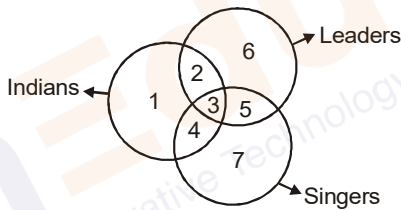


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**NTSE TEST – 2**

**MAT**

**Directions (Q. 1 & 2) :** Study the following figure carefully and answer the given questions.



- Which region represents Indian leaders who are singers?  
(A) 2 (B) 3  
(C) 4 (D) 5
- Which region represents Indian singers who are not leaders?  
(A) 1 (B) 2  
(C) 3 (D) 4
- A, B, C and D are playing cards. A and B are partners. D faces toward North. If A faces towards West, then who faces towards South?  
(A) B (B) C  
(C) D (D) None of these
- The total of the ages of Amar, Akbar and Anthony is 80 years. What was the total of their age three years ago?  
(A) 71 years (B) 72 years  
(C) 77 years (D) 79 years
- In a certain code language, 15729 is written as AEGBI and 2346 is written as BCDF. How will 23549 be written in that language?  
(A) ABEDI (B) CBEDI  
(C) BCEDI (D) CEBDI

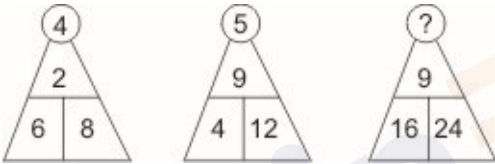
**Directions (Q. 6 to 10) :** Find out the relationship between the first two words and then choose the word from the given alternatives, which bears the same relationship to the third word, as the first two bear.

- Food : Stomach :: Fuel : ?  
(A) Plane (B) Truck  
(C) Engine (D) Automobile
- Sedative : Pain :: Solace : ?  
(A) Irritation (B) Kill  
(C) Grief (D) Hurt
- Botany : Plants :: Entomology : ?  
(A) Snakes (B) Insects  
(C) Birds (D) Germs
- 9 : 80 :: 10 : ?  
(A) 91 (B) 101  
(C) 93 (D) 99
- ASTN : ZTSO :: MSUB : ?  
(A) LRRC (B) LTTA

(C) NTVC

(D) LTTC

Direction (11 to 13) Get the rule and find the suitable option for blank cell.

11. 

(A) 3 (B) 7  
(C) 6 (D) 9

12. 

|    |    |    |
|----|----|----|
| 23 | 48 | 25 |
| 46 | 92 | ?  |
| 31 | 60 | 29 |

(A) 54 (B) 4  
(C) 46 (D) 138

13. 

|    |    |    |
|----|----|----|
| 3  | 5  | 4  |
| 8  | 14 | 11 |
| 25 | ?  | 34 |

(A) 44 (B) 43  
(C) 42 (D) 41

Direction (14) Following question is based on the five three digit numbers given below :

14. If the positions of first and the third digit in each of the numbers is interchanged which of the following will be the lowest number after the rearrangement?

264, 175, 826, 397, 549

- (A) 175 (B) 264  
(C) 397 (D) 826

15. In the following question, find which one word cannot be made from the letters of the given word.

HANDSOME

- (A) HALE (B) HEN  
(C) SOME (D) HEAD

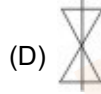
Direction (16 to 17) Which of the answer figures marked (A), (B), (C) (D) will complete the given series of problem figures :

16. 

(A)  (B)   
(C)  (D) 

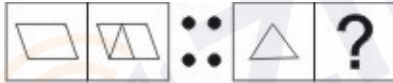
17. 

(A)  (B) 

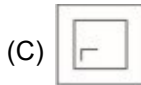
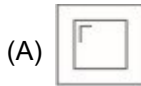


Direction (18 to 19) Answer the questions on the basis of the information given below. In each of the following questions, there are two pairs of figures. In the first pair, one figure is related to the other in the certain manner. If the same relation has to exist in the second pair, which answer choice should come in place “?”.

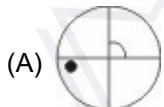
18.



19.



