SECTION-A : PHYSICS

This section contains **11 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

1. Two teams played a game of tug-of-war. The red team and the blue team pulled in opposite directions for a long time, but the rope did not move. What does this mean?

(1) Neither team pulled very hard.

(2) The red and blue team pulled with equal force.

(3) The red team pulled harder than the blue team.

(4) The blue team pulled harder than the red team.

2. Choose the incorrect statement :

(1) Earthquakes occur because of deforestation.

(2) Molten rocks coming out of a volcano are called lava.

(3) In case of a natural disaster, very often transport, electricity, water supply and other facilities of affected areas are destroyed.

(4) Events which cause damage to property and human life are called calamities.

3. What does the following figure shows?
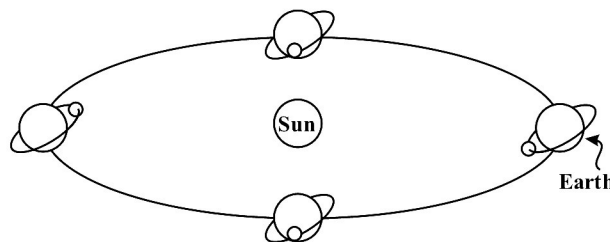
(1) Earth and Sun are revolving around moon.

(2) Sun is revolving around Earth and Moon is revolving around Sun.

(3) Earth is revolving around Sun and Moon is revolving around Earth.

(4) Earth is revolving around Sun and Sun is revolving around Moon.

4. The capacity of the is _____, if , and = 3 ml

(1) 18 ml (2) 30 ml (3) 22 ml (4) 16 ml

5. The outermost part of the earth is called

(1) Crust (2) Mantle (3) Core (4) None of these

6. Music player converts _____ energy to _____ energy.

(1) electrical, sound (2) sound, electrical (3) electrical, light (4) light, electrical

7. 2 hours = _____ minutes.

(1) 3 (2) 180 (3) 60 (4) 120

8. Earth is round like a football, but we do not fall off due to

(1) gravitational force   (2) rotation of earth

(3) revolution of earth   (4) all of these

9. Estimate the unit of following objects.
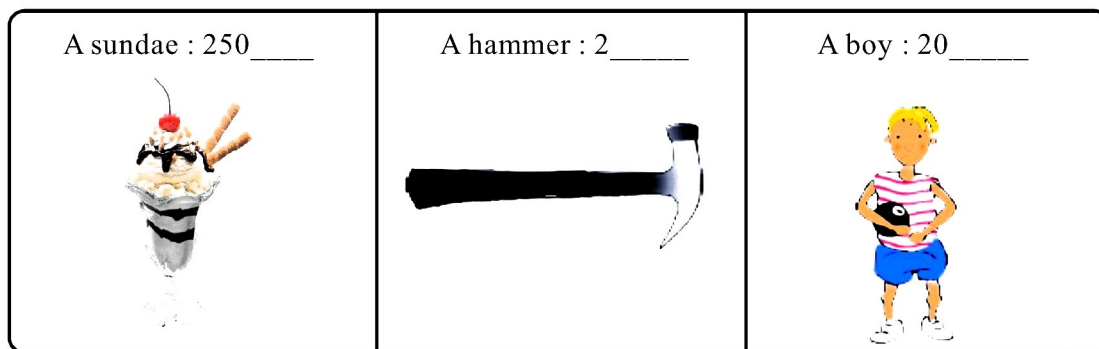
A sundae : 250_____	A hammer : 2_____	A boy : 20_____
(A)	**(B)**	**(C)**

	(A)	**(B)**	**(C)**
(1)	g	g	g
(2)	g	kg	kg
(3)	kg	g	kg
(4)	kg	kg	g

10. When tectonic plates collide, molten rock from beneath Earth's crust is sometimes forced up through the surface. When this occurs, it is called

