	$HNO_3$
1)	A–iv; B–iii; C–ii; D–i	2)	A–i; B–ii; C–i; D–iii
3)	A–iv; B–ii; C–i; D–iii	4)	A–iii; B–iv; C–ii; D–i

31. **Assertion**: Phenolphthalein is an acid-base indicator.

Reason: It gives different colours in acidic and basic medium.

- 1) Both Assertion & Reason are correct and Reason is correct explanation of Assertion
- 2) Both Assertion & Reason are correct and Reason is not correct explanation of Assertion
- 3) Assertion is correct but Reason is incorrect
- 4) Assertion is incorrect but Reason is correct

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32.	Wh	ich compound has both covalent as well as co	oordina	ate covalent bond?
	1)	$H_2S$	2)	$CO_2$
	3)	$H_2O$	4)	$N_2O_5$
33.	Cor	rrect decreasing power of ionisation is		
	1)	α-rays > γ-rays > β-rays	2)	$\alpha$ -rays > $\beta$ -rays > $\gamma$ -rays
	3)	β-rays > α-rays > γ-rays	4)	$\gamma$ -rays $> \beta$ -rays $> \alpha$ -rays
34.	xFε	$e + yH_2O \longrightarrow Fe_3O_4 + zH_2$		
	The	coefficients $x$ , $y$ and $z$ in the balanced equati	on are	respectively
	1)	4, 4 and 3	2)	3, 3 and 4
	3)	3, 4 and 3	4)	3, 4 and 4
35.	Wh	ich of the following reaction represents the g	iven st	atement?
	'Silv	ver chloride decomposes to give silver and ch	llorine'	
	1)	$2AgCl_{(s)} \rightarrow 2Ag_{(s)} + Cl_{2(g)}$	2)	$\operatorname{AgCl}_{2(s)} \to \operatorname{Ag}_{(s)} + \operatorname{Cl}_{2(g)}$
	3)	$AgCl_{2(s)} \to Ag_{(s)} + Cl_{(g)}$	4)	$Ag_2Cl_{(s)} \to Ag_{2(s)} + Cl_{(g)}$
36.	Dur	ring roasting of copper pyrite the gas remove	d is?	
	1)	Sulpher trioxide	2)	Sulpher dioxide
	3)	Oxygen	4)	Nitrogen
37.	If ar	n ore contains impurity of $SiO_2$ , identify the a	ppropi	riate flux for the removal of it
	1)	MnO	2)	$P_{4}O_{10}$
	3)	$O_2$	4)	$SO_2$
38.	The	first ionisation energies of Li, Be, B and C are	e in the	order
	1)	Li > B < Be < C	2)	Li < Be > B < C
	3)	Li > Be > B > C	4)	Li < Be > B > C
39.	An	element with atomic number '32' belongs to		
	1)	4th period, 16th group	2)	3 <sup>rd</sup> period, 14 <sup>th</sup> group
	3)	4 <sup>th</sup> period, 14 <sup>th</sup> group	4)	5 <sup>th</sup> period, 15 <sup>th</sup> group
40.	The	volume of CO <sub>2</sub> liberated at STP on burning 2	4g of c	arbon in excess of oxygen is
	1)	22.4 litre	2)	44.8 litre
	3)	16.8 litre	4)	67.2 litre

- 41. If equal volume of two gases, CH<sub>4</sub> and O<sub>2</sub> are allowed to diffuse, then time taken for diffusion of CH<sub>4</sub> is found to be
  - 1)  $\frac{1}{\sqrt{2}}$  times that of  $O_2$

2)  $\frac{1}{2}$  times that of  $O_2$ 

3)  $\sqrt{2}$  times that of  $O_2$ 

- 4) 2 times that of O<sub>2</sub>
- 42. If the formula of metallic nitrate is  $M(NO_3)_{2'}$  then what will be formula of the nitride of that metal?
  - 1) MN,

2)  $M_3N_2$ 

3) M<sub>2</sub>N

- 4)  $M_2N_3$
- 43. The ratio of phosphorous atoms present in calcium phosphide and magnesium phosphate is
  - 1) 1:2