20. Which of the four alternatives is identical with the given figure?



21. If Ashok is taller than Suresh, Raju is taller than Ashok, Chandu is shorter than Suresh, then Chandu is -

- (A) Taller than Ashok
- (B) As tall as Suresh
- (C) Taller than Suresh
- (D) Shorter than Ashok

Direction: (22 to 26) Read the following information carefully and answer the questions given below it. In a car exhibition, seven cars of seven different brands, viz Cadillac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo were displayed in a row, facing east direction such that :

- I. Cadillac was to the immediate right of Fargo.
- II. Fargo was fourth to the right of Fiat.
- III. Maruti was between the Ambassador and Bedford.
- IV. Fiat, which was third to the left of Ambassador, was at one of the extreme ends.

22. Which of the following was the correct position of the Mercedes ?  
(A) To the Immediate right of Fargo (B) To the Immediate left of Bedford  
(C) Between Bedford and Fargo (D) Fourth to the right of Maruti
23. Which of the following is definitely true ?  
(A) Fargo is between Ambassador and the Fiat  
(B) Cadillac is to the immediate left of Mercedes  
(C) Fargo is to the immediate right of Cadillac  
(D) Maruti is fourth to the right of Mercedes
24. Which cars are neighbours of Cadillac ?  
(A) Ambassador and Maruti (B) Maruti and Fiat  
(C) Fiat and Mercedes (D) Mercedes and Fargo
25. Which of the following is definitely true ?  
(A) Maruti is to the immediate left of Ambassador  
(B) Bedford is to the immediate left of Fiat -  
(C) Bedford is at one of the ends  
(D) Fiat is second to the right of Maruti
26. Which of the following groups of cars is to the right of the Ambassador ?  
(A) Cadillac, Fargo and Maruti (B) Maruti, Bedford and Fiat  
(C) Mercedes, Cadillac and Fargo (D) Bedford, Cadillac and Fargo

**Direction : (27 to 30) Study the given information carefully and answer the questions that follow.**

**There are four people sitting in a row : one each from India, Japan, USA and Germany, but not in that order.**

- I. They are wearing caps of different colours not necessarily in that order.**
- II. One is wearing a kurta and one a T-shirt.**
- III. The Indian is wearing a green cap and a jacket.**
- IV. The American is not seated at either end.**
- V. The persons with kurta and T-shirt are sitting next to each other.**
- VI. The persons with kurta wears a red cap and sits next to the Japanese.**
- VII. The Japanese wears a shirt and is not seated at either end.**
- VIII. The man with white cap wears T-shirt and is seated at one end.**

27. Who wears the T-shirt?  
(A) Indian (B) Japanese  
(C) American (D) German
28. Who is wearing a kurta?  
(A) Indian (B) Japanese  
(C) American (D) German
29. What is the colour of the cap worn by the Japanese?  
(A) Red (B) Green  
(C) Yellow (D) White

30. Who is next to the man wearing T-shirt?  
(A) Indian (B) Japanese  
(C) American (D) German

**Direction (31 to 32) Are to be answered with reference to the following explanatory paragraph :**  
**Suppose the view of number system, a symbol system was substituted, which had digits** □, Λ, Z, Σ, ★, ♣, <, X, and ⊕ **corresponding to the digits, 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 respectively. The digit** □ **is used in the same fashion as the digit 0 in the decimal system.**

31. Which is equal to  $10^2$ ?  
(A) Λ □ □ (B) ♣ 3  
(C) ♣ Λ Λ (D) ⊕ □ □
32. What is the sum of  $3 + ♣ + Σ = ?$   
(A) Λ Z (B) Λ Σ  
(C) ⊕ (D) □ Σ
33. If MARE is coded as NESI and LOVER is coded as MUWIS how would you code ABOVE in the same language?  
(A) ECUWI (B) IWUCE  
(C) CUVWE (D) BCPWF
34. In the given alternatives, find the word which cannot be formed by using the letters of the word 'RAPPROCHEMENT'  
(A) REPRESENT (B) REPROACH  
(C) PHANTOM (D) CEMENT
35. A bus for Delhi leaves every thirty minutes from a bust stand. An enquiry clerk told a passenger that the bus had already left ten minutes ago and the next bus will leave at 9:35 a.m. At what time did the enquiry clerk give this information to the passenger?  
(A) 9:10 am (B) 8:55 am  
(C) 9:05 am (D) 9:15 am
36. What is related to 'Taka' in the same way as 'Lira' is related to 'Italy'?  
(A) Pakistan (B) Jordan  
(C) Maxico (D) Bangladesh
37. What is related to 'Diamond' in the same way as 'Soft' is related to 'Wax'?  
(A) Rough (B) Bright  
(C) Smooth (D) Hard

