GENERAL INSTRUCTIONS FOR SAMPLE TEST PAPERS FOR RESO-SAT/RESO-FAST

STUDENTS MOVING TO CLASS-IX

Time : 11/2 Hr.

Max. Marks : 100

- 1. In Mathematics, Physics, Chemistry, Biology each question carry 2(two) marks and in Social Science, Mental Ability & English each question carry 1 (one) mark.
- 2. Blank papers, clip boards, log tables, slide rule, calculators, mobile or any other electronic gadgets in any form is not allowed.
- 3. Write your Name and Roll No. in the space provided in the bottom of this booklet.
- 4. Before answering the paper, fill up the required details in the blank space provided in the answer sheet.
- 5. Do not forget to mention your roll number neatly and clearly in the blank space provided in the answer sheet.
- 6. There is 1/4 negative marking for each wrong answer.So attempt each question carefully.
- 7. No rough sheets will be provided by the invigilators. All the rough work is to be done in the blank space provided in the question paper.
- 8. In case of any dispute, the answer filled in the OMR sheet available with the institute shall be final.

MARKING CRITERIA						
No. of Questions	Туре	Marks				
	Correc		ect		Wrong	Blank
1–60	Only one correct	Q. No. 1 to 40 : 2 Marks each		ach	–0.50 Marks	0
1-00	only one contect	Q. No. 41 to 60	1 Marks ea	ach	–0.25 Marks	•
	IM	PORTA	TL			
PROCEDURE OF FILLING UP THE ANSWERS IN OMR SHEET						
Wrong Filling Right Filling						
	D Tick mark	A	©	-ully da	rken with HB I	Pencil
) O X (Cross mark	A	©	ully da	rken with HB F	Pencil
A 🖲 © 🤃	Half filled or sen	ni dark 🛛 🔿 🔴	© 🖻 F	ully da	rken with HB F	Pencil
B C (Light filled	В	© 🖻 F	ully da	rken with HB F	Pencil

MARKING CRITERIA

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- 1. If $(1^3 + 2^3 + 3^3 + 4^3)^{3/2} = \frac{1}{x}$, then x is (A) 100 (B) 1/100 (C) 1000 (D) 1/1000
- ABCDE is a regular pentagon. A star of five points ACEBDA is formed to join their alternate vertices. The sum of all five vertex angles of this star is –



(A) Two right angle(B) Three right angle(C) Four right angle(D) Five right angle

- A fruit seller losses 10% by selling 26 oranges for Rs. 25/ The number of oranges he should sell for Rs. 5/ each to gain 17% is :
 (A) 4
 (B) 5
 - (C) 6 (D) 8
- Amongs the given options which of the number is the average of the remaining three ?
 (A) 26
 (B) 39
 (C) 30
 (D) 61
- 5. Six more than one-fourth of a number is two fifth of the same number. Then the number is :
 (A) 30
 (B) 40
 (C) 50
 (D) 60
- 6. If a + b = 12, ab = 17 then the value of (4 + a)(4 + b) is -(A) 61 (B) 64 (C) 81 (D) 74

The sides of an 8 × 8 square are cut by certain points into pieces of length 1 and 7, 2 and 6, 3 and 5 and 4 and 4 as shown in figure. The area of the quadrilateral determined by these four points are :



(A) 28	(B) 36
(C) 48	(D) 8

Which of the following number is the largest?

(A) (1 + 2 ^{1/2}) ²	(B) $2\left(\frac{1}{6}+\frac{1}{3}\right)^{-1}$
(C) (24) ^{0.5}	$(D)\left(\frac{10}{7}\right)\left(\frac{9}{6}\right)\left(\frac{8}{5}\right)$

In a class, the number of boys is more than the number of girls by 12% of the total strength. The ratio of boys to girls is : (A) 11 : 14 (B) 14 : 11 (C) 25 : 22

(C) 25 : 28	(D) 28 : 25
The mean weight o	f a class of 34 students is

46.5 kg. If weight of the teacher is included, the mean rises by 500 gm. Then the weight of the

teacher is –

(A) 175 kg	(B) 62 kg
(C) 64 kg	(D) 72 kg
Pressure varies (A) F (C) F ²	with force F as : (B) F ^{_1} (D) F ^{_2}

Space For Rough Work

11.

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12. The unit of change in momentum is : (A) N × s (B) N/s

(C) N	(D) $\frac{\text{kgxs}}{\text{m}}$
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13.	The phenomenon due to which bottom of a tank			
	filled with water app	ears raised is :		
	(A) dispersion	(B) refraction		
	(C) reflection	(D) all of them		

- 14.
 How many electrons constitute current of one micro ampere in one second ?

 (A) 6.25×10^6 (B) 6.25×10^{12}

 (C) 6.25×10^9 (D) 6.25×10^{15}
- 15.
 The shrillness of a musical sound depends upon:

 (A) Amplitude
 (B) Loudness

 (C) Frequency
 (D) Quality
- 16. Two stretched membranes of area 2 cm² and 3 cm² are placed in a liquid at the same depth. The ratio or the pressure on them is :
 - (A) 2² : 3² (B) 2 : 3 (C) 3 : 2 (D) 1 : 1
- 17. Piece of resistance wire has resistance of 4Ω . It is doubled on itself. Now its resistance will be :
 - (A) 4Ω (B) 2Ω

 (C) 1Ω (D) 8Ω
- 18. An electric bell when ringing :(A) carries no electric current(B) carries continuous current
 - (C) carries intermittent current
 - (D) has a permanent magnet to make it work

19. Assertion : Earth behave like a huge bar magnet. **Reason** : The freely suspended magnet always point in a particular direction.
(A) both assertion and reason are true and reason is the correct explanation of assertion.
(B) both assertion and reason are true and reason is not the correct explanation of assertion of assertion .

