

1. Find the missing term in the following series

Z, X, U, Q, L ?

(A) F

(B) K

(C) G

(D) E

2. Find the missing term in the following series

AZ, YB, CX, WD, ?

(A) VE

(B) UE

(C) EU

(D) EV

3. Find the missing term in the following series

HEJ, JGL, LIN, NKP, ?

(A) MOR

(B) PNS

(C) PMR

(D) NPT

4. Arrange the given words in the order they occur in dictionary.

I. SIGN

II. SOLID

III. SCENE

IV. SIMPLE

(A) III, I, II, IV

(B) III, I, IV, II

(C) III, IV, I, II

(D) III, IV, II, I

5. Find the odd one out?

(A) 19

(B) 7

(C) 9

(D) 13

6. Find the odd one out?

(A) 488

(B) 929

(C) 776

(D) 667

7. Find the odd one out?

(A) Mother-daughter

(B) Father-Son

(C) Uncle-Aunt

(D) Uncle-Nephew

8. JK : QR :: _____ : _____

(A) ST : UV

(B) WX : ZY

(C) CF : JL

(D) BC : IJ

Direction (9) the following questions are based on the following information :

Five men A, B, C, D and E read a newspaper. The one who reads first gives it to C. The one who reads last had taken from A. E was not the first or last to read. There were two readers between B and A.

9. B passed the newspaper to whom?

- (A) A
- (B) C
- (C) D
- (D) E

10. How many triangles are there in the following figures ?



- (A) 11
- (B) 14
- (C) 16
- (D) 7

11. As 'Earthquake' is related to 'Seismograph' in the same way 'Milk' is related to which

- (A) Hydrometer
- (B) Hygrometer
- (C) Spherometer
- (D) None of these

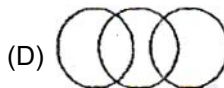
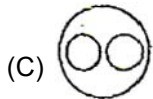
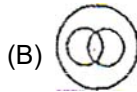
12. Find the odd one out?

- (A) Gold
- (B) Silver
- (C) Bronze
- (D) Zinc

13. Find the odd one out?

- (A) 232
- (B) 362
- (C) 661
- (D) 284

14. Select the diagram out of the four that best represents the relationship among the items given in the questions :
Doctors, Human beings, Married People.

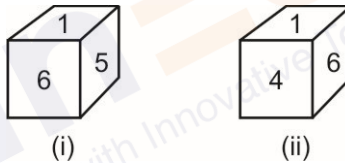


15. In the Olympic games, flags of 6 nations were hoisted in the following way. The flag of America was to the left of Indian Tricolour and to the right of the flag of France. The flag of Australia was on the right of the Indian flag but to the left of the flag of Japan, which was to the left of the flag of China. Find the two flags which are in the centre.

- (A) America and India
- (B) Japan and Australia
- (C) America and Australia
- (D) India and Australia

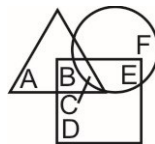
16. A rat runs 20 m towards east and turns to right and runs 10 m and turns to right, runs 9 m and again turns to left, runs 5 m and then turns to left runs 12 m and finally turns to left and runs 6 m. Now which direction is the rat facing?
(A) East (B) North
(C) West (D) South
17. Paisa – Rupee, Centimetre – Metre, Kilogram – ?
(A) Metric tonne (B) Hectogram
(C) Quintal (D) Gram
18. If A is B's brother, B is C's sister and C is D's father then D is A's
(A) Brother (B) Sister
(C) Nephew (D) Data inadequate
19. Mukesh left home for the bus stop 10 minutes earlier than usual. It takes 10 minutes to reach the stop. He reached the stop at 1.45 a.m. What time does he usually leave home for the bus stop?
(A) 1.40 a.m. (B) 1.45 a.m.
(C) 1.55 a.m. (D) date inadequate

20. Which number is to the opposite of 4?



- (A) 5 (B) 3
(C) 2 (D) 6
21. If CONSULTS is written as OCSNLUST then ADVICE will be written as :
(A) DAIVEC (B) ECLVDA
(C) DAVICE (D) VDAECI

22. In the given figure, the triangle represents girls, square represents sports-persons and circle represents coaches. Which portion of the figure represents girls who are sports persons but not coaches?



- (A) A (B) B
(C) C (D) D
23.
$$\begin{array}{ccc} 16 & 4 & 64 \\ 9 \text{ (9) } 25 & 4 \text{ (4) } 4 & 49 \text{ (?) } 81 \\ 36 & 4 & 100 \end{array}$$

(A) 15 (B) 16
(C) 17 (D) 18

24. Find the mirror image of the following word? VINAYAKA

- (A) INVAYAKA
- (C) AKAYANIV

- (B) AKAYANIV
- (D) AKAYANIV

25. In each of the following questions, there are two terms to the left of the sign :: which are related in some way. Obtain the same relationship between the terms to the right of the sign :: from one of the four alternatives given under it.

Rich : Poor :: Enemy?

- (A) War
- (B) Weapons
- (C) Friend
- (D) Hate

26. In each of the following questions, there are two terms to the left of the sign :: which are related in some way. Obtain the same relationship between the terms to the right of the sign :: from one of the four alternatives given under it.