2) 2:1

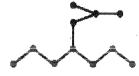
3) 1:3

- 4) 1:1
- 44. Which of the following pairs is homologue?
  - 1) CH<sub>3</sub>OH,CH<sub>3</sub>OCH<sub>3</sub>

2) CH<sub>3</sub>OH, CH<sub>3</sub>SH

3) CH<sub>3</sub>OCH<sub>3</sub>, CH<sub>3</sub>CH<sub>2</sub>OH

- 4) CH<sub>3</sub>OH, CH<sub>3</sub>CH<sub>2</sub>OH
- 45. How many 2° carbon present in the following compound?



1) 4

2) 5

3) 6

- 4) 7
- 46. Names of some compounds are given. Which one is not according to IUPAC system?
  - 1)  $CH_3$   $CH_3$   $CH_3CH_2 CH CH CH_2CH_3$   $CH_2CH_3$   $CH_2CH_3$  3-Methyl-4-ethylheptane
- 2) CH<sub>3</sub>-CH-CH-CH<sub>3</sub> OH CH<sub>3</sub>
  - 3-Methylbutan-2-ol

- 3) CH<sub>3</sub>CH<sub>3</sub> C CH CH<sub>3</sub> CH<sub>2</sub>CH<sub>3</sub>
  - 2-Ethyl-3-methylbut-1-ene

4)  $CH_3 - C = C - CH(CH_3)_2$ 4-Methylpent-2-yne

### SCSS-ST-24-PCB-(SET-A)

47. 2-Methylpropan-1-ol is obtained from

1) Ethanal +  $(CH_3)_2$ CHMgX

2) Methanal +  $(CH_3)_2CHMgX$ 

3) Phenol + Conc.H<sub>2</sub>SO<sub>4</sub>

4) Phenol + Conc.HNO<sub>3</sub>

48. Which of the following compound has the highest boiling point?

1) CH<sub>3</sub>OCH<sub>2</sub>CH<sub>3</sub>

2) CH<sub>3</sub>COOH

3) CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>OH

4) CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>

49. Select the CORRECT statements from the following:

- a) Cellulose is made up of a large number of glucose units
- b) PET is a very familiar form of polyester
- c) Polyvinyl chloride is a thermosetting plastic
- d) Metal cans are non-biodegradable
- e) Melamine resists fire and tolerate heat

1) a, b, d and e

2) a, b, c and e

3) b, c only

4) c, d and e only

50. Assertion: Petroleum or crude oil pumped out of oil well is not pure

Reason: Petroleum is refined to get various fraction which can be used for specific purposes

- 1) Both Assertion & Reason are correct and Reason is correct explanation of Assertion
- 2) Both Assertion & Reason are correct and Reason is not correct explanation of Assertion
- 3) Assertion is correct but Reason is incorrect
- 4) Assertion is incorrect but Reason is correct

### Section-C: Biology

51. Assertion: Non-living objects exhibit metabolism.

**Reason**: Growth is observed only in living things.

- 1) Both Assertion & Reason are correct and Reason is correct explanation of Assertion
- 2) Both Assertion & Reason are correct and Reason is not correct explanation of Assertion
- 3) Assertion is correct but Reason is incorrect
- 4) Both Assertion and Reason are incorrect
- 52. What is the criteria used by R. H. Whittaker for classification?
  - A) Physiological character
  - C) Mode of nutrition
  - E) Reproduction
  - 1) All except A and B
  - 3) All except E and F

- B) Phylogenetic relationship
- D) Thallus organization
- F) Biochemical difference
- 2) All except C and D
- 4) All except A and F
- 53. Similarities between monocotyledonous and dicotyledonous plants includes:
  - P) Both have parallel venation
    - Both posseses trimerous flowers
  - 1) P and Q only

R)