(C) assertion is true and reason is false.(D) both assertion and reason are false.

Given graph indicates negative velocity

20.



Which of the following graph also indicate negative velocity





21. In fire extinguishers, CO_2 extinguishes the fire by forming -

(A) solution	(B) foam
(C) gas	(D) emulsion
The first fully man	made fibre was :
(A) Nylon	(B) Silk

(C) Cotton (D) Terylene

Space For Rough Work

22.



				(D)Statement 1 is true	and statement 2 is false
23.	Percentage of carbon p anthracite is :- (A) 94 - 98% (C) 78 – 86 %	(B) 27 - 30% (D) 27 %	29.	reaction with air produc B is used in rubber ind C acts as a conductor	ements such that A on ces dazzling white flame, lustry for hardening and with rise in temperature.
24.	Mg burns with oxygen (A) Green yellow flame (B) Blue flame (C) Brick red flame (D) Dazzling white flam			Then A, B, C are – (A) metals (B) metalloid, metal, an (C) non-metal, metal, r (D) metal, non-metal, r	
25.	Which of the followi thermosetting plastic? (A) Melamine (C) PVC	ng is an example of (B) Polythene (D) All the above	30.	produces white precip	
26.	Tungsten is used in ele (A) it has high melting (B) it is metallic in natu (C) it has high tensile s	point ire		(B) 'A' is $CaCO_3$ and 'B (C) 'A' is Ca(OH)HCO_3 (D) 'A' is CaCO_3 and 'B	i' is Ca(OH) HCO_3 and 'B' is Ca(HCO_3) ₂ i' is Ca(HCO ₃) ₂
27.	 (D) it has high density Which of the following a petrol to improve its quit (A) Calcium carbonate (B) Ethylene dibromide (C) Tetraethyl lead (D) Ethyl Mercaptan 		31.		nhoek
28.	electrode in an electrol Statement - $2 \rightarrow$ Gra non-metal. Choose the correct sta	phite is an example of	32.	Raw materials require photosynthesis are : (A) CO_2 and H_2O (B) Sugar and H_2O (C) O_2 and chlorophyll (D) Minerals and O_2	red for the process of
	is the correct explanati (B) Statement 1 and 2 a is not the correct expla	are true but statement 2	33.	Which is not the const (A) Red blood cells	ituent of blood ? (B) White blood cells



(C) Statements 1 and 2 are false

statement 2 is false

34. 35.	(C) Platelets "Nitrogen fixation" mean (A) conversion of atmo- nitrogen compounds (B) nitrogen cycle in nat (C) manufacture of nitrog (D) liquification of nitrog The oxygen evolved in p from (A) CO_2 (C) temperature	ospheric nitrogen into ture gen from air en	40.	Match the disease wit mark the correct state (i) Rabies (ii) Malaria (iii) Ring worm (iv) Tuberculosis (A) i - 1, ii - 2, iii - 3, iv (B) i - 3, ii - 4, iii - 2, iv (C) i - 2, ii - 3, iii - 4, iv (D) i - 4, ii - 2, iii - 1, iv	 Bacteria Fungus Virus Plasmodium 4 1 1
36.	Which among the follow between living and non (A) Euglena (C) Fungi	ing is a connecting link	41. 42.	Ain–i–Akbari was writte (A) Akbar (C) Raja Todar Mal Hitler formed a party na (A) Communist Party	(B) Faizi (D) Abul Fazal
37.	Which of the following a for an animal cell : (i) It contains a single la (ii) Outer most boundary (iii) Nucleus is well d center. (A) (i) and (ii)	rge vacuole y is plasma membrane eveloped and lies in	43.	 (B) Nazi Party (C) Labour Party (D) Conservative Party (D) Conservative Party The capital of the Chols (A) Tanjore (C) Madurai 	as was (B) Vangi (D) Uraiyur
38.	 (A) (i) and (ii) (C) none of these Virus contains (A) DNA only (B) RNA only (C) RNA and DNA both (D) Either RNA or DNA 	(B) (ii) and (iii) (D) all are true but not both	44.	Daulah? (A) Battle of Buxar (B) Battle of Panipat (C) Battle of Plassey (D) Battle of Haldighati	
39.	"Master gland" of the bo (A) Hypothalamus (C) Adrenal		45.	Whether a Bill is a more by the (A) Speaker of the Lok (B) Chairman of the Ra (C) Finance Minister (D) Prime Minister	



46.	A state of emergency can be declared in India
	by –

(A) The Prime Minister(B) The President(C) The Parliament(D) The Governor of a state

- **47.** The spring tide occurs when the moon the sun and the earth make in angle of (A) 90° (B) 180° (C) 45° (D) $33^{1/2^{\circ}}$
- 48. The Grand Canyon is in (A) Africa (B) Asia (C) America (D) Australia
- 49. Which of the following is the chief crop of Australia
 (A) Rice
 (B) Sugar Cane
 (C) Wheat
 (D) Potato

А	?	D	
В	35	С	
D	189	Е	

53.

55.