**Direction (38 to 39) Find out the pair which is different from the others**

38. (A) Work-Leisure (B) Day-Night  
(C) Expedite-Procrastinate (D) Frequently-Always
39. (A) Banana (B) Apple  
(C) Orange (D) Carrot
40. (A) 15 (B) 21  
(C) 63 (D) 81

**Direction (41 – 42) : Answer the questions on the basis of the information given below. Six people are to be seated around a circular table keeping equal distance among each other. Naveen cannot sit adjacent**

to Laxman, Madhavi or Puneet. However, Kamini insists on sitting adjacent to Madhvi and in the anticlockwise direction with respect to Madhvi. Omprakash should also be seated.

41. In how many possible arrangements can these six people seat themselves around the circular table?  
(A) 1 (B) 2  
(C) 4 (D) 6
42. Who sits opposite to Madhvi?  
(A) Naveen (B) Laxman  
(C) Omprakash (D) can't be determined
43. Six roads lead to a country. They may be indicated by letters X, Y, Z and digits 1, 2, 3. When there is a storm, Y is blocked. When there are floods X, 1 and 2 will be affected. When road 1 is blocked, Z also is blocked. At a time when there are floods and a storm also blows, which roads can be used?  
(A) Z and 2 (B) Only Z  
(C) Only 3 (D) Only Y

**Direction (44 – 48) : Read the following information carefully and answer the questions that follow.**

**I. There are six students (A, B, C, D, E and F) in a group. Each student can opt for only three choices out of the six which are music, reading, painting, badminton, cricket and tennis.**

**II. A, C and F like reading.**

**III. D does not like badminton, but likes music.**

**IV. Both B and E like painting and music.**

**V. A and D do not like painting, but they like cricket.**

**VI. All student except one like badminton.**

**VII. Two students like tennis.**

**VIII. F does not like cricket, music and tennis.**

44. Which pair of students has the same combination of choices?  
(A) A and C (B) C and D  
(C) B and E (D) D and F
45. Who among the following students like both tennis and cricket?  
(A) A and B (B) C  
(C) B and D (D) D
46. How many students like painting and badminton?  
(A) 1 (B) 2  
(C) 3 (D) 4
47. Who among the following do not like music?  
(A) A, C and D (B) A, B and C  
(C) A, C and F (D) B, D and F
48. Which of the following is the most popular choice?  
(A) Tennis (B) Badminton  
(C) Reading (D) Painting
49. How many 5's are there in the following number sequence which are immediately followed by 3 but not immediately preceded by 7 ?  
**8 9 5 3 2 5 3 8 5 5 6 8 7 3 3 5 7 7 5 3 6 5 3 3 5 7 3 8**

- (A) 1 (B) 2  
(C) 3 (D) 4

50. Light : Ray :: Sound : ?

- (A) Hear (B) Wave  
(C) Audio (D) Pitch

**Direction (51 – 53)** Fill up the blanks with the most suitable alternatives and mark them in the sheet.

51. Success in this examination depends \_\_\_\_\_ hard work alone.

- (A) at (B) for  
(C) over (D) on

52. My uncle decided to take \_\_\_\_\_ and my sister to the market.

- (A) I (B) me  
(C) mine (D) myself

53. Rohan and Rohit are twin brothers, but they do not look \_\_\_\_\_.

- (A) unique (B) likely  
(C) different (D) alike

**Direction (54 – 57)** In each question below, there is a sentence of which some parts have been jumbled up. Rearrange these parts which are labeled P, Q, R and S to produce the correct sentence. Choose the proper sequence.