3) Q and R only

- Q) Both posseses vascular tissue system
- S) Both have embryo with two cotyledons
- 2) P, Q and R
- 4) Q only
- 54. You are given 13 meiotic divisions. From these divisions, how many enclosed seeds you can form and how many pollen grains will be wasted?
  - 1) Number of seed-10; number of wasted pollen grain-2
  - 2) Number of seed-13; number of wasted pollen grain-0
  - 3) Number of seed-2; number of wasted pollen grain-10
  - 4) Number of seed-52; number of wasted pollen grain-52
- 55. Cell elongation in internodal regions of the green plant takes place due to:
  - 1) Auxin

2) Gibberellins

3) Ethylene

- 4) Abscisic acid
- 56. A farmer notices that his crop yield increases significantly when he introduces beehives near his fields. Which aspects of sexual reproduction in flowering plants is most likely responsible for this increase?
  - 1) Germination

2) Fertilization

3) Double fertilization

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

***************************************	Column-I			Column-II
	(Genetic cross)			(Genotypic ratio)
A)	Rr × Rr	i)		1:1:1:1
B)	$Rr \times rr$	ii	)	1:2:1:2:4:2:1:2:1
C)	RrYy × rryy	ii	i)	1:1
D)	$RrYy \times RrYy$	iv	7)	1:2:1
1)	A–iv; B–iii; C–i; D–ii	2	)	A–iv; B–iii; C–ii; D–i
3)	A–iii; B–iv; C–ii; D–i	4	)	A-iii; B-iv; C-i; D-ii

58.	Rea	nd the following statements and select th	e corr	ect option with respect to inheritance o
	cha	racters?		
	P)	Factors responsible for inheritance of char	acters a	are present in pairs
	Q)	Alternative forms of same gene are called	alleles	
	R)	Alleles resides on non-homologous chrom	osome	s
	S)	Dominant allele is represented by capital l	etter	
	1)	P and Q only	2)	P, Q and R
	3)	P, Q and S	4)	R and S only
59.	A co	ouple is expecting a child and undergoes prer	natal tes	sting. The results show an extra chromosome
	in th	ne $21^{\mathrm{st}}$ -pair. What disorder is the child likely	to have	?
	1)	Turner's syndrome	2)	Klinfelter's syndrome
	3)	Down's syndrome	4)	Edward's syndrome
60.	Rea	d the following statements and select the corr	ect opti	on with respect to James Watson and Franci
	Cric	ck's model of DNA :		
	P)	Height of one Helix is 34 A <sup>0</sup>		
	Q)	One helix contain 20 base pairs		
	R)	Distance between two base pairs is 0.34 nm		
	S)	Diameter of DNA is 20 A <sup>0</sup>		
	1)	P and Q only	2)	P and R only
	3)	P, Q and R only	4)	P, R and S only
61.	Whi	ich of the following correctly represents the o	entral	dogma of molecular biology?
	1)	$(R NA \xrightarrow{Transcription} DNA \xrightarrow{Translation} Prot$	ein	
	2)	$(D NA \xrightarrow{Transcription} RNA \xrightarrow{Translation} Protection$	ein	
	3)	$Proteins \xrightarrow{Transcription} RNA \xrightarrow{Translation} DN$	(Å)	
	4)	$(DNA \xrightarrow{Transcription} Proteins \xrightarrow{Translation} RI$	NA	
62.	Give	en below are two statements.		
	Stat	ement-I: Vaccine is a antigen containing ma	terial g	riven to acquire either permanent or tempo
	rary	immunity against a specific pathogen or dis	ease.	
	Stat	ement-II: A gene synthesizing the vitamin-A	A has b	een introduced in the variety of rice.
	Cho	ose the most appropriate answer from the o	ptions (	given below :
	1)	Both Statement-I and Statement-II are inco	rrect	
	2)	Statement-I is correct but Statement-II is in	correct	
	3)	Statement-I is incorrect but Statement-II is	correct	:
	4)	Both Statement-I and Statement-II are corr	ect	