(A) 64 (B) 65 (C) 66 (D) 67

- 54. Ram is 11th in a queue which has 45 people. In queue the number of men member is double than the number of ladies. If 5 men are infront of Ram, how many ladies are behind him ?
 (A) 10
 (B) 9
 (C) 8
 (D)
- Direction : (55) A sheet has been folded in the manner as shown in X, Y and Z respectively and punched. You have to choose from the alternatives how it will look when unfolded.

50. Sindri is important for

- (A) Oil refining
- (B) Aluminium Manufacture
- (C) Machine-tool industry
- (D) Fartilizer Production

Directions : (51 to 52) Find the missing terms :

- **51.** 55, 210, ?, 820, 1275 (A) 465 (B) 420 (C) 410 (D) 515
- 52. BYCXA, EVFUD, HSIRG, KPLOJ, ? (A) MNLOL (B) NMOLM (C) QJRIP (D) PKQJO



Direction(56 to 60) Tick the correct altyernative-

56.	'You don't know where Karen is,									
	(A) Don't you	(A) Don't you (B) do you								
	(C) is she	(D) None								
57.	You can't stop me	what I want.								
	(A) doing	(B) do								
	(C) from doing	(D) that I do								



- 58. I'm sure I locked the door. I clearly remember.....it.
 (A)have locking (B) to lock
 (C) to have locked (D) None
- 59. I'm tired. I'd rather....out this evening, if you don't mind.
 (A) not going
 (B) not to go
 (C) don't go
 (D) not go

60.	'Shall	Ι	stay	here?'	'l'd	rather		
	like			.with us.'				
	(A) you	cor	ne	(B) y	ou to c	ome		
	(C) you	ca	me	(D) you would come				

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	D	А	А	В	В	С	В	А	В	С	А	А	В	В	С
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	D	С	С	В	D	С	А	А	D	А	А	С	В	D	D
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	В	А	D	А	В	В	В	D	В	В	D	В	D	С	А
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	В	В	С	С	D	А	В	В	А	А	В	С	С	D	В



1. If the difference of the square of two consecutive rational numbers is 29. Then one of the number is -

(A) 28	(B) 13
(C) 14	(D) 16

2. If
$$(1^2 + 2^2 + 3^2 + 4^2 + 5^2)^2 = \frac{1}{P}$$
 then P is_____.

(A)
$$\frac{1}{3125}$$

(C) $\frac{1}{3025}$ (D) 3025

(B) 3125

- A man suffers a loss of 25% by selling articles at the rate of Rs. 432 per dozen. The cost price of the article per dozen was :
 (A) Rs. 45
 (B) Rs. 48
 (C) Rs. 476
 (D) Rs. 576
- The compound Interest on Rs. 25,600 for 2 years at 6¼ % per annum is :
 (A) Rs.3000 (B) Rs. 3300
 (C) Rs. 3600 (D) Rs. 4000
- 5. Evaluate $\sqrt{41 \sqrt{21 + \sqrt{19 \sqrt{9}}}}$ (A) 3 (B) 6 (C) 5 (D) 6.4
- 6. Evaluate $\left(\frac{1}{2}\right)^{-3/2} \div \left[\left(\frac{1}{2}\right)^3\right]^{-1/2}$

$(A)\left(\frac{1}{2}\right)^{-2}$	$(B)\left(\frac{1}{2}\right)^{-3/5}$
(C) 0	(D) 1

A cylindrical rod whose height is 8 times of its radius is melted and recast into spherical balls of same radius. The number of balls will be :

 (A) 4
 (B) 3
 (C) 6
 (D) 8

A student has to secure 35% marks to pass the examination. If he gets 120 marks and fails by 20 marks, find the maximum marks set for the examination :

(A) 1000	(B) 400
(C) 350	(D) 700

8.

9

 $\frac{1}{\sqrt{3}}$ is :

(C

If the mean of y and $\frac{1}{y}$ is M, then the mean of y³ and

(A)
$$M \frac{(M^2 - 3)}{2}$$
 (B) M (4M² - 3)

(C)
$$M^3$$
 (D) 2M (4 M^2 –3)

10. If
$$\frac{5x}{4} + \frac{6-x}{8} = \frac{6(x+3)}{3} - \frac{1}{6}$$
, then $x = ?$
(A) $-\frac{121}{22}$ (B) $\frac{121}{12}$

$$)\frac{212}{21}$$
 (D) $-\frac{122}{21}$

If the reflected ray is at an angle of 90° to the incident ray, then the angle of incidence of a ray is :
 (A) 50°
 (B) 60°

(A) 50	(6) 00
(C) 45°	(D) 90°

- 12. External forces are : (A) always balanced (B) never balanced
 - (C) may or may not be balanced
 - (D) none of these
- A series of ocean waves, each 5.0 m from crest to crest, are moving past the observer at a rate of 2 waves per second. What is the velocity :
 (A) 2.5 m/s
 (B) 5.0 m/s
 (C) 8.0 m/s
 (D) 10.0 m/s



14. If I is the current through a wire and e is the charge of electron, then the number of electrons in t sec. will be given by

(A)
$$\frac{Ie}{t}$$
 (B) Ite

(C)
$$\frac{e}{lt}$$
 (D) $\frac{lt}{e}$

- 15.
 1 dyne is equal to :

 (A) 980 g wt
 (B) 980 kg wt

 (C) $\frac{1}{980}$ g wt
 (D) None of these
- **16.** Atmospheric pressure on the earth is unable to crush humans because :

(A) humans are the most powerful living beings on the earth

(B) pressure exerted from the inside of the body cells is less than the atmospheric pressure there (C) pressure exerted from the inside of the body cells is more than the atmospheric pressure there

(D) pressure exerted from the inside of the body cells equals the atmospheric pressure there

- 17. A book of 10 N is placed on the table. The force exerted by the surface of the table on the book will be :
- 19. If the distance between the object and its image in a plane mirror is 14.6 cm, then the distance of the object from the mirror is
 (A) 14.6 cm
 (B) 7.3 cm
 - (C) 29.2 cm (D) 10 cm
- 20.
 Commercial unit of electrical energy is :

 (A) Calorie
 (B) Kilowatt hour

 (C) Joule
 (D) All of them

- 21. The metal which can displace zinc from its salt solution is -(A) Mg (B) Fe
 - (C) Pb (D) Cu Which of the following has the highest percentage of carbon ? (A) Peat (B) Lignite

22.