Bed : Furniture ::

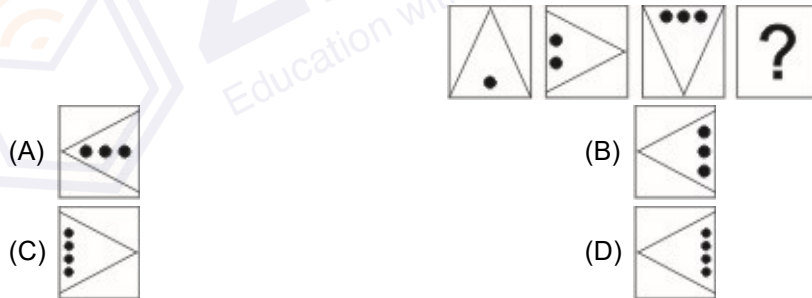
- (A) Teacher : Education
- (B) Silver : Metal
- (C) Girl : Frock
- (D) Scooter : Rider

27. In each of the following questions, there are two terms to the left of the sign :: which are related in some way. Obtain the same relationship between the terms to the right of the sign :: from one of the four alternatives given under it.

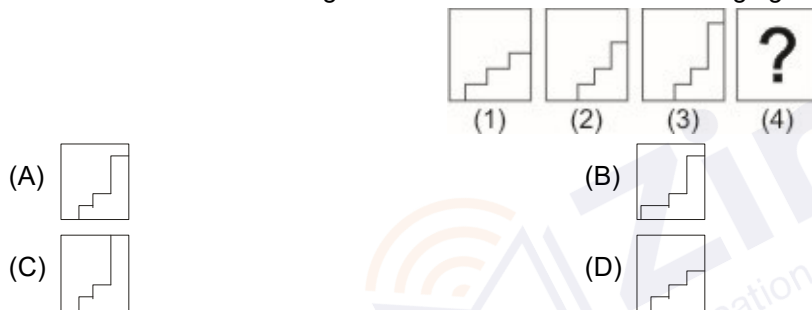
Profit : Loss ::

- (A) Adult : Child
- (B) Whole : Part
- (C) Rupee : Paisa
- (D) Success : Failure

28. Complete the series.



29. Which one of the answer figures will come next in the following figure series?

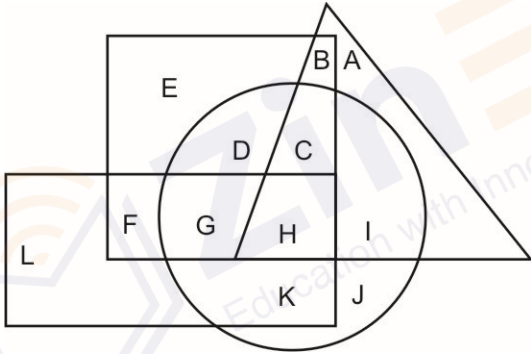


30. If the following words are arranged as found in the dictionary, then what will be the fourth letter from the left in the last word?

INTIMATION, INFORMATION, INTEREST, INTERROGATION, INSTIGATION

- (A) R
- (B) O
- (C) T
- (D) I

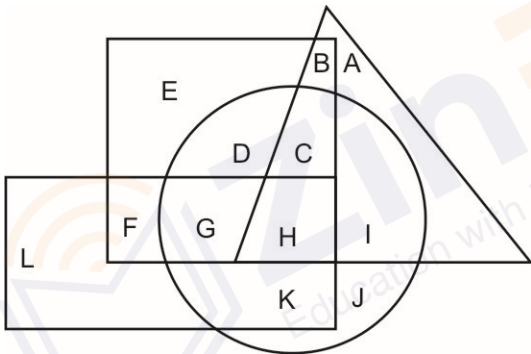
31. In the following diagram, the square represents girls, the circle tall persons, the triangle is for tennis players and the rectangle stands for the swimmers. On the basis of the given diagram, answer the following questions.



Which letter represents tall girls who are swimmers but don't play tennis?

- (A) C
- (B) D
- (C) G
- (D) H

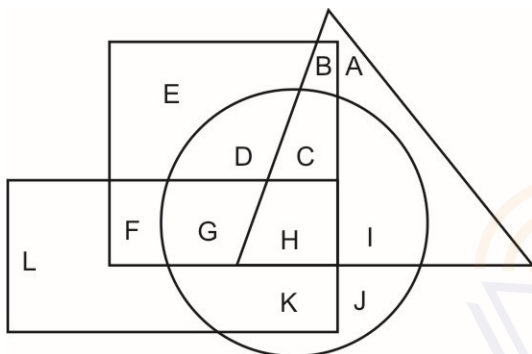
32. In the following diagram, the square represents girls, the circle tall persons, the triangle is for tennis players and the rectangle stands for the swimmers. On the basis of the given diagram, answer the following questions.



Which letter represents girls who are swimmers, play tennis but are not tall?

- (A) B
- (B) E
- (C) F
- (D) None of these

33. In the following diagram, the square represents girls, the circle tall persons, the triangle is for tennis players and the rectangle stands for the swimmers. On the basis of the given diagram, answer the following questions.