(1) a flood   (2) an earthquake   (3) a rift   (4) a volcano

11. Arrange the following masses from lightest to heaviest.

12 tennis rackets m = 10 kg	28 pieces of rope m = 25 kg	18 exercise mats m = 20 kg	15 sports balls m = 15 kg
A	B	C	D

(1) A > B > C > D   (2) D > C > B > A   (3) D > B > C > A   (4) A < D < C < B

SECTION-B : CHEMISTRY

This section contains **11 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

12. What are I, II, III and IV in the given flow chart?

_____I_____Heat and _____II_____ Pressure

Solid ⇌ Liquid ⇌ Gas

_____III_____Heat and _____IV_____ Pressure
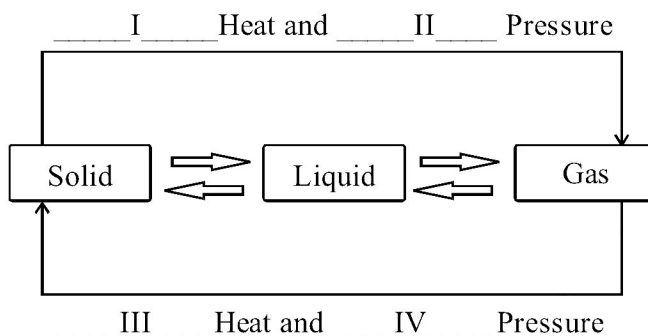
	I	**II**	**III**	**IV**
(1)	Increase	Increase	Decrease	Decrease
(2)	Decrease	Decrease	Increase	Increase
(3)	Increase	Decrease	Decrease	Increase
(4)	Decrease	Increase	Decrease	Increase

13. Sumita took an unknown substance into a glass. The substance took the shape of the glass. Later she transferred the substance into a bowl. The substance took the shape of the bowl but its volume remained the same. What is the state of this substance?

(1) Solid   (2) Gas

(3) Liquid   (4) None of these

14. Which of the following statements is not true?

(1) Water should be conserved for future use.

(2) Water should be treated before disposal.

(3) Water animals are safe and remain unaffected by the pollution as they live under water.

(4) Contaminated water can also cause various diseases.

15. Study the following figure and answer.

Ice   Water   Steam
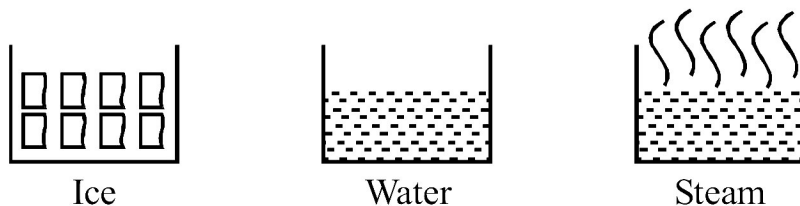
The ice present in first beaker becomes water upon

(1) cooling   (2) heating

(3) evaporation   (4) condensation

16. Read the given table carefully :-

	A		B		C
(p)	Stone	(t)	Oil	(ℓ)	Pencil
(q)	Paper	(u)	Milk	(m)	Oxygen
(r)	Juice	(v)	Air	(n)	Steam
(s)	Rubber	(w)	Honey	(o)	Nitrogen

In given table, materials of group A have maximum intermolecular forces of attraction between their particles, whereas materials of group B have less intermolecular forces of attraction than materials of group A and materials of group C have negligible intermolecular forces of attraction. Which of the following materials are grouped incorrectly in groups A, B and C respectively ?

(1) q,v,o   (2) r,v, ℓ (3) r, u, n   (4) p, u, n

17. A _____ has a neither definite _____ nor _____ shape

(1) Solid, Volume, definite   (2) Gas, Volume, definite

(3) Liquid, Volume, definite   (4) None of these

18. Minerals are chemical substances that occur in nature. They form due to natural processes within the Earth. They may be simple substances or very complex ones. Minerals are of two types - Metallic or non-metallic. Find the metallic mineral from the following.