(C) Bituminous (D) Anthracite

(C) Fe₂O₂

Which of the following is an example of amphoteric oxide ?(A) ZnO(B) CO

(D) FeO

- 24. The head of a safety match contains

 (A) antimony trisulphide and potassium chlorate
 (B) antimony chloride and potassium sulphide
 (C) antimony carbonate
 (D) potassium sulphide
- 25. Which one of the following statements pertaining to the general properties of metals is wrong ?
 (A) Most of the metals form basic oxides.
 (B) All metals displace hydrogen from acids.
 (C) All metals except Hg are found in solid state at room temperature.

(D) Metals form alloys with other metals.

- 27. LPG mainly contains :
 (A) butane and isobutane
 (B) methane
 (C) methane and ethane
 (D) hydrogen, methane and ethane
- 28. Kavita, Mahima and Shreya were doing an experiment in which water was to be heated in a beaker. Kavita kept the beaker in innermost black part of the candle flame. Mahima kept the beaker near the wick in the yellow part and Shreya kept the beaker in the outermost part of the flame. Whose water will get heated in a shorter time ?
 (A) Kavita
 (B) Mahima

(C) Shreya (D) Both Kavita and



29.	in a laboratory is :	(R) pylop	36.	Bacteriophage is : (A) Bacteria which kills organisms (B) Bacteria which kills viruses			
20	(A) silk (C) cotton	(B) nylon (D) both (A) and (B)		(C) Virus which attack (D) None of the above			
30.	Fabric polycot is prepa (A) polyester with silk (B) polyester with nylor (C) polyester with cotto (D) polyester with silk a	n on and cotton	37. 38.	The most busy part of the human body is : (A) Heart (B) Eye (C) Liver (D) Ear The Sex of the child is determind by :			
31.	Manures are beneficia (A) They increase soil (B) They increase water (C) They are water solu (D) They are required in	erosion r holding capacity of soil uble in nature	39.	 (A) Health of mother ar (B) Male and female bo (C) Female (D) Male Removal of weeds is negative. 			
32.	 (D) finely are required if Green revolution means (A) use of green manur (B) Growing of more cr (C) Use of high yeild va (D) Green vegetation 	s re ops		 because weeds : (A) compete with crop for nutrition (B) cause diseases in crop (C) delay the harvesting time of the crop (D) attract the insects and birds towards the crop 			
33.	Diagnostic test for AID (A) Widal Test (B) Lepamin test (C) ELISA Test (D) Biopsy	S is :	40.	NPK stand for : (A) Nitrogen, Phosphorus and Sulphur (B) Nitrogen, Potassium and Calcium (C) Nitrogen, Phosphorus and Potassi (D) Nitrogen, Potassium and Iron			
34.	World climate is threa concentration of : (A) oxygen (C) nitrogen	atened by increase in (B) carbon dioxide (D) water vapours	41.	Shahjahanabad consis largest and grandest m (A) Jama Masjid (C) Chandni Chowk	sted of one of the nosques in India. (B) Red Fort (D) Dargah		
35.	Bishnoi community peo protecting : (A) Khejri tree (C) Pinus tree	pple lost their lives while (B) Salt tree (D) Teak tree	42.	Woods despatch supp (A) Orientalist (C) Muslims	orted - (B) Anglicist (D) None		



43.	The period of Congress Phase" is :	known as 'Moderate	52.			
	(A) 1885–1900 (C) 1885–1903	(B) 1885–1901 (D) 1885–1905				
44.	First cotton mill in India (A) Delhi (C) Madras	was established at - (B) Bombay (D) Calcutta	53.			
45.	Hiuen Tsang had come to l (A) Asoka (C) Samudragupta	ndia during the reign of: (B) Chadragupta-II (D) Harsa Vardhan				
46.	Sati system was prohihite in the year : (A) 1827 (C) 1829	ed by William Bentinck (B) 1828 (D) 1830				
47.	In British period the Supreme Court was established under which Act – (A) Pitt's India Act (B) India Council Act 1860 (C) Regulating Act 1773 (D) Indian Council Act 1892					
48.	 (b) Indian Council for Tool Who is known as the father of Indian constitution– (A) Pt. Jawahar Lal Nehru (B) Krishna Menon (C) Sardar Vallabhbhai Patel (D) Bhimrao Ambedkar 					
49.	The sessions of Lok Sabha is summoned by the : (A) Speaker of Lok Sabha (B) President (C) Leader of the Majority party (D) Ministry of Paraliamentary affairs					
50.	Which one of the foll 'Pittsburg of India'? (A) Baroda	owing in known as (B) Rourkela	Dir			
Directio	(C) Jamshedpur on : (51) Find the missing	(D) Durgapur	56.			
	· · · · · · · · · · · · · · · · · · ·					

51. 25 17 41 32 83 11 26 ? 31 (A) 26 (B) 25 (C) 34 (D) 38 How many numbers amongst the numbers 7 to 41 are there which are exactly divisible by 9 but not by 3 ?