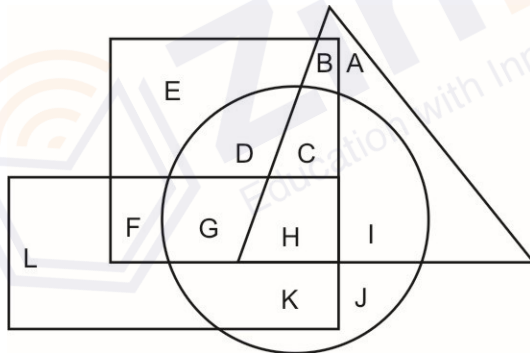


Which letter represents tall girls who do not play tennis and are not swimmers?

- (A) C
- (C) E

- (B) D
- (D) G

34. In the following diagram, the square represents girls, the circle tall persons, the triangle is for tennis players and the rectangle stands for the swimmers. On the basis of the given diagram, answer the following questions.



Which letter represents tall persons who are gents and swimmers but do not play tennis?

- (A) I
- (B) J
- (C) K
- (D) L

35. How many such 6's are there in the following number series which are followed by an even number and preceded by any odd number?

3 6 4 5 7 6 3 5 4 3 6 4 5 6 4 1 6 3 9 6 3 4 5 6

- (A) zero
- (B) one
- (C) two
- (D) three

36. Bablu ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in the examination. How many boys were there in that class?

- (A) 44
- (B) 50
- (C) 55
- (D) 40

37. If in the word **DISTURBANCE**, the first letter is interchanged with the last letter, the second letter is interchanged with the tenth letter and so on, which letter would come after the letter 'T' in the newly formed word?

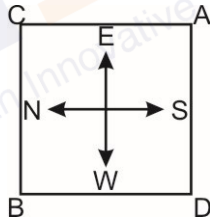
- (A) I
- (B) N
- (C) S
- (D) T

Direction (38 – 41) Study the given information carefully and answer the questions that follow.

- I. A, B, C, D, E, F and G are sitting on the wall and all of them are facing east.
- II. C is on the immediate right of D.
- III. B is at an extreme end and has E as his neighbour.
- IV. G is between E and F.
- V. D is sitting third from the south end.

38. Who is sitting to the immediate right of E?
(A) A (B) C
(C) D (D) None of these
39. Which of the following pairs of people are sitting at the extreme ends ?
(A) AB (B) AE
(C) CB (D) FB
40. Name the person who should change places with C so that he gets the third place from the north end.
(A) E (B) F
(C) G (D) D
41. Which of the conditions I to V given above is not required to find out the place in which A is sitting?
(A) I (B) II
(C) III (D) All are required

Direction (42 – 43) the following questions are based on the diagram given below showing four persons stationed at the four corners of a square piece of plot as shown.



42. A starts crossing the field diagonally. After walking half the distance, he turns right, walks some distance and turns left. Which direction is A facing now?
(A) North-east (B) North-west
(C) North (D) South-east
43. From the original position given in the above figure. A and B move one arm length clockwise and then cross over to the corner diagonally opposite; C and D move one arm length anticlockwise and cross over the corner diagonally opposite. The original configuration ADBC has now changed to
(A) CBDA (B) BDAC
(C) DACB (D) ACBD
44. Arrange the following in meaningful sequence :
1. Table 2. Tree 3. Wood 4. Seed 5. Plant
(A) 4, 5, 3, 2, 1 (B) 4, 5, 2, 3, 1
(C) 1, 3, 2, 4, 5 (D) 1, 2, 3, 4, 5

45. Arrange the following in meaningful sequence :
1. Yarn 2. Plant 3. Saree 4. Cotton 5. Cloth
(A) 2, 4, 1, 5, 3 (B) 2, 4, 3, 5, 1
(C) 2, 4, 5, 1, 3 (D) 2, 4, 5, 3, 1
46. If **SYSTEM** is coded as 131625, **TERMS** may be coded as :-
(A) 62251 (B) 62451
(C) 64251 (D) 62415
47. Find the next term of the following series :
H, L, P, T, X, ?
(A) P (B) B
(C) M (D) A
48. Find the next term of the following series :
If P is the brother of the son of Q's son, how is P related to Q?
(A) Grandson (B) Nephew
(C) Father (D) Uncle
49. Find the next term of the following series :
If PEARL is written MBXOI, then how would DIAMOND be written in that code?
(A) AFXJLKA (B) NQYFSOB
(C) FBYAKLM (D) DPGKAFR
50. Find the wrong term of the following series.
2, 6, 11, 17, 23, 32, 41
(A) 6 (B) 17
(C) 23 (D) 32

LANGUAGE

Direction (51 – 54) : In the following questions the first and the last parts of the sentence are numbered as 1 and 6. The rest of the sentences is split into four parts and are named as P, Q, R and S. These four parts are not given in their proper order. Read the jumbled parts of the sentence and find out which of the four combinations is correct. Then find the correct answer.

51. 1 : I have not come
P : even if it means some humiliation
Q : but the boy must learn
R : to complain, he said
S : to be honest
6: An admit he broke our window pane.
(A) S P R Q (B) Q S P R

(C) R Q S P

52. **1 : India has been a land**
P : but in the sense that learning has always been very highly valued
Q : not indeed in the sense that education has been universal
R : and the learned man has been held in higher esteem
S : of learning throughout the ages
6: then the warrior or the administrator.
- (A) P Q S R (B) R Q P S
(C) R S Q P (D) S Q P R

53. **1 : It was obvious**
P : made by him
Q : submitted at the meeting
R : from the comments
S : on the draft proposals
6: that he was not satisfied with them.
- (A) Q R S P (B) S Q R P
(C) R P S Q (D) P S R Q

54. **1 : Lakhs of students**
P : on all India basis
Q : from all over India
R : which are held
S : appear in the examinations
6 : by different recruiting organizations.
- (A) P Q S R (B) S R Q P
(C) Q S R P (D) Q S P R

Directions (55 to 64) In the following passages some of the words have been left out. First read the Passage over and try to understand what is about. Then, fill in the blanks with the help of the alternatives given.