54. When he

P : did not know

Q : he was nervous and

R : heard the hue and cry at midnight

S : What to do

The proper sequence should be :

- (A) RQPS (B) QSPR  
(C) SQPR (D) PQRS

55. It has been established that

P : Einstein was

Q : although a great scientist

R : weak in arithmetic

S : right from his school days

The proper sequence should be :

- (A) SRPQ (B) QPRS  
(C) QPSR (D) QSPR

56. I read an advertisement that said

P : posh, air conditioned

Q : gentleman of taste

R : are available for

S : fully furnished rooms

The proper sequence should be

- (A) PQRS (B) PSRQ  
(C) PSQR (D) RSPQ

57. Since the beginning of history

P : have managed to catch

Q : the Eskimos and Red Indians

R : by a very difficult method

S : a few specimens of this aquatic animal

The Proper sequence should be:

- (A) QRPS (B) SQPR  
(C) SQRP (D) QPSR

**Direction (58 – 62) For each of the following sentences four alternatives are given. You are required to choose the correct meaning of the idioms given in italics in the sentences.**

58. The boy turned a *deaf ear* to the pleadings of all his well-wishers.  
(A) listened carefully (B) was deadly opposed  
(C) posed indifference (D) did not pay any attention
59. We should give a *wide berth* to bad characters.  
(A) keep away from (B) publicly condemn  
(C) give publicity to (D) not sympathise with
60. Sumit had to look *high and low* before he could find his scooter key.  
(A) nowhere (B) always  
(C) everywhere (D) somewhere
61. You may *rush from pillar to post*, but you stand no chance of getting what you want without bribe.  
(A) be very busy  
(B) rush in all directions and suffer much harassment.  
(C) go to all post boxes and post offices.  
(D) go to many offices and post letters.
62. At a party, he is always in *high spirits*.  
(A) talkative (B) cheerful  
(C) drunk (D) uncontrollable

**Direction (63 – 65) : In the following sentences, a word or phrase is written in italicized letters. For each italicized part four words/phrases are listed below each sentence. Choose the word nearest in meaning to italicized part.**

63. Man has to *encounter* many hardships in life.  
(A) solve (B) face  
(C) bear (D) overcome
64. Ritu asked Rashmi not to *meddle* in her affairs.  
(A) intercede (B) impose  
(C) cross (D) interfere
65. *Incensed* by his rude behaviour the manager suspended the work.  
(A) enthused (B) enraged  
(C) inflamed (D) excited

**Direction (66 – 68) : The following sentences consist of a word or a phrase which is written in italicized letters. Each of them is followed by four words or phrases. Select the word or the phrase which is closest to the opposite in meaning of the italicized word or phrase.**

66. The plane lay burnt in *fragments*.



- (A) whole (B) parts  
(C) scraps (D) pieces

67. His health has been *deteriorating* since he returned from trekking expedition.

- (A) ameliorating (B) amending  
(C) undertaking (D) worsening

68. Twenty point programme is aimed at *alleviating* the sufferings of the poor.

- (A) aggravating (B) mitigating  
(C) eradicating (D) appeasing

White cement is the basic raw material for producing cement tiles and cement paint which are used extensively in building construction. The main consumers of white cement are, therefore, cement tile and cement paint manufacturing units. These consumers, mostly in the small scale sector, are today facing a major crisis because of a significant increase in the price of white cement during a short period. The present annual licensed production capacity of white and grey cement in the country is approximately 3.5 lakh tones. The average demand is 2-2.5 tonnes. This means that there is idle capacity to the tune of one lakh tones or more. The price rise is, therefore, not a phenomenon arising out of inadequate production capacity but evidently because of artificial scarcity created by the manufacturers in their self-interest.

The main reason for the continuing spurt in cement price is its decontrol. As it is, there is stiff competition in the cement paint and tile manufacturing business. Any further price revision at this stage is bound to have a severe adverse impact on the market conditions. The Government should take adequate steps to ensure that suitable controls are brought in. Else it should allow import of cement.

69. Why is the price of cement going up?

- (A) Because the Government is controlling the quota.  
(B) Because of export of white cement.  
(C) Because of the large usage of white cement.  
(D) None of these

70. Which of the following statement is false according to the passage?

- (A) Price rise in white cement would increase the price of cement paint.  
(B) White cement is a controlled product.  
(C) Increase in price of white cement is not because of production problem.  
(D) Price rise in white cement would upset cement tile market.

71. What is the crisis being faced by the cement tile manufacturers as described in the passage?

- (A) White cement is priced very low. (B) White cement is not of good quality.  
(C) White cement usage is high. (D) White cement prices are very high.