(A) 0	(B) 1
(C) 2	(D) 3

In the following question dice has been shown in different poisiton. Study the pattern of the numbers on each face of it and find out the value of the sign "?" from four alternatives given -



Find out the two signs to be interchanged for making following equation correct :
3 - 9 × 27 + 9 ÷ 3 = 3
(A) + and (B) × and +
(C) × and ÷
(D) × and -

Direction : (56) Tick the correct passive voice from the alternatives given below-

The couple will exchange the rings before the cake is cut.
(A) The rings will be exchanged by the couple before the cake is cut.
(B) Before the cake is cut, the couple will exchange the rings.
(C) Both the above
(D) None of these



Direction(57 to 60): Spot the error-

- **57.** As the first Presisdent (A) / of India, Dr. Rajendra Prasad (B) / was known by all types of people in the world (C) / No error (D)
- 58. I was surprising (A) / at not having seen (B) / her even though she was standing just beside my wife. (C) / No error (D)
- If you apologise (A) / for having broken your (B)
 / promises you will certainly be forgave. (C) / No error (D)
- 60. They exclaimed with delight that it (A) / was a very fine picture (B) / and said that they have never seen such a beautiful picture before. (C) / No error (D)

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	С	С	D	В	В	D	С	В	В	D	С	С	D	D	С
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	D	В	D	В	В	А	D	Α	А	В	С	А	С	С	С
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	В	С	С	В	А	С	А	D	А	С	А	В	D	В	D
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	С	С	D	В	С	Α	А	В	С	D	А	С	А	С	С



	The sector of	$(4.7)^3 - (2.7)^3$				
1.	The value of	$\frac{(4.7)^2}{(4.7)^2 + 4.7 \times 2.7 + (2.7)^2}$	IS :			

(A) 2	(B) 7.4
(C) 5	(D) 84.14

2. If
$$x = 3 + \sqrt{8}$$
, then the value of $x^2 + \frac{1}{x^2}$ is :

(A) 24	(B) 34
(C) 17	(D) None of these

3. Shashi makes a fixed deposit of Rs. 50000 in a Bank for 73 days. If the rate of interest be 6.5% per annum what amount does she get on maturity of FD ? (A) Re 6650 (B) Re 10350

(7) 13.0000	(D) N3.40000
(C) Rs.50650	(D) None of these

4. Each side of a square is 5 cm. The perimeter of the equilateral triangle formed on the diagonal of the square would be -

(A) 15 cm	(B) 20 cm
(C) 20 √2 cm	(D) 15 √2 cm

5. In the given Figure, AB || CD and AC || BD. If \angle EAC = 40°, \angle FDG = 55°, \angle HAB = x°, then the value of x is :



The average age of two brothers is 13. It is increased by 11 years when their mother's age is also included. The age of the mother is :

(A) 45 years (B) 46 years (C) 47 years (D) 48 years

7. In the figure AB \parallel CD and line $t_1 \parallel t_2$, find measure of Z.



(B) remains insulator.

(C) converts sulphuric acid into insulator.

(D) acts as electrodes.

(Space For Rough Work)

6.

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8.

9.



12.	dipped in distilled wate brought near the circui (A) would keep moving direction continuously.	in anticlockwise	19.	The circuit is discontinuous : (A) when the switch is in 'OFF' mode. (B) when the switch is in 'ON' mode. (C) without any source of current. (D) without a bulb.		
	(B) would keep moving continuously.(C) would remain still.(D) would show deflect		20.	A stone falling from example of : (A) frictional force. (B) magnetic force.	n the roof of a house is an	
13.	A small instrument hav (A) tuning fork. (B) larynx.	ing two prongs is called:		(C) gravitational forc (D) electrostatic forc	ce.	
	(C) music fork. (D) frequency arm.		21.	The nonmetal which ture of fertilizers is - (A) chlorine	h is used for the manufac- (B) sulphur	
14.	In a tug-of-war, when each other, the rope : (A) moves towards the (B) moves towards the (C) remains stationary (D) None of these		22.		opper sulphide	
15.	Pressure directly depe	nds on :		(C) ferrous sulphate		
	(A) force (C) mass	(B) volume (D) none of these	23.	(D) ferric sulphate , In displacement rea		
16.	According to the laws of reflection : (A) Angle i = Angle r (B) Sine i = Sine r (C) Sine i / Sine r = constant (D) tani= tan r			 (A) a less active metal displaces a more active metal. (B) a more active non- metal is displaced by less active non metal. (C) a less active non-metal displaces hydroge 		
17.	How much is the velocity fo light in Vacuum ? (A) 3,00,000 km/sec. (B) 3,00,00 km/sec. (C) 3,00,000 km/hr. (D) 3,00, 00 Km/hr			from dilute acids. (D) a more active me dilute acids.	tal displaces hydrogen from	
18.	Orion constellation is a (A) Great Bear (C) Hunter	also called : (B) Saptarshi (D) Letter 'W'	24.	Which of the followin (A) Brass (C) Duralium	g alloys is light and strong ? (B) Stainless steel (D) Bronze	