When we visited the volcano it was in a state of **55** We stood near tip of the **56** on an irregular piano. It was heaped **57** stones and cinders and **58** rocks which had been regularly **59** out from the volcano. During the volcanic eruption, large quantities of rocks and stones were hurled out from the summit, in terrible **60**. From the summit volumes **61** smoke and fountains of liquid fire **62** forth continuously. The smoke now white, now impenetrably black was **63** by a deep fiery roar. Stones **64** down and the molten lava moved on with a horrible sound.

55. (A) movement (B) eruption
(C) ejection (D) insertion

56. (A) point (B) summit
(C) path (D) curve
57. (A) on (B) in
(C) with (D) by
58. (A) slanting (B) curving
(C) pointed (D) big
59. (A) flung (B) toppled
(C) distanced (D) over-flown
60. (A) calm (B) confusion
(C) horror (D) speed
61. (A) in (B) about
(C) of (D) with
62. (A) flew (B) extracted
(C) poured (D) oozed
63. (A) together (B) turned
(C) stuck (D) accompanied
64. (A) rose (B) ascended
(C) rained (D) poured
65. Select the meaning of the given phrases / idioms.
To bury the Hatchet
(A) to keep a secret (B) to make peace
(C) to obtain money (D) to make friends with
66. Select the meaning of the given phrases / idioms.
To blow one's own trumpet
(A) to make music (B) to speak loudly
(C) to reveal something (D) to boast
67. Select the meaning of the given phrases / idioms.
To pay through the nose

- (A) to pay an excessive price
(B) to punish a person by cutting off his nose
(C) to cut off one's nose to spite one's face
(D) to suffer from cold after having eaten something spicy

68. Select the meaning of the given phrases / idioms.

To get into hot water

- (A) to have a hot bath
(B) to keep warm
(C) to get into trouble
(D) to get drowned

69. Select the meaning of the given phrases / idioms.

A bolt from the blue

- (A) an electric shock
(B) a piece of bad luck
(C) a complete surprise
(D) a flash of lightning

70. Select the word which means the opposite of the given word

Relinquish

- (A) Abdicate
(B) Renounce
(C) Possess
(D) Deny

71. Select the word which means the opposite of the given word

latent

- (A) undeveloped
(B) apparent
(C) hidden
(D) implied

72. Select the word which means the opposite of the given word

Gradual

- (A) energetic
(B) dynamic
(C) rapid
(D) enthusiastic

73. Select the word which means the opposite of the given word

Fragile

- (A) unknown
(B) strong
(C) intelligent
(D) foolish

74. Select the word which means the opposite of the given word

Transient

- (A) urgent
(B) eternal
(C) youthful
(D) original

75. Choose the most appropriate synonym
Slightly
(A) Strikingly (B) to a small extent
(C) exactly (D) to a large extent
76. Choose the most appropriate synonym
Modest
(A) boast (B) show
(C) humble (D) impolite
77. Choose the most appropriate synonym
Favour
(A) show (B) approve
(C) reward (D) indulge
78. Choose the most appropriate synonym
Adversary
(A) opponent (B) anniversary
(C) admirer (D) administrator
79. Choose the most appropriate synonym
Squander
(A) learner (B) waste away
(C) developer (D) repel

Direction (80 – 85)

80. Fill in the blanks with suitable conjunctions.
Trust in God _____ do the right.
(A) or (B) and
(C) else (D) but
81. Fill in the blanks with suitable conjunctions.
Work hard _____ you will not pass.
(A) therefore (B) because
(C) if (D) else
82. Fill in the blanks with suitable conjunctions.
He is very rich _____ he is not contented.
(A) and (B) for
(C) whereas (D) still

83. Fill in the blanks with suitable conjunctions.
Wise men love virtue _____ fools shun it.
(A) whereas (B) because
(C) for (D) or

84. Fill in the blanks with suitable conjunctions.
He was found stealing and _____ he was arrested
(A) for (B) but
(C) therefore (D) still

85. Fill in the blanks with suitable conjunctions.
It was a case of a miser _____ his money.
(A) and (B) for
(C) but (D) or

Directions (86 to 90): Read the passage and answer the questions given below:

Detective glories tend to glorify crime. Murderers, gangsters and crooks all kinds are described as tough, cunning and courageous individuals who know how to take care of themselves and how to get what they want. In James McCain's *The Postman Always Rings Twice*, for instance the villain is much more a impressive character than his victim. He is casual, brave, smart and successful with women. It is true that he finally gets caught. But he is punished for a crime that he did not commit, so that his conviction is hardly a triumph of justice. Besides, looking back over the exciting life of the criminal, the reader might conclude that it was worth the risk.