(1) Quartz   (2) Mica

(3) Gold   (4) Feldspar

19. Which of the following shows the arrangement of particles of solids?

20. Lava cools to form

(1) igneous rocks   (2) sedimentary rocks

(3) metamorphic rocks   (4) sandstones

21. Droplets of water (rain, snow, sleet, or hail) fall to the Earth's surface. This is called-

(1) evaporation   (2) precipitaion

(3) condensation   (4) all of these

22. 'X' is a type of soil, which is a mixture of clay, silt, sand and humus. This holds water well and has many nutrients. Most plants grow well in this soil. Identify 'X'.

(1) Clay   (2) Sandy

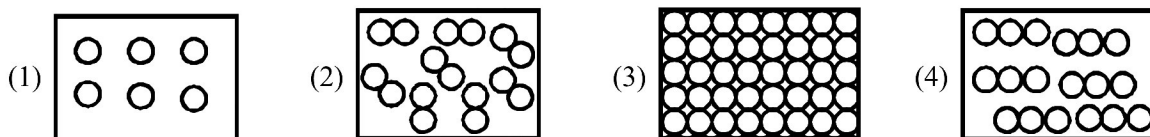(3) Loam   (4) Subsoil

SECTION-C : BIOLOGY

This section contains **11 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

23. Which of the following is essential for photosynthesis ?
    (1) Sunlight   (2) Chlorophyll   (3) Carbon dioxide   (4) All of these
24. A chameleon changing colours to blend in with its surroundings is an example of
   (1) Hibernation   (2) Migration   (3) Camouflage   (4) Degradation
25. When a plant gives rise to new plants from parts like stem, roots & leaves. Then it is called
    (1) Sexual reproduction   (2) Vegetative propagation
    (3) Sprouting   (4) Pollination
26. Which sentence best explains, why some flowers have bright colors?
    (1) The bright colors attract animals that will help to spread pollen.
    (2) The bright colors help the flower to take more sunlight.
    (3) The bright colors tell animals to stay away from the flowers.
    (4) The bright flowers help the plant to take more water.
27. Animals have the innate ability to escape from predation. Some examples are given below. Select the incorrect example.
    (1) Turtles and crabs have hard shells.
    (2) Zebras and deer merge with their surroundings.
    (3) Polar bears and walrus do not have a thick layer of fat called blubber.
    (4) Arctic fox have brown coats in summer but grow white fur in winter.
28. The given figures show few modifications for vegetative reproduction. They all are
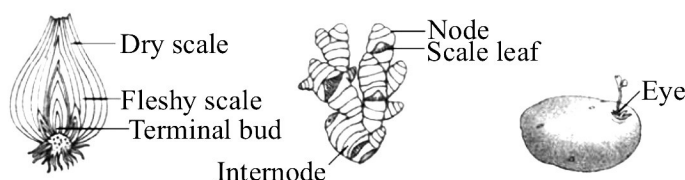
    (1) Modified roots   (2) Modified underground stems
    (3) Modified underground leaves   (4) All of these
29. A healthy diet needs a balance of many things. Fruits, vegetables and table salt are all good sources of
    (1) Minerals   (2) Carbohydrate
    (3) Water   (4) Proteins
30. Tuberculosis usually occurs due to
    (1) Indigestion   (2) Viral infection
    (3) Bacterial infection   (4) Allergic reaction
31. Why does a plant bend towards sunlight?
    (1) To prepare food   (2) To respire
    (3) To absorb food   (4) To absorb water
32. The process of fusion of male and female gamete is known as
    (1) Excretion   (2) Fertilization   (3) Transpiration   (4) Pollination
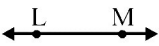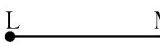
33. Refer to the given picture of a plant with some of its parts labelled as X, Y and Z. In the absence of part_____, the plant cannot make its food, because it will not have_____. Select the option that correctly fills the blanks in the above given statement.
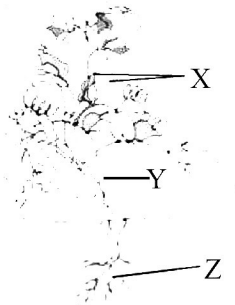