25.	Separation of fractions of petroleum is done by- (A) simple distillation (B) destructive distillation (C) fractional distillation (D) sedimentation	31.	 Cell theory states that : (A) all cells are living (B) all cells have nucleus (C) cells are fundamental and structural units of living organisms (D) cells reproduce by mitosis and meiosis. A multicellular organism possesses (A) differentiated cells (B) undifferentiated cells (C) dedifferentiated cells (D) all the above. 		
26. 27.	 Which of the following are animal fibres ? (A) Silk and Jute (B) Silk and Wool (C) Cotton and Wool (D) Nylon and Polyster Which of the following statements regarding pure 	32.			
	 water is correct ? (A) Pure water acts as an insulator when 6V battery is used. (B) Pure water has maximum density at 4°C and minimum at 0°C. (C) Pure water is neutral to litmus. 	33. 34.	Asexual reproduction thro (A) Rose (C) Yeast Soil erosion can be prev (A) deforestation	(B) Neem (D) Ginger	
28.	 (D) All are correct The flame of candle has three zones. The outer zone is blue, the middle zone is yellow and the inner zone is black. Which is correct regarding this ? (A) The outer zone is least hot. (B) The middle zone is hottest. (C) The inner zone is least hot. (D) All the zones have same temperature. 	35. 36.	 (B) afforestation (C) overgrazing (D) removal of vegetation Pollution is not caused of (A) wood (C) unsaturated carbon Which one of the following 	due to the use of (B) solar energy (D) SO ₂	
29.	The type of combustion in which heat, light and sound are produced is -(A) rapid(B) explosion(C) spontaneous(D) None of these		fossil fuels (A) Natural gas, oil and v (B) Oil, wood pieces and (C) Coal, wood pieces a (D) Coal, oil and Natural	d dry dung nd oil	
30.	 Which of the following statement is not true ? (A) Flame can be seen over burning solids and liquids. (B) Type of flame depends upon the amount of oxygen available. (C) Invisible zone of a flame is the least hot zone. (D) Blue zone indicates complete combustion of fuel. 	37. 38.	An entity not a compone (A) plant. (C) building. Wildlife is destroyed mo (A) There is lack of prop (B) Mass scale hunting f (C) It's natural habitat is (D) Natural calamity	 (B) animal. (D) climate. ost when : er care for foreign trade 	



39.	The food items that pr infection/diseases are (A) fruits and vegetable (B) sweets and chocol (C) chips and snacks (D) ice creams	es	47.		y Naicker			
40.	The secretions of endo (A) hormones (C) oily secretions	ocrine glands are called- (B) sweat (D) water	48.	In 1999 the world po (A) 1 billion (C) 6 billion	pulation reached : (B) 3 billion (D) 8 billion			
41.	Which article of the Co Right to water : (A) Article 10 (C) Article 21	onstitution is a part of (B) Article 20 (D) Article 31	49.	The Vernacular Pres year (A) 1875 (C) 1877	ss Act was passed in the (B) 1876 (D) 1878			
42.	Which of the following of India : (A) Lok Sabha (B) Parliament	made the Constitution	50.	The book 'Gulamgir (A) Ambedkar (C) Narayana Guru	(B) Haridas Thakur (D) Jyotirao Phule			
	(C) Constituent Assembly (D) British Parliament			Direction : (51) Find the missing term :				
43.	H. J. khandekar suppo (A) Adivases (C) Harijans	orted : (B) Rural People (D) None of these	51.	1 7 3 3 5 4 35 74	6 ? 8 104			
44.	vided into numerous	ection, the country is di-		(A) 1 (C) 3	(B) 2 (D) 4			
	(A) states (C) panchayats	(B) councils (D) constituencies.	52.		s ÷ + × –, SAND is written			
45.		JS Constituion prohibits laws regarding religion?		that code ? (A) + - / ÷ - (C) × ÷ / - +	(B) # - / ÷ - (D) × - / ÷ -			
	(B) Second Amendment (C) Third Amendment (D) Fourth Amendment			minute-hand points direction does the h	•			
46.	Kalgoorlie and Coolga (A) South America (C) Western Australia	rdie are located in (B) Africa (D) Western India.		(A)South-West (C) North-West	(B) South-East (D) North-East			



54. What is the number of triangles in this figure ? 57.



Direction : (55) Three of the following four are alike in a certain way and so form a group. Which is the one that does not belong to that group ?

(B) 20

(D) 24



Direction(56 to 60): Tick the correct alternative-

56. She said that she (A) will meet her mother-in-law on her birth

day. (B) would meet her mother-in-law on her birthday.

(C) may meet her mother-in-law on her birthday.

(D) shall meet her mother-in-law on her birthday.

- The contestants complained that
 (A) they will have performed better if they are given more time.
 (B) they will have performed better if they were given more time.
 (C) they would have performed better if they had been given more time.
 (D) they would performed better if they was given more time.
- 58. Before the semester was over, the programme
 (A) had approved.
 (B) was being approved.
 (C) had been approved.
 (D) is being approved.
- 59. The synonym of 'Diabolic' is-(A) Kind hearted (B) Pleasant (C) Wicked (D) None of these
- 60. The antonym of 'Inane' is-(A) Silly

(C) Frivolous

- (B) Wise
 - (D) None of these

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	Α	В	С	D	В	В	В	Α	Α	Α	Α	С	Α	С	Α
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	Α	Α	С	Α	С	С	В	D	С	С	В	D	С	В	С
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	С	D	С	В	В	D	С	С	А	А	С	С	С	D	Α
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	С	В	С	D	D	В	В	Α	С	А	В	С	С	С	В