86. The passage mention James McCain
(A) as an author of detective stories (B) as brave, smart, and successful with women
(C) as tough cunning and courageous (D) as being more impressive than others
87. Murderers, gangsters and crooks referred to in the passage given above
(A) always manage to get away (B) are often glorified in detective stories
(C) are wiser than their victims (D) know how to escape from law
88. According to this passage, a criminal in a detective story generally gets caught
(A) for the crimes he has committed
(B) because of his careless mistakes
(C) because the police is smarter than the criminals
(D) for the crimes he has not committed
89. According to the passage, the life of a criminal
(A) is exciting

- (B) is hardly worth the risk
- (C) is seldom presented in the right perspective
- (D) ends in a triumph of justice

90. According to the passage given above, detective stories
- (A) make interesting reading
 - (B) are hardly worth reading
 - (C) encourage readers to commit crimes
 - (D) tend to create wrong notion about crimes and punishment

SAT

1. Two men are standing close to a long straight metal pipe and at some distance from each other. One man fires a gun and the other hears two explosions with a time interval of one second between them. If the velocity of sound in metal is 3630 m/s and in air is 330 m/s, the distance between the two men is :
- (A) 36.3 m
 - (B) 363 m
 - (C) 726 m
 - (D) 3630 m
2. An object of mass 10 kg moves at a constant speed of 10 ms^{-1} . A constant force acts for 4 s on the object and gives it a speed of 2 ms^{-1} in opposite direction. The force acting on the object is :
- (A) -3 N
 - (B) -30 N
 - (C) 3 N
 - (D) 30 N
3. A man weighing 60 kg lifts a body of 15 kg to the top of a building 10 m high in 3 minutes. The power of man is :
- (A) 40.83 W
 - (B) 45 W
 - (C) 32.6 W
 - (D) 20 W
4. A train overtakes two persons walking along a railway track. The first one walks at 4.5 km/hr. The other one walks 5.4 km/hr. The train needs 8.4 and 8.5 seconds respectively to over take them. What is the speed of the train if both the persons are walking in the same direction as the train?
- (A) 63 km/hr
 - (B) 72 km/hr
 - (C) 99 km/hr
 - (D) 81 km/hr
5. Negative value of work done indicates that
- (A) force and displacement are in the same direction
 - (B) more than one force is acting on the object.
 - (C) displacement and force are in same directions and both have the same magnitude.
 - (D) displacement and force are in opposite directions.

6. n identical resistors together consume power P_s when connected in series and power P_p when connected in parallel across a power supply of voltage V . Then is $\frac{P_p}{P_s}$

- (A) n^2 (B) $\frac{1}{n^2}$
 (C) n (D) $\frac{1}{n}$

7. The specific resistance of a metal wire depends on its

- (A) Length (B) Area
 (C) Temperature (D) Mass

8. Which of the following cannot be the distance-time graph of an object?



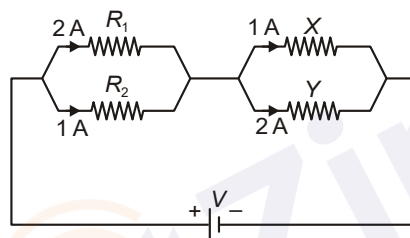
9. A body moving in a circular path of radius 1 m takes 1 second to reach its diametrically opposite point. Find the magnitude of its average velocity

- (A) π m/s (B) 2π m/s
 (C) 2 m/s (D) $\frac{\pi}{2}$ m/s

10. A freely suspended bar magnet always points in

- (A) North-south direction (C) South-west direction
 (B) North-east direction (D) East-west direction

11. In the given circuit find the ratio of the resistances X and Y .



- (A) $\frac{X}{Y} = \frac{2}{1}$ (B) $\frac{X}{Y} = \frac{R_2}{R_1}$
 (C) $\frac{X}{Y} = \frac{R_2 - R_1}{R_2 + R_1}$ (D) Both (1) & (2)

12. When a charged particle moves in a magnetic field, its kinetic energy will

- (A) Increase (B) Decrease

(C) Remain constant

(D) Become half of the initial kinetic energy when projected

13. One mole of any substance contains $6.023 \cdot 10^{23}$ particles. It was determined by –

(A) Barzilius

(B) Avogadro

(C) Dalton

(D) perin

14. What will be the sublimate obtained when a mixture of sand, sulphur, common salt and iodine is sublimed?

(A) Sand

(C) Iodine

(C) Sulphur

(D) Common salt

15. An element belongs to groups 17. It is present in third period and its atomic number is 17. What is the atomic number of the element belonging to same group and present in fifth period?

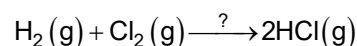
(A) 85

(B) 17

(C) 35

(D) 53

16. In a reaction vessel 100g H_2 and 100g Cl_2 are mixed and suitable conditions are provided for the following reaction :



Select the correct statement (s) for the above reaction

(A) presence of light is required for this reaction (B) it is a chain reaction

(C) catalyst is required

(D) (A) and (B) both

17. Match the following and choose the correct answer :

Column I**Column II**

(a) Solid

(i) Super energetic particles

(b) Liquid

(ii) No shape not fixed volume at a given pressure

(c) Gas

(iii) Has definite shape

(d) Plasma

(iv) Definite shape with less molecular forces than that in solids.