72. Which of the following is correct according to the passage?

- (A) White cement is not used in the manufacture of paint.  
(B) White cement forms a minor part of tile manufacturing.  
(C) White cement is very important for tile manufacturing.  
(D) White cement is used only for making paints.

73. What is the author's suggestion to bring down prices?

- (A) Government should control the white cement market.  
(B) Production capacity should be increased.  
(C) Usage of white cement in other areas should be reduced.

(D) Competition among manufacturers of cement paints and tiles should be reduced.

**Direction (74 to 77) In the questions below, out of the four alternatives, choose the one which can be substituted for the given words/sentences.**

74. A cure for all diseases.  
(A) Remedy (B) Panacea  
(C) Relief (D) Palliative
75. Ready to believe.  
(A) Credulous (B) Credible  
(C) Creditable (D) Incredible
76. Study of birds.  
(A) Zoology (B) Radiology  
(C) Ophthalmology (D) Ornithology
77. Government by one person with absolute power.  
(A) Autocracy (B) Democracy  
(C) Meritocracy (D) Republic

**Direction (78 to 80) In these questions, a part of the sentence is bold which may need improvement. Alternatives are given at (A), (B) and (C) below, one of which may be a better option. In case no improvement is required your answer is (D)**

78. I had my ears **bored** so I could wear my diamond ear-rings.  
(A) holed (B) pricked  
(C) pierced (D) No improvement
79. It is interesting to **correspond** the history of the 19th century with its literature.  
(A) corroborate (B) correlate  
(C) command (D) No improvement
80. **Didn't** Mr Sharma come to the office yet?  
(A) Hadn't (B) Hasn't  
(C) Isn't (D) No improvement

**PASSAGE**

**Direction (81 to 90) In the passage some of the words have been left out. Read the passage and fill in the blanks with the help of alternatives given.**

One of the myths relevant to the contemporary human condition is that of Prometheus. It has positive and optimistic **81**. Man can better himself and aspire **82**. higher worlds through his own efforts. **83**. In the process, he may **84**. terrible tribulations, wars, revolutions, tortures of the **85**. and the spirit. Time and again he would be tempted to throw **86**. the towel or retire into **87**. and to the dream world of drugs and **88**. But he will not, if made of the **89**. of Prometheus, be diverted. He will stick **90**. his goal, as Prometheus did in stealing fire from the gods, suffering terrible retribution for his pains.

81. (A) signals (B) morals  
(C) echoes (D) undertones
82. (A) in (B) into  
(C) to (D) after
83. (A) and (B) though  
(C) yet (D) still

84. (A) resist (B) experience  
(C) challenge (D) suffer
85. (A) heart (B) body  
(C) mind (D) soul
86. (A) up (B) in  
(C) away (D) off
87. (A) wilderness (B) meditation  
(C) obscurity (D) passivity
88. (A) stimulants (B) luxuries  
(C) delusions (D) deceptions
89. (A) stuff (B) material  
(C) substance (D) blood
90. (A) by (B) to  
(C) in (D) on

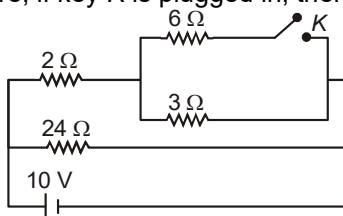
## SAT

1. The second's hand of a watch is 2 cm long. The speed of the tip of this hand is :  
(A) 0.21 cm/s (B) 2.1 cm/s  
(C) 21.0 cm/s (D) None of these
2. Domestic electrical wiring is basically a :  
(A) combination of series and parallel connections  
(B) parallel connection  
(C) series connection  
(D) series connection within each room and parallel connection elsewhere
3. What will happen if the external unbalanced force on a moving car is removed?  
(A) It will start moving faster than earlier  
(B) It will come to rest  
(C) It will move with the uniform velocity it has acquired till then  
(D) It will start moving slowly
9. The value of g becomes  
(A) greater at the poles than at the equator  
(B) greater at the equator than at the north pole  
(C) greater at the equator than at the south pole  
(D) zero at the equator
5. An object of mass 12 kg is moving with a uniform velocity of 3 m/s. The kinetic energy possessed by the object is:  
(A) 54 J (B) 18 J  
(C) 36 J (D) 48 J
6. A car moves a distance of 200 m. it covers the first half of the distance at speed 40 km/h and the second half of the distance at speed v. If the average speed is 48 km/h, then the value of v is -  
(A) 50 km/h (B) 56 km/h  
(C) 58 km/h (D) 60 km/h