1.	If x% of $\frac{1}{y} = 16\frac{2}{3}$ % of $\frac{1}{2}$ of y is x :	1 150 , then what percent	6.	If $x + y = 5$ and $xy = 6$ th (A) 39 (C) - 63	ne value of (x³ – y³) is- (B) 19 (D) 63
2.	(A) $11\frac{1}{9}\%$ (C) 10% I sold two watches for	(B) $9\frac{1}{11}\%$ (D) 9%	7.	If C and A are for circum circle respectively, then- (A) A = 4π C (C) C ² = 4π A	
Ζ.	10% loss, and another the loss percentage or th resulted from the transa (A) Profit of 10%	at 10% profit. What is e profit percentage that	8.	By what number should that the quotient may be	4
3.	If A : B = $1\frac{1}{2}$: $3\frac{1}{2}$; E A : B : C is :	$3:C = 5\frac{1}{4}: 7\frac{1}{2}$, then		(A) $-\frac{1}{9}$ (C) $-\frac{1}{18}$	(B) 18 (D) <u>1</u> 8
	(A) 5 : 7 : 12 (C) 3 : 7 : 10	(B) 5 : 7 : 10 (D) 3 : 7 : 12	9.	The mean of the followin value of P :	ng data is 15. Find the
4.	Which of these number remaining three ? (A) 26 (C) 30	s is the average of the (B) 39 (D) 61		x : 15 25 10 P 35 f : 10 6 3 15 6 (A) 60 (B) 4 (C) 515 (D) 20	
5.	The mean of x_1, x_2 i = 1, 2,, 50 is re- mean is- (A) $\frac{M}{50}$		10.	Shalu cycles to her scho of 12 km/hr. It takes he the school. If she wants 15 minutes, what should (A) 16 km/hr (C) 18 km/hr	r 20 minutes to reach to reach her school in
	(C) ⁵⁰ / _M	(D) M	11.	Waves of frequency grea called as : (A) panasonic (C) sonic	ater than 20,000 Hz are (B) ultrasonic (D) infrasonic



12.	low voltage. (B) cannot melt. (C) can melt only on p current. (D) electric fuse does	age of electric current of bassage of high electric not contain wire.	19.	Choose the correct alter object be placed so th image of the same size lens : (A) At the focus of the I (B) At twice the focal le (C) At infinity (D) Between optical cer	at a real and inverted is obtained by a convex ens ngth	
13.	Lubricant (A) increases (C) does not change	. force of friction. (B) decreases (D) none of these	20.	The time taken by sur		
4.4	Nome the brightest pl	anat :		surface is approximate	•	
14.	Name the brightest pla (A) Moon	(B) Venus		(A) 4 min. (C) 8 sec.	(B) 8 min (D) 15 min.	
	(C) Mars	(D) Jupiter		(0) 0 000.		
	(-)		21.	The alkali used in the p	reparation of rayon is :	
15.	-	waves to determine the		(A) Sodium Carbonate(B) Sodium hydroxide		
	depth of sea is called	: (B) infrasound				
	(A) ultrasound (C) acoustics	(D) sonar		(C) Calcium hydroxide (D) None of these		
				(D) None of these		
16	The speed of light in v (A) 330 m/s (C) 300,000 km/s	racuum is : (B) 300,000 m/s (D) 1759 m/s	22.	for long on a burning stove then cooking oil catches fire because :		
17.	is formed behind the r (B) An eye defect in w is formed before the re (C) A lens defect in wh sharply on a single po	vhich image of an object etina nich image is not formed		 (A) Its temperature is temperature. (B) Its temperature has temperature. (C) Its temperature is temperature. (D) Its temperature is temperature. 	as reached its ignition s lower than critical	
		through the focus of the	23.	Non-metal used in purit (A) nitrogen (C) sulphur	fication of water is : (B) oxygen (D) chlorine	
18.	Pressure varies with a	area (A) as :				
	(A) A	(B) <u>1</u>	24.	Copper objects becom of :	e dull due to formation	
	(C) A ²	(D) $\frac{1}{A^2}$		(A) CuCO ₃ (C) CuO	(B) Cu (OH) ₂ .CuCO ₃ (D) CuSO ₄	



25. Percentage of carbon present in an air dried sample of anthracite is :-

(A) 94 - 98%	(B) 27 - 30%
(C) 78 – 86 %	(D) 27 %

- 26. Ammoniacal liquor is -
 - (A) ammonia absorbed in water.
 - (B) ammonium hydroxide.
 - (C) aqueous solution of ammonia.
 - (D) All of the above.
- 27. Which of the following is a polymer :

$$(A) \xrightarrow{H}_{H} C = C \begin{pmatrix} H \\ H \end{pmatrix}$$

$$(B) \begin{bmatrix} H & H & H & H & H \\ I & I & I & I & I \\ -C - C - C - C - C - C - C - C - I \\ I & I & I & I \\ H & H & H & H & H \end{bmatrix}_{n}$$

(C) Both (A) and (B)

$$(D) H - C - C = C - H$$
$$H H$$
$$H$$
$$H$$

28. A luminous flame appears :

(A) leu	(b) green
(C) yellow	(D) blue

29. Hydrogen is a very good fuel because :
(A) it has highest calorific value.
(B) burning of hydrogen does not cause any pollution.
(C) hydrogen can be easily prepared by the electrolysis of water.
(D) All of these