(A) a – i, b – ii, c – iii, d – iv

(B) a – iii, b – iv, c – ii, d – i

(C) a – iii, b – iv, c – i, d – ii

(D) a – i, b – iv, c – ii, d – iii

18. Nitya was a very naughty girl. One day she made a paper cup by folding a sheet of paper. Then she poured about 50 ml water in the cup and heated the cup over a candle flame. To her surprise the paper cup did not burn. It is because :

(A) in the presence of water, the ignition temperature of the paper cannot be reached.

(B) the candle flame does not provide sufficient heat to raise the temperature of paper to its ignition temperature.

(C) the flame of the candle is not luminous

(D) None of these

19. Which of the following is liquid at ordinary temperature?
(A) Germanium (B) Gallium
(C) Gold (D) Galena
20. When molecules gain enough energy they
(A) move away from each other (B) come close to each other
(C) remain at the same position (D) none of these
21. During evaporation of liquid
(A) the temperature of the liquid rises
(B) the temperature of the liquid falls
(C) the temperature of the liquid remains unaffected
(D) None of the above is correct
22. Which of the following reactions led to the discovery of the neutron?
(A) ${}^{14}_6\text{C} + {}^1_1\text{p} \longrightarrow {}^{14}_7\text{N} + {}^1_0\text{n}$ (B) ${}^{11}_5\text{B} + {}^2_1\text{D} \longrightarrow {}^{12}_6\text{C} + {}^1_0\text{n}$
(C) ${}^9_4\text{Be} + {}^4_2\text{He} \longrightarrow {}^{12}_6\text{C} + {}^1_0\text{n}$ (D) ${}^8_4\text{Be} + {}^4_2\text{He} \longrightarrow {}^{11}_6\text{C} + {}^1_0\text{n}$
23. With the increase in atmospheric pressure, the boiling point of a liquid
(A) Increases (B) Decreases
(C) Does not change (D) First decreases then increases
24. Copper acquires dull green coating of _____ on exposure to moist air for long time.
(A) CuCO_3 (B) $\text{CuO} \cdot \text{CuCO}_3$
(C) $\text{Cu}(\text{OH})_2 \cdot \text{CuO}$ (D) $\text{Cu}(\text{OH})_2 \cdot \text{CuCO}_3$
25. Which of the following forms a toxic substance in blood by combining with haemoglobin?
(A) CO (B) CO₂
(C) CH₄ (D) O₂
26. Vermicomposting involves
(A) earthworm (B) cockroach
(C) leech (D) roundworm
27. Which disease is likely to occur in crowded areas?
(A) Noninfectious (B) infectious
(C) Genetic (D) Deficiency disease
28. Acid rain is caused due to oxides of :

- (A) Nitrogen only
(C) Chlorine and nitrogen
- (B) Sulphur and phosphorus
(D) Nitrogen and sulphur
- 29.** Heart attack occurs due to the blockage of
(A) Coronary vein
(C) Aorta
- (B) Coronary artery
(D) Pulmonary vein
- 30.** Which cell organelle performs all of the following functions?
(i) Storage of proteins
(ii) Storage of oils
(iii) Providing colour to flowers
(A) Plastid
(C) RER
- (B) SER
(D) Golgi apparatus
- 31.** All are types of animal connective tissue, except
(A) Muscles
(C) Ligaments
- (B) Bones
(D) Tendons
- 32.** The most widely accepted theory of organic evolution is
(A) Darwin's Theory
(C) Mutation Theory
- (B) Lamarck's Theory
(D) Chemical Theory
- 33.** A person is suffering from a disease as a result his intestine fails to absorb food material. So what type of cell is missing from intestine?
(A) Stratified squamous epithelium
(C) Cuboidal epithelium
- (B) Columnar epithelium
(D) Ciliated epithelium
- 34.** The main aim of vaccination is?
(A) It creates immunity in the body
(B) It kills disease causing micro organisms
(C) It prevents entry of microorganisms in the body
(D) It is for confusing microorganisms
- 35.** Detoxification for many poisons and drugs in human body cells is carried out by
(A) Golgi apparatus
(C) Lysosomes
- (B) Smooth endoplasmic reticulum
(D) Ribosome
- 36.** Indo-China comprises
(A) India and China
(C) India, China and Vietnam
- (B) North and South Vietnam and China
(D) The modern countries of Vietnam, Laos and Cambodia

37. Which of the following was not a part of Gandhiji's satyagraha?
(A) Emphasis on the power of truth and search for truth
(B) Satyagraha as a pure soul-force
(C) A physical force which sought destruction of the enemy
(D) Not a weapon of the weak but a weapon which forced the adversary to accept the truth without violence
38. People belonging to different communities, regions or language groups developed a sense of collect belonging through
(A) Experiences of united struggles
(B) A variety of cultural processes through which nationalism captured people's imagination
(C) History and fiction, folklore and songs, popular prints and symbols all developed nationalism
(D) All the above
39. Which pact resolved the issue of separate electorates for dalits between Gandhi and Ambedkar in 1932?
(A) Lucknow pact
(B) Nagpur pact
(C) Poona pact
(D) Surat pact
40. The Simon Commission was boycotted in India because :
(A) There was no Indian member in the Commission.
(B) It supported the Muslim League
(C) Congress felt that people deserved Swaraj
(D) There were differences among the members
41. Who said, "The Swaraj would not come for a hundred years if untouchability is not eliminated"?
(A) Motilal Nehru
(B) Subhash Chandra Bose
(C) Mahatma Gandhi
(D) B. R. Ambedkar
42. If anyone violates our Fundamental Rights we can directly approach the :
(A) Prime Minister
(B) Supreme Court
(C) President
(D) Vice President
43. What is meant by 'begar'?
(A) Practice of begging
(B) Practice of forcing workers to work without any wages
(C) Practice of encouraging workers to work at normal wages
(D) Both (B) and (C)
44. What is the tenure of office of the Prime Minister?
(A) 5 years
(B) 6 years