(1) Y, carbon dioxide
(2) Z, water
(3) X, chlorophyll
(4) Both (2) and (3)

SECTION-D : MATHEMATICS

This section contains **25 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

34. A cuboidal box has _____ corner points.
    (1) 10 (2) 6   (3) 12   (4) 8

35. Richa purchased four different sizes of teddy. Length of the smallest teddy is 15 cm. Each is 2 cm longer than the other. Find the difference of length between the largest and the smallest teddy.
    (1) 1 cm   (2) 13 cm   (3) 6 cm   (4) 15 cm

36. Which one of the following figure represents the line segment LM?

    (1)   (2)   (3)   (4)

37. Population of India in 2013 was 1274239769. The sum of the place value and the face value of ten millions digits of the 10-digit number given above is
    (1) 200000002   (2) 70000007   (3) 4000004   (4) 100000000

38. Count the number of slanting lines in the given figure.
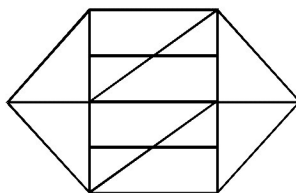
    (1) 1   (2) 2   (3) 6   (4) 10

39. If 3 is a factor of the 7-digit number 258*970, then the place value of missing digit (*) cannot be
    (1) 8000   (2) 5000   (3) 4000   (4) 2000

40. If 54 is the 3rd common multiple of 6 and △, then the smallest possible number for △ is
    (1) 12   (2) 9   (3) 3   (4) 18

41. M is the largest number which when rounded off to the nearest hundreds gives 74500. N is the smallest number which when rounded off to the nearest thousands gives 350000. What is the sum of M and N?
    (1) 402049   (2) 424500   (3) 424049   (4) None of these

42. In the following, find the number of angles which are greater than right angle.
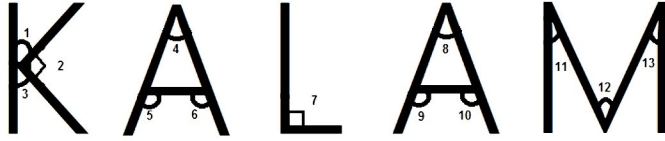
(1) 4   (2) 5   (3) 8   (4) 11

43. Which number matches the word name. "Ten lakh six hundred Sixty one" ?

(1) 10661   (2) 1000661   (3) 100661   (4) 10000661

44. 20.600 gm + _____ gm = 41 gm

(1) 20.400   (2) 20   (3) 12.400   (4) 20400

**45.** Observe the number line given, what is the difference between X and Y.
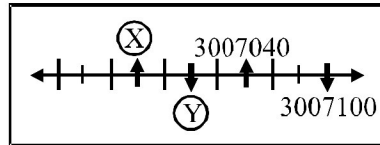
(1) 4060   (2) 400   (3) 4040   (4) 40

46. Identify the scalene triangle from the following.

(4) All of these

47. The numbers which are not multiples of 2 are called _____ numbers.

(1) even   (2) odd   (3) prime   (4) composite

48. Find the greatest number which will divide the greatest 4-digit number and the greatest 5-digit number exactly.

(1) 9   (2) 15   (3) 14   (4) 2

49. HCF of 6 and 12 is

(1) 6   (2) 12   (3) 18   (4) 3

50. What shape will you get, if you connect the given dots with each other by straight lines?
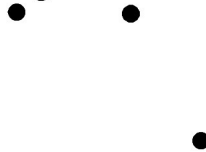
(1) Square   (2) Circle   (3) Triangle   (4) Rectangle

51. Perimeter of a triangle is the sum of the lengths of all the _____ sides.

(1) 10   (2) 1   (3) 3   (4) 8

52. Some Roman numerals are given in the box, I C L M D . Which of the following is the number that can be written using only all the given Roman numerals?