63. Match the following Column-I with Column-II and select the most appropriate option given below:

	Column-I		Column-II
A)	First tropic level (T <sub>1</sub> )	i)	Grass
B)	Second tropic level $(T_2)$	ii)	Grasshopper
C)	Third tropic level (T <sub>3</sub> )	111)	Frog
D)	Fourth tropic level $(T_4)$	iv)	Snake
		v)	Hawk
1)	A–i; B–iii; C–iv; D–v	2)	A-i; B-ii; C-iii; D-iv

3) A-v; B-iv; C-iii; D-ii

- 4) A-iv; B-iii; C-ii; D-v
- 64. Select the option that correctly matches characteristic features with the group of three animals
  - 1) Skeleton of spicules - Sycon, Adamsia, Spongilla
  - 2) Excretion by flame cells – Taenia, Fasciola, Silver fish
  - 3) Mouth contains Radula - Dentalium, Octopus, Star fish
  - 4) Jointed appendages - Cockroach, Apis, Laccifer
- 65. Some proteins and lipids manufactured by RER and SER help in building the cell membrane. The process is known as
  - 1) Membrane biogenesis

2) Endocytosis

3) Exocytosis

- 4) Both 2 and 3
- 66. Match the following Column-I with Column-II and select the most appropriate option given below:

EMPONENTIAL STATE OF THE PARTY	Column-I	Contraction of the Contraction of the State of the Contraction of the	Column-II
A)	Fore brain	i)	Posture and balance
B)	Association area	ii)	B.P., Salivation, Vomiting
C)	Medulla	iii)	Sensation & thinking
D)	Cerebellum	iv)	Interpretation & respond to information
1)	A–iv; B–iii; C–i; D–ii	2)	A–iii; B–iv; C–i; D–ii
3)	A–iii; B–iv; C–ii; D–i	4)	A–ii; B–iii; C–ii; D–i

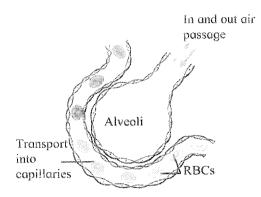
- 67. Which of the following statements are INCORRECT?
  - A) Chemical coordination is seen in both plants and animals
  - B) Nervous coordination is seen in both plants and animals
  - C) Hormones produced in endocrine gland move to body parts through nerve fibres
  - D) A feedback mechanism regulates the action of the hormones
  - 1) A and B

2) B and D

3) B and C

- 4) A and D
- 68. Which of the following events in the mouth cavity will be affected if salivary amylase is lacking in the saliva?
  - 1) Starch breaking down into sugars
  - 2) Proteins breaking down into amino acids
  - 3) Absorption of vitamins
  - 4) Fats breaking down into fatty acids and glycerol

69. Due to which part shown in diagram, the larger surface is available for gaseous exchange?



1) In and out air passage 2) Alveoli

3) Capillaries

- 4) **RBCs**
- 70. Select the INCORRECT statement
  - 1) LH and FSH triggers ovulation in ovary
  - 2) Endometrium starts to regenerate under the effect of progesterone
  - 3) Developed follicles bursts under the effect of LH
  - 4) Estrogen is secreted by developing follicles
- 71. **Assertion**: Vagina acts as copulation canal and fertilization canal.

**Reason:** Both insemination and fusion of gametes occur in vagina of female.

- 1) Both Assertion & Reason are correct and Reason is correct explanation of Assertion
- 2) Both Assertion & Reason are correct and Reason is not correct explanation of Assertion
- 3) Assertion is correct but Reason is incorrect
- 4) Both Assertion and Reason are incorrect
- 72. Match the following disease given under Column-I with its group of causetive agent given under Column-II and select correct option given below:

	Column-I			Column-II
A)	Ringworm	i)	)	Protozoan
B)	Malaria	ii	i)	Virus
C)	Leprosy	ii	ii)	Fungi
D)	Influenza	i	v)	Bacteria
1)	A–iv; B–iii; C–i; D–ii	2	2)	A–i; B–iii; C–iv; D

)—i

3) A-iii; B-i; C-iv; D-ii

- 4) A-iii; B-i; C-ii; D-iv
- 73. Which act has been enacted since 17th October 2000 and been amended in 2008 for person committing the cyber crime?
  - 1) IT Act - 2000

IT Act - 2008 2)

3) IT Act - 1999 4) IT Act - 2014

### 74. Statements:

- A) Evolution is the gradual change occuring in living organisms over a long duration.
- B) 5.5 billion years ago, life had been non existent on the Earth.
- C) First primitive type of cells may have been formed from the mixture of different types of organic and inorganic compounds.
- D) According to theory of evolution, first living material (protoplasm) has been formed in fresh water bodies.