- (C) As long as he wants
(D) He does not have a fixed tenure
45. Which of the following is not a function of the parliament?
(A) It can impeach and remove the president out of his office
(B) It decides whether a state will have legislative council or not.
(C) It can impeach the judges of the Supreme Court
(D) It can impeach the judges of the High Court of India
46. What is the minimum age for voting in India :
(A) 21 years
(B) 18 years
(C) 25 years
(D) 35 years
47. The Right of Private Property in India today is :
(A) A fundamental right
(B) A political right
(C) A moral right
(D) A legal right
48. Which one is an example of Sedimentary Rock?
(A) Sandstone
(B) Granite
(C) Marble
(D) None of these
49. Which of the following is not a sea port?
(A) Kochi
(B) Paradip
(C) Rameshwaram
(D) Vishakhapatnam
50. UNO was formed on
(A) 26 Oct., 1945
(B) 28 Oct., 1945
(C) 30 Oct., 1945
(D) 24 Oct., 1945
51. The sector which includes agriculture, forestry, animal husbandry, fishing, poultry, farming and mining –
(A) Primary Sector
(B) Secondary Sector
(C) Tertiary Sector
(D) All of the above
52. 'Sugar Bowl of India', is
(A) Madhya Pradesh
(B) Uttar Pradesh
(C) Kerala
(D) Karnataka
53. Which city is often termed as Manchester of India?
(A) Bombay
(B) Ahmadabad
(C) Surat
(D) Kanpur
54. Which of the following is also called Golden Fibre?

- (A) Jute (B) Coffee
(C) Tea (D) Cotton

55. What is meant by 'begar'?

- (A) Practice of begging
(B) Practice of forcing workers to work without any wages
(C) Practice of encouraging workers to work at normal wages
(D) Both (B) and (C)

56. The first successful textile mill was established in :

- (A) Delhi (B) Vishakhapatnam
(C) Chennai (D) Mumbai

57. Which one of the following steel plants is located in Chhattisgarh?

- (A) Bokaro (B) Durgapur
(C) Bhilai (D) Rourkela

58. Which of the following was the first port to be developed soon after Independence?

- (A) Mumbai (B) Kolkata
(C) Paradip (D) Kandla

59. Which one of the following groups of cities is connected by the National Highway No. 1?

- (A) Delhi – Amritsar (B) Delhi – Kolkata
(C) Delhi – Mumbai (D) Varanasi – Kanyakumari

60. What attracts an MNC?

- (A) Cheap labour (B) Ready demand for the product
(C) Both A & B (D) None of the above

61. Kerala has low infant mortality rate because :

- (A) It has good climatic condition
(B) It has adequate infrastructure
(C) It has adequate provision of basic health and educational facilities
(D) It has poor net attendance ratio

62. If anyone violates our Fundamental Rights we can directly approach the :

- (A) Prime Minister (B) Supreme Court
(C) President (D) Vice President

63. The government is responsible for providing free and compulsory education to all the children up to age of :

- (A) 16 years (B) 12 years

(C) 18 years (D) 14 years

64. Name the body which conducts the elections in India.

- (A) Supreme Court (B) Parliament
(C) Cabinet (D) Election Commission

65. Koderma in Jharkhand is the leading producer of which one of the following minerals?

- (A) Bauxite (B) Mica
(C) Iron ore (D) Copper

66. Which soil is the most widespread soil of India?

- (A) Alluvial (B) Black
(C) Laterite (D) Desert

67. The land developed due to soil erosion is called as

- (A) Fallow land (B) Bad land
(C) Waste land (D) Culturable waste land

68. The headquarters of European Union are located at –

- (A) Rome (B) Geneva
(C) Berlin (D) Brussels

69. The first Indian woman to become the president of the Indian National Congress was :

- (A) Sarojini Naidu (B) Kasturba Gandhi
(C) Pandita Ramabhai (D) Lakshmi Sahagal

70. Green revolution encouraged

- (A) Plantation of more trees (B) Organic farming
(C) Use of HYV's seeds (D) More use of machinery

71. 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) Rs. 6650 (B) Rs. 49350
(C) Rs. 50650 (D) None of these

72. If both $x + 1$ and $x - 1$ are factors of $ax^3 + x^2 - 2x + b$, find the value of a and b

- (A) $a = 2, b = 1$ (B) $a = -2, b = 1$
(C) $a = -2, b = -1$ (D) $a = 2, b = -1$