7. Fruits and vegetables can conduct electricity because they contain :  
(A) lots of fibre (B) sweetener  
(C) acids, salts and water (D) vitamins
8. A battery can supply a charge of  $2.5 \times 10^3$  C. If the current is drawn from the battery at a rate of 12.5 A. Calculate the time in which battery will get discharged?  
(A) 360s (B) 200s  
(C) 250s (D) 100s
9. If two ends of a wire connected to a battery, are dipped in distilled water, the compass needle brought near the circuit :  
(A) would keep moving in anticlockwise direction continuously  
(B) would keep moving in clockwise direction continuously  
(C) would remain still  
(D) would show deflection
10. What is the resistance between P and Q?



- (A)  $\frac{3}{4} \Omega$  (B)  $\frac{4}{3} \Omega$   
(C)  $\frac{16}{3} \Omega$  (D) infinity
11. In the electric circuit shown in the figure, if key  $K$  is plugged in, then



- (A) Current through  $24 \Omega$  resistance increases  
(B) Current through  $2 \Omega$  resistance remains the same  
(C) Potential difference across  $3 \Omega$  resistance decreases  
(D) Potential difference across  $2 \Omega$  resistance decreases
12. In an electric circuit, negative charge always flows from  
(A) A region of higher potential to lower potential  
(B) A region of lower potential to higher potential  
(C) Higher resistance to lower resistance

(D) Lower resistance to higher resistance

13. Two elements (X) and (Y) combine to form compound (A) and (B). For the fixed mass of (X) masses of (Y) combine are in 3 : 7 ratio. If in (A) 4 g of (X) combine with 12 g of (Y), then in (B) 8 g of (X) will combine with ..... g of (Y).
- (A) 8 (B) 56  
(C) 28 (D) 24



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14. Which of the following names represents the foul smelling, black, thick, viscous liquid obtained from destructive distillation of coal?  
(A) Coke (B) Coal Tar  
(C) Coal Gas (D) None of these
15. In an atom the sum of neutrons and protons is 14. The number of neutrons is two more than number of protons. The atom is -  
(A) N (B) O  
(C) C (D) Ne
16. If aufabu rule is not followed, Ca will be placed in ..... block and period respectively -  
(A) s, 4 (B) d, 4  
(C) d, 3 (D) d, 5
17. A gas 'X' is passed through water to form a saturated solution. The aqueous solution on treatment with the  $\text{AgNO}_3$  gives a white precipitate. The saturated aqueous solution also dissolves magnesium ribbon with evolution of a colourless gas 'Y'. Identify 'X' and 'Y'.  
(A) X =  $\text{CO}_2$ , Y =  $\text{Cl}_2$  (B) X =  $\text{Cl}_2$ , Y =  $\text{CO}_2$   
(C) X =  $\text{Cl}_2$ , Y =  $\text{H}_2$  (D) X =  $\text{H}_2$ , Y =  $\text{Cl}_2$
18. What is the degree of ionisation of one litre water containing  $10^{-7}$  moles  $\text{H}^+$  ions?  
(A)  $1.8 \times 10^{-7} \%$  (B)  $18 \times 10^{-7} \%$   
(C)  $1.8 \times 10^{-6} \%$  (D)  $1.8 \times 10^{-5} \%$
19. The mass of sodium in 11.7 g of sodium chloride is :  
(A) 2.3 g (B) 4.6 g  
(C) 6.9 g (D) 7.1 g
20. The solubility of  $\text{K}_2\text{SO}_4$  in water is 16 g at  $50^\circ\text{C}$ . The minimum amount of water required to dissolve 4 g  $\text{K}_2\text{SO}_4$  is :  
(A) 10 g (B) 25 g  
(C) 50 g (D) 75 g
21. Which of the following is known as quick lime?  
(A)  $\text{KNO}_3$  (B)  $\text{CaO}$   
(C)  $\text{SO}_2$  (D)  $\text{HgO}$
22. The number of molecules in 1 ml of water is -  
(A)  $3.3 \times 10^{22}$  (B) 1  
(C)  $6.02 \times 10^{23}$  (D) 18
23.  $6.022 \times 10^{20}$  atoms of silver (at mass = 108 u) weigh -  
(A)  $108 \times 10^3$  g (B) 108 g  
(C) 0.108 g (D) 10.8 g
24. The correct chemical formula of aluminium sulphate is -  
(A)  $\text{Al}_2(\text{SO}_4)_3$  (B)  $\text{Al}_2(\text{SO}_3)_4$   
(C)  $\text{Al}_3(\text{SO}_4)_4$  (D)  $\text{AlSO}_4$
25. Rate of photosynthesis is higher in  
(A) Terrestrial plant (B) Aquatic plant  
(C) Temperate forest (D) Grassland