Which of the above statements are INCORRECT?

1) B and D

2) B, C and D

3) A, B and C

- 4) Only D
- 75. The name of some common diseases are given below:

Cold, Flu, AIDS, Pneumonia, Cholera, Typhoid, Tuberculosis, Polio

How many of the above diseases are caused by viruses?

1) 4

2) 5

3) 3

4) 6

# Section-D : Basic Mathematics & Mental Ability

	3.10.111			
76.	5 kg	g of metal A and 20 kg of metal B are mixe	d to form an	alloy. The percentage of metal A in the alloy
	is			
	1)	20 %	2)	25 %
	3)	40 %	4)	None of these
77.			ns 10%. If th	e article is sold at twice of the price, the gain
	•	cent will be		
	1)	20 %	2)	60 %
	3)	100 %	4)	120 %
78.	A ta	kes 2 hours more than B to walk d km, b	out if A doub	oles his speed, then he can make it in 1 hour
	less	than B. How much time does B require	for walking	d km?
	1)	$\frac{d}{2}$ hours	2)	3 hours
	3)	4 hours	4)	$\frac{24}{3}$ hours
<i>7</i> 9.	A bo	oat covers 64 km upstream in 8 hours a	nd 120 km d	lownstream in 12 hours. What is the speed
	(in r	n/s) of the boat in still water?		•
	1)	2.5	2)	2
	3)	3.5	4)	3
80.	If a	square and a rhombus stand on the sam	e base, then	the ratio of the areas of the square and the
	rhoi	mbus is		
	1)	greater than 1	2)	equal to 1
	3)	equal to $\frac{1}{2}$	4)	equal to $\frac{1}{4}$
81.	If p,	$q_r$ r are all real number then $(p-q)^3 + (q$	$(-r)^3 + (r - p)^3$	o) <sup>3</sup> is equal to
	1)	(p-q)(q-r)(r-p)		3(p-q)(q-r)(r-p)
	3)	1	4)	0
32.	Wha	at least value which should be added to	1812 to mak	e it divisible by 7, 11 and 14?

Space for rough work

2)

4)

36

154

1)

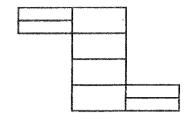
3)

12

72

DJ.	ır a,	b, c are integers; $a^2 + b^2 = 45$ and $b^2 + c^2 = 40$ , t	nen me	e values of a, b and c respectively are
	1)	2,6,3	2)	3, 2, 6
	3)	5, 4, 3	4)	None of these
84.	On	a school's Annual Day sweets were to be equ	ally di	stributed amongst 112 children. But on that
	pari	ticular day, 32 children were absent. Thus the	remaii	ning children got 6 extra sweets. How many
	swe	eets was each child originally supposed to get	?	
	1)	15	2)	18
	3)	24	4)	Cannot be determined
85.	The	average age of a group of 9 family members	is 22 ye	ars. LAVGIR is the youngest and his age is 6
	year	rs. What was the average age of the family jus	st befor	re LAVGIR was born?
	1)	18	2)	7
	3)	20	4)	24
86.	The	sum of the numerator and denominator of a	fraction	n is $11$ . If $1$ is added to the numerator and $2$ is
	sub	tracted from the denominator, it becomes $\frac{2}{3}$ .	The fr	action is
	1)	$\frac{5}{6}$	2)	
	3)	$\frac{3}{8}$	4)	<u>8</u> <u>3</u>
87.	The	ratio between the present ages of Simran and	Smriti	is 3 : 7, respectively. After 4 years Smriti's age
	will	be 39 years. What was Simran's age 4 years a	go?	
	1)	12 years	2)	13 years
	3)	19 years	4)	11 years
88.	The	value of $\log_2[\log_2{\{\log_4(\log_4(256)^4)\}}]$ is		
	1)	0	2)	1
	3)	2	4)	4

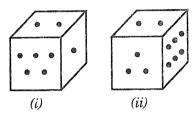
89. Count the number of rectangles in the given figure.