73. A circular wire of radius 42 cm is cut and bent it into the form of rectangle whose sides are in the ratio of 6 : 5. The smaller side of the rectangle is :
- (A) 30 cms (B) 60 cms
(C) 72 cms (D) 132 cms
74. The length of the side of a rhombus is 10 units and its diagonals differ by 4 unit. The area of the rhombus is :
- (A) 108 sq. unit (B) 96 sq. unit
(C) 84 sq. unit (D) 48 sq. unit
75. The perimeter of a rectangle is 100 and its diagonal has length x. The area of this rectangle, is :
- (A) $625 - x^2$ (B) $625 - \frac{x^2}{2}$
(C) $1250 - x^2$ (D) $1250 - \frac{x^2}{2}$
76. $n^2 - 1$ is divisible by 8, if n is :
- (A) an integer (B) a natural number
(C) an odd integer (D) an even integer
77. $\frac{x^{-1}}{x^{-1} + y^{-1}} + \frac{x^{-1}}{x^{-1} - y^{-1}}$ is equal to :
- (A) $\frac{2y^2}{y^2 - x^2}$ (C) $\frac{2x^2}{y^2 - x^2}$
(B) $\frac{2y^2}{y^2 + x^2}$ (D) none
78. If $(x + a)$ is a factor of $x^2 + px + q$ and $x^2 + mx + n$ then the value of a is :
- (A) $\frac{m-p}{n-q}$ (B) $\frac{n-q}{m-p}$
(C) $\frac{n+q}{m+p}$ (D) $\frac{m+p}{n+q}$
79. A student got marks in 5 subjects in a monthly test is 2, 3, 4, 5, 6. In these obtained marks, 4 is the
- (A) Mean and median (B) Median but no mean
(C) Mean but no median (D) Mode
80. Two different kind of bricks were produced. The dimensions of the one kind are 10 cm × 12 cm × 14 cm and the dimensions of other are 12 cm × 14 cm × 16 cm. By what percent is the volume of the larger brick greater than the volume of the smaller brick.
- (A) by 37.5% (B) by 40%
(C) by 50% (D) by 60%
81. A television set was sold for Rs. 5760 by giving successive discounts of 10% and 20% respectively. What was the marked price

- (A) 8000/- (B) 6400/-
(C) 3200/- (D) None of these

82. 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 : 28 (D) 28 : 25

83. If $\tan\theta$ and $\sec\theta$ are the roots of the quadratic equation $ax^2 + bx + c = 0$ then.

- (A) $a^4 = b^2(b^2 - 4ac)$ (B) $b^4 = a^2(b^2 - 4ac)$
(C) $a^4 = b^2(b^2 + 4ac)$ (D) $b^4 = a^2(b^2 + 4ac)$

84. If D is any point on the side BC of a $\triangle ABC$, then :

- (A) $AB + BC + CA > 2AD$ (B) $AB + BC + CA < 2AD$
(C) $AB + BC + CA > 3AD$ (D) None

85. $f(x)$, $g(x)$ are two polynomial with integer coefficient such that their H.C.F. is 1 and LCM is $(x^2 - 4)(x^4 - 1)$. If

$f(x) = x^3 - 2x^2 - x + 2$, then $g(x)$ is :

- (A) $x^3 - 2x^2 + x + 2$ (B) $x^3 - 2x^2 + x - 2$
(C) $x^3 + 2x^2 + x + 2$ (D) $x^3 - 2x^2 - x - 2$

86. 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

87. If $2 \times (\sqrt{2})^5 \times (\sqrt{2})^{-2/3} = (\sqrt{2})^{x+1}$, then the value of x is :

- (A) $\frac{2}{3}$ (B) $1\frac{1}{3}$
(C) $4\frac{1}{3}$ (D) $5\frac{1}{3}$

88. A shop-keeper sells a hockey stick marked Rs. 150 at 10 percent discount and gives a ball costing Rs. 20 free with each hockey. He then makes a profit of 15 percent. His cost price per hockey is

- (A) Rs. 135 (B) Rs. 115
(C) Rs. 108 (D) Rs. 100

89. Twelve years hence a person will be four times as he was twelve years ago, then his present age is

- (A) 20 years (B) 25 years
(C) 28 years (D) 30 years

90. A train overtakes two person walking along a railway track. The first one walks at 4.5 km/hr. The other one walks at 5.4 km/hr. The train needs 8.4 and 8.5 seconds respectively to over take them. What is the speed of the train if both the persons are walking in the same direction as the train?
- (A) 63 km/hr (B) 72 km/hr
(C) 99 km/hr (D) 81 km/hr



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ANSWER KEY_ NTSE 1(MAT)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	D	C	B	C	D	C	D	B	B	D	C	A	B	D
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
B	C	C	B	A	A	B	C	C	C	B	D	D	C	D
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
C	D	B	C	D	C	C	D	A	C	D	B	A	B	A
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
B	B	A	A	C	C	D	C	C	B	B	C	D	A	D
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
C	D	D	D	B	D	A	C	C	C	B	C	B	B	B
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
C	B	A	B	B	D	D	A	C	A	A	B	D	C	D
						<u>SAT</u>								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B	B	A	D	D	A	C	C	C	A	D	C	D	B	D
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
D	B	D	B	A	B	C	A	D	A	A	B	D	B	A
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
A	A	B	A	B	D	C	D	C	A	C	B	B	D	B
45	47	48	49	50	51	52	53	54	55	56	57	58	59	60
B	D	A	C	A	A	B	B	A	B	D	C	D	A	C
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
C	B	D	D	B	A	B	D	A	C	C	D	B	B	D
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
C	A	B	A	D	A	B	A	A	C	D	D	D	A	D