26. Rate of photosynthesis is dependent on :  
(A) Light quality (B) Light intensity  
(C) Duration of light (D) All of these
27. Animals eat food  
(A) To get energy (B) For repair of the body  
(C) To get resistance against diseases (D) All the above
28. The mode of nutrition in fungi (mushroom) is called  
(A) Autotrophic (B) Holozoic  
(C) Heterotrophic (D) Saprophytic
29. Which is the first part of small intestine?  
(A) Ileum (B) Jejunum  
(C) Duodenum (D) Caecum
30. Number of teeth in adult man.  
(A) 28 (B) 26  
(C) 32 (D) 36
31. Bile juice is produce by  
(A) Stomach (B) Liver  
(C) Gall bladder (D) Pancreas
32. The two organisms which breathe only through their moist skin are :  
(A) fish and frog (B) frog and earthworm  
(C) leech and earthworm (D) fish and earthworm
33. In which of the following process  $\text{CO}_2$  is released?  
(A) Glycolysis (B) Photosynthesis  
(C) Alcohol fermentation (D) Lactic acid fermentation
34. Respiration is  
(A) Biochemical process (B) Physico-chemical process  
(C) Physical process (D) Oxidation process
35. One of the following animals does not use tracheae as the respiratory organs. This animal is :  
(A) grasshopper (B) prawn  
(C) mosquito (D) cockroach
36. According to the census of 2001, a 'literate' person is one who :  
(A) Can read, write his/her name  
(B) Can read write any language  
(C) Is 7 years old and can read and write any language with understanding  
(D) all of the above
37. Right to Constitutional Remedies comes under :  
(A) Fundamental Rights (B) Legal Rights  
(C) Constitutional Rights (D) Natural Rights
38. Which one of the following pairs is correct with respect to the conservation of wild-life in India?  
(A) Bandipur-Madhya Pradesh (B) Corbett-Karnataka  
(C) Kaziranga-Assam (D) Kanha Kisli-Uttar Pradesh
39. Law in free India are based on –  
(A) Customs (B) Constitution  
(C) Religion (D) Race

40. Percentage of forest area in India is :  
(A) 27 (B) 22  
(C) 17 (D) 31
41. Sindri is important for  
(A) Oil refining (B) Aluminium Manufacture  
(C) Machine-tool industry (D) Fertilizer Production
42. Who is the leader of the ruling party in the Lok Sabha?  
(A) Home Minister (B) Speaker  
(C) President (D) Prime Minister
43. 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
44. Judges of the Supreme Court can work till they attain \_\_\_\_\_ years of age.  
(A) 58 (B) 60  
(C) 62 (D) 65
45. The minimum age limit of Lok Sabha member and the Rajya Sabha member is :  
(A) 30 years and 25 years respectively (B) 25 years and 30 years respectively  
(C) 25 years and 35 years respectively (D) 25 years and 25 years respectively
46. Hiuen Tsang had come to India during the reign of :  
(A) Ashoka (B) Chandragupta-II  
(C) Samudragupta (D) Harsa
47. Which of the following is a peninsular river of India?  
(A) Kosi (B) Gandak  
(C) Krishna (D) Sutlej
48. Around how many ministers are there in the Cabinet?  
(A) 100 (B) 60  
(C) 20 (D) 10
49. The aim of green revolution  
(A) Land reform (B) High quality seeds  
(C) Modernization of agriculture (D) Patent system
50. The revolt of 1857 started from  
(A) Meeruth (B) Kanpur  
(C) Delhi (D) Lucknow
51. National Consumers Day fall on :  
(A) 31 March (B) 23 August  
(C) 24 December (D) 25 January
52. Which of the following factors has not facilitated globalization?  
(A) Technology (B) Liberlisation of trade  
(C) WTO (D) nationalization of banks
53. An asset that the borrower owns and uses it as a guarantee to a lender until the loan is repaid  
(A) Security (B) Guarantee  
(C) Land (D) Collateral