- Which of the following substances is used in refining of petroleum ?(A) NaCl(B) NaOH
- (C) Na₂CO₃ (D) NaHCO₃ **31.** Beetroot is grown for : (A) flower (B) leaves
 - (C) gum (D) Sugar
- 32. The percentage of moisture content in a grain during harvesting should not exceed :
 (A) 25 percent
 (B) 14 percent
 (C) 5 percent
 (D) 10 percent
- 33. Nitrogen fixation is :
 (A) Nitrogen _____ Ammonia
 (B) Nitrogen _____ Nitrates
 (C) Nitrogen _____ Amino acid
 - (D) Both A and B

(A) In - situ

(C) In - vivo

- Which of the following is an edible mushroom ?
 (A) Aspergillus
 (B) Sargassum
 (C) Agaricus
 (D) All of the above
- 35. BOD is a measure of : (A) Amount of oxygen needed by green plants during night. (B) Amount of carbon dioxide combined with haemoglobin. (C) Industrial wastes poured into water bodies. (D) Extent to which water is polluted with organic compounds. 36. A disease that has been eradicated from the world is : (A) Chicken pox (B) Polio (C) Small pox (D) Mumps 37. When plant diversity is maintained in natural habitat the conservation is known as :

(B) Ex - situ

(D) In - vitro



38.	Which one is the excretory organ of humans?			When crops are combined with livestock the					
	(A) Mouth	(B) Kidney		type of farming is known as					
	(C) Stomach	(D) Liver		(A) Mixed Farming					
				(B) Commercial grain farming					
39.	The heart beat of a yo	ung man is approximately:		(C) Nomadic herding					
	(A) 70 times per minu	ute		(D) Intensive farming					
	(B) 72 times per minu	ute	47.	Who organised a Durbar in Delhi to acknowledge					
	(C) 80 times per minu	ute		Queen Victoria as the Empress of India?					
	(D) None of these			(A) Lord Clive	(B) Lord Hardinge				
40	Function of any loss	is to disport.		(C) Viceroy Lytton	(D) Lord Dufferin				
40.	Function of amylase	-	48.	Which longitude's local time has been taken					
	(A) Glucose	(B) Starch		as the Indian Standard Time ?					
41.	(C) Protein	(D) Cellulose		(A) 89° 45' E	(B) 75°30' E				
	Which one of the	following in known as		(C) 82°30' E	(D) None of them				
41.	Which one of the following in known as 'Pittsburg of India'?								
	(A) Baroda	(B) Rourkela	49.	Who introduced Doctrine of Lapse ? (A) Lord Dalhousie (B) Dupleix					
	(C) Jamshedpur	(D) Durgapur		(C) Sir Eyre Coote	(D) Lord Wellesley				
42.	India's share in world population :			In which language were Puranas written?					
	(A) 20%	(B) 16.7%		(A) Pali	(B) Prakrit				
	(C) 18%	(D) 14.7%		(C) Sanskrit	(D) Marathi				
43.	Vasco da Gama discovered the sea route to			Directions : (51) Find the missing terms :					
	India in -		51.	55, 210, ?, 820, 1275					
	(A) 1478	(B) 1488	•	(A) 465	(B) 420				
	(C) 1498	(D) None of these		(C) 410	(D) 515				
			Direct	ction : (52) In the following question one number is					
44.	In dry regions, soil erosion is checked by :			wrong in the series, find out the wrong number.					
	(A) Shelter belts								
	(B) Strip cropping		52. 53.	10, 26, 74, 218, 654, 1946, 5834					
	(C) Plugging of gullies	S		(A) 26	(B) 74				
	(D) Contour ploughing	9		(C) 218	(D) 654 , '8 ÷ 4' means 12, '6 × 2'				
45				means 4 and '12 + 3'					
45	How many organs are there in Indian governmen?			100 – 10 × 1000 ÷ 10					
	(A) 4			(A) 1090	(B) 0				
	(C) 5	(D) 2		(C) 1900	(D) 20				
				· /					



- 54. A baby who was born on 29th Feb. 1896, when did he celebrate his first birthday.
 (A) 28th Feb. 1897 (B) 29th Feb. 1900
 (C) 29th Feb. 1904 (D) 20th Feb. 1908
- **55.** What is the value of **A** if each letter represents a different digit ?

A 3 B × B 2 1 7 B	
(A) 3	(B) 4
(C) 5	(D) 7

Direction : (56-60) Tick the correct alternative:-

- 56. Why did Ravi go alone? He
 - (A) can have asked me to come.
 - (B) can have asked me to come.
 - (C) could have asked me to come.
 - (D) will have asked me to come.
- 57. I am

(A) broke. Will you lend me two hundred rupees?

(B) broke. Must you lend me two hundred rupees?

(C) broke. Would you lend me two hundred rupees?

(D) broke. Should you lend me two hundred rupees?

58. Everybody

(A) is shocked by the news yesterday.
(B) has shocked by the news yesterday.
(C) has been shocked by the news yester day.
(D) was shocked by the news yesterday.

59. Mrs. Mridul teaches us English. The correct passive form of the sentence is

(A) We were taught English by Mrs. Mridul.
(B) We has been taught English by Mrs.

Mridul. (C) We are taught English by Mrs. Mridul. (D) We had been taught English by Mrs. Mridul.

60. Anoushka ______ her hair in two long plaits. (do) (A) Do (B) Done (C) Does (D) Did

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	Α	В	С	В	Α	В	С	С	В	Α	В	С	В	В	D
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	С	А	В	В	В	В	В	D	В	Α	D	В	С	D	В
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	D	В	D	С	D	С	Α	В	В	В	С	В	С	Α	В
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	Α	С	С	Α	С	Α	D	В	С	В	С	С	D	С	