(1) 1775   (2) 864   (3) 1947   (4) 1651

53. Each side of a square field measures 85 m. The perimeter of the square field is

(1) 320 m   (2) 340 m   (3) 350 m   (4) 360 m

54. A shopkeeper has 87 kg 520 gm rice. He sold 62 kg 470 gm to one customer. How much is left with the shopkeeper?

(1) 25 kg 150 gm   (2) 25 kg 50 gm

(3) 25 kg 500 gm   (4) 20 kg 50 gm

55. A student is studying from a book in the shape of a cuboid. He wants to count the number of edges of the book, then number of edges in the book are ____ .

(1) 4   (2) 8   (3) 10   (4) 12

56. The angle we can see in the english alphabet H is _____

(1) Acute angle   (2) Obtuse angle

(3) Right angle   (4) None of these

57. An obtuse angle lies between_____

(1) $0°$ and $90°$ (2) $90°$ and $180°$

(3) $45°$ and $90°$ (4) $180°$ and $360°$

58. If the area of the floor of room is 60 sq. metre and the length of the room is 8 m, find its breadth.

(1) 5.7 m   (2) 7.5 m   (3) 8.5 m   (4) 5.8 m

SECTION-E : MENTAL ABILITY

This section contains **22 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

59. Rachel is 16th from the left end in a row of 50 girls. What is her position from the right end?

(1) 30th   (2) 33rd   (3) 34th   (4) 35th

60. Which of the following diagram indicates the best relation between Musical instrument, Guitar, Flute?
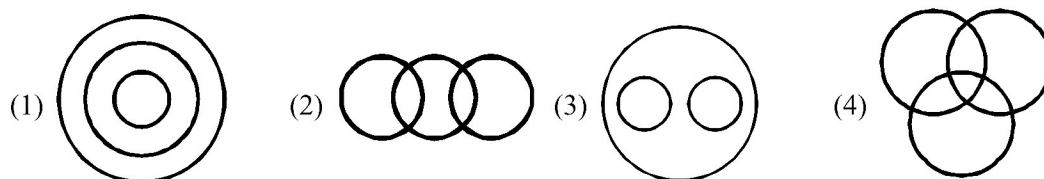
**61.** Look at the pattern carefully and complete the series.

62. In a certain code 'LIMCA' is written as OLPFD. How is 'PAIN' written in that code ?

(1) SDLQ (2) SLDQ

(3) RBLP (4) RDLQ

63. How many such 2's are in the following number sequence each of which is immediately followed by 4?

3 1 2 4 5 1 2 3 1 4 1 3 5 6 7 8 1 3 9

(1) 1 (2) 2 (3) 3 (4) 0

64. Raman left his home and walked 15 km towards east. He then turn left and walk 10 km, again turn left and walk 20 km, finally turn left and walk 10 km.

In which direction is Raman facing now?

(1) East (2) West

(3) North (4) South

65. Select the combination of numbers so that the letters accordingly will form a meaningful word.

G U P N E I N

1 2 3 4 5 6 7

(1) 3, 5, 4, 2, 1, 6, 7 (2) 3, 5, 4, 1, 2, 6, 7

(3) 3, 5, 6, 7, 4, 2, 1 (4) 7, 6, 5, 3, 4, 2, 1

66. Shazam starts walking in South to his house and walks 10 m. Now he took a left turn and walks 3 m and after that he took another right turn and walks 5 m. In which direction he is walking now?

(1) West (2) South (3) North (4) East

67. Which word can be formed from the given letters?

E P Q R A Y C D H P K

(1) ROCKET (2) KEPT

(3) POCKET (4) HAPPY

68. Find the missing term in the series given below.

3, 5, 9, 15, 23, ?

(1) 32 (2) 33 (3) 35 (4) None of these

69. Shinchan travels 13 km North and turns left. Then he travels 9 km and turns right and cover another 10 km. He finally turns to right and travels another 9 km. In which direction he is walking now?