- 1) 8
- 3) 18

- 2) 17
- 4) 20

90. Two positions of a dice are given below. When 1 is at the top, which number will be at the bottom?



- 1) 2
- 3) 4

- 2) 3
- 4) 6

91. If animals which can walk are called 'swimmers' animals who crawl are called 'flying', those living in water are called 'snakes' and those which fly in the sky are called 'hunters', then what will a lizard be called?

1) Swimmers

2) Snakes

3) Flying

4) Hunters

92. Pointing to the woman in the picture, Rajiv said, "Her mother has only one grandchild whose mother is my wife." How is the woman in the picture related to Rajiv?

1) Cousin

2) Wife

3) Sister

4) Data inadequate

Dire	ction	s (Q. No. 93 & 94): Read the following infor	mation	to answer the given questions:			
	P, Q, R, S, T, U, V and W are eight friends sitting around a circle facing towards the centre.						
	i)	W is on the immediate left of P but is not the neighbour of T or S					
	ii)	U is on the immediate right of $Q$ and $V$ is the neighbour of $T$					
	iii)	R is between T and U					
93.	Which of the following statements is true?						
	1)	T is between U and Q	2)	U is the neighbour of V			
	3)	V is between W and T	4)	W is between P and S			
94.	What is the position of S?						
	1)	On the immediate left of Q	2)	Second to the right of U			
	3)	Between Q and U	4)	On the immediate left of P			
Dire	ctions	s (Q. No. 95 & 96): Read the following inform	nation	carefully to answer the given questions:			
	Five plays A, B, C, D and E are to be staged from Monday to Friday of a week. On each day, on						
		play will be staged. D or E should not be either the first or last to be staged. E should be immediately					
		owed by C. B to be staged immediately after I		-			
95.	Which is the first play to be staged?						
	1)	A	2)	В			
	3)	C	4)	Cannot be determined			
96.	Which of the following is the correct sequence of staging all the plays?						
	1)	ADBCE	2)	AECDB			
	3)	BDAEC	4)	None			
97.	The following question contains three elements. These elements may or may not have some						
		inter-linkage. Each group of elements may fit into one of these diagrams at (1), (2), (3) and (4)					
	You have to indicate the group of elements which correctly fits the diagrams.						
	Which of the following diagram indicates the best relation between <b>Children</b> , <b>Naughty</b> and						
	Studious?						
	1)		2)	00			

# SCSS-ST-24-PCB-(SET-A)

98.	If 30th January, 2003 was Thursday, what was the day on 2nd March, 2003?					
	1)	Tuesday	2)	Thursday		
	3)	Saturday	4)	Sunday		
99. If ' $P \times Q$ ' means ' $P$ is the daughter of $Q'$ ; ' $P + Q'$ means ' $P$ is the father of $Q'$ ; ' $P \div Q'$ means ' $P$ is						
	of Q'	and $'P-Q'$ means $'P$ is the brother of $Q'$ , then i	n the e	expression $A \div B + C - E \times F$ , how is A related		
to F?						
	1)	Mother	2)	Aunt		
	3)	Daughter-in-law	4)	None of these		
100.	30 m. Then he turns right and walks 35 m					
Then he turns right and walks 35 m. Then he turns left and walks 15 m. Then he again turn						
	walks 15 m. In which direction and how many metres away is he from his original position?					
	1)	15 metres West	2)	30 metres East		
	3)	30 metres West	4)	45 metres East		

# 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-Арт-2024 . After 02-00 РМ				
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 declared in parent meeting					

वरील तारखांमध्ये काही बदल झाल्यास वेबसाईट वर सूचना दिली जाईल.