(1) South (2) North

(3) East (4) West

70. Arrange the given words in the alphabetical order and choose the one that comes at second place.

(1) Bat (2) Indication

(3) Express (4) Project

71. Question is based on the following diagram.
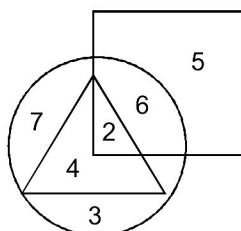
□ ⟶ Children who like the movie "Mission Mangal"

△ ⟶ Children who like the movie "Uri:The Surgical Strike "

○ ⟶ Children who like the movie "Super 30"

Which number represents Children who like both the movies "Mission Mangal" and "Super 30" but not "Uri : The Surgical Srike" ?
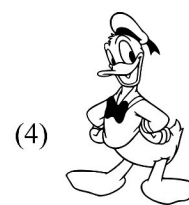
(1) 7   (2) 6   (3) 2   (4) 4

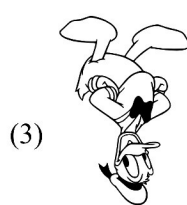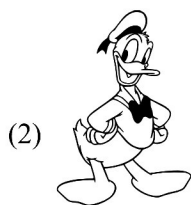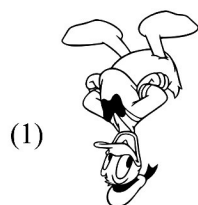**72.** These symbols are arranged in a pattern. @ % @ @ % % @ @ @ % % %. Which set of symbols is arranged in the same pattern?

(1) * # * # * * # # * * # #   (2) # * # # * # # # * # # # #

(3) * # * * # # * * * # # #   (4) # # * * # * # # * * # *

73. Find the mirror image of figure (X)

(X)

(1)   (2)   (3)   (4)

74. In the following question, select the odd number from the given alternatives

(1) 30   (2) 40   (3) 51   (4) 10

75. Find the water image of the given word.

CHESS

(1) CHE2S   (2) CH32S   (3) 22EHƆ   (4) ƆHESS

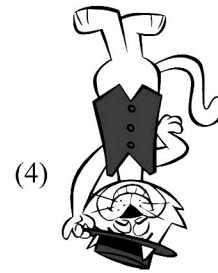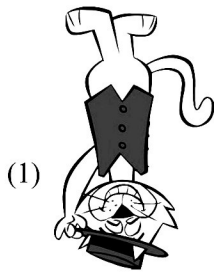**76.** In the following question, select the odd word from the given alternatives.

(1) CD   (2) PQ   (3) SU   (4) VW

77. In the following question find the mirror image.

PSK8478

(1) 8ᖜ48KƧ�   (2) 8ᖜ48KSP   (3) 8ᖜ48KSP   (4) None of these
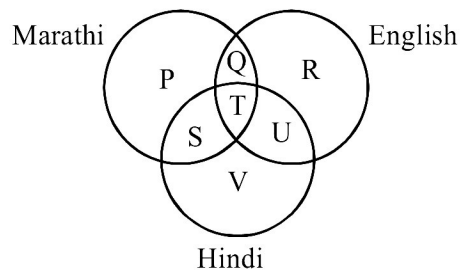
78. Find the water image of following given figure.

(1)   (2)   (3)   (4)

79. Choose the odd one out:

(1) Ladyfinger   (2) Potato   (3) Brinjal   (4) Banana

80. Study the diagram and identify the people who can speak only Hindi?

(1) Q   (2) S   (3) V   (4) U

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	2	1	3	2	1	1	4	1	2	2	4	3	3	3	2
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	2	2	3	3	1	2	3	4	3	2	1	3	2	1	3
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	1	2	4	4	3	4	1	3	3	2	3	4	2	1	4
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	1	2	1	2	3	3	4	2	2	4	3	2	2	4	3
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	1	1	1	4	2	2	4	2	3	3	2	3	4	3	1
Que.	76	77	78	79	80										
Ans.	3	2	4	4	3										