54. Under employment occurs when people  
(A) Do not want to work  
(B) Are working in lazy manner  
(C) Are working less than what they are capable of doing  
(D) Are not paid for their work
55. Name the important trading company that become master of India.  
(A) French trading company (B) Italian East India company  
(C) The English east India company (D) None of these
56. Which of the following organizations is responsible for maintaining peace and security among international countries?  
(A) IMF (B) World Bank  
(C) UNSC (D) UNESCO
57. "Santiniketan" was established by -  
(A) Bankim Chand Chaterjee (B) Rabindranath Tagore  
(C) E. V. Ramaswamy (D) Vivekanand
58. Population between the age group of 15 years to 59 years is known as  
(A) educated population (B) dependent population  
(C) working population (D) independent population
59. The largest and smallest states of India in area are –  
(A) Rajasthan - Chandigarh (B) Punjab - Haryana  
(C) Rajasthan - Goa (D) Andhra Pradesh - Goa
60. NDA stands for :  
(A) National Defence Army (B) National Democratic Alliance  
(C) National Defence Alliance (D) Non-Disclosure Agreement
61. The Preamble of our Constitution reads : India is a  
(A) Soverign, Socialist, Secular, Democratic Republic  
(B) Secular, Socialist, Soverign, Democratic Republic  
(C) Socialist, Soverign, Secular, Democratic Republic  
(D) Secular, Soverign, Democratic, Socialist Republic.
62. Which city of India is known as "Silicon Valley"  
(A) Bangalore (B) Ahemdabad  
(C) Trivendram (D) Pune
63. The central dome of Viceroy's building was copied from :  
(A) Stupa of Sanchi (B) Taj Mahal  
(C) Red Fort (D) Fatehpur Sikri
64. Decisions on every issue related to the elections are taken by the  
(A) Prime Minister (B) President  
(C) Chief Election Commissioner (D) Chief commissioner
65. The Non Government Organisations in Bhopal are fighting for the cause of  
(A) CEO Anderson (B) Bhopal gas tragedy  
(C) DOW company (D) Union Carbide

66. The Vernacular Press Act was passed in the year  
(A) 1875 (B) 1876  
(C) 1877 (D) 1878
67. The person that serves as the Law minister in the first cabinet of post-independence India was  
(A) Sarojini Naidu (B) Jawaharlal Nehru  
(C) Somnath Lahiri (D) Bhimrao Ambedkar
68. A council consisting of several ward members, often called panch, and a president or sarpanch.  
(A) Gram Sabha (B) Gram Panchayat  
(C) Gram Parishad (D) None of these
69. 85% of the loans taken by poor households in the urban areas are from  
(A) Cooperatives (B) Local bank  
(C) Government bank (D) Informal sources
70. What a person desires to sell is exactly what the other wishes to buy :  
(A) Market (B) Product  
(C) Economic activity (D) Double coincidence of wants
71. If the compound interest for 2 years on a certain sum be Rs. 84 and the simple interest for 3 years on the same sum be Rs. 120, the sum will be :  
(A) Rs. 565 (B) Rs. 450  
(C) Rs. 515 (D) Rs. 400
72. The arithmetic mean of 5 numbers is 27. If one of the number is excluded the mean of the remaining number is 25. Find the excluded number.  
(A) 27 (B) 25  
(C) 30 (D) 35
73. A trader purchases 70 kg of tea at Rs. 15.00 per kg and 30 kg of tea at Rs. 18.00 per kg and mixes the two. If the packing charges are 5 percent and he would like to make a profit of 20 percent, he should sell the tea at (approximately) :  
(A) Rs. 17.50 per kg (B) Rs. 18.20 per kg  
(C) Rs. 20 per kg (D) Rs. 19.50 per kg
74.  $1, -2, 3, -4, 5, -6, \dots, n(-1)^{n+1}$  consider the sequence. What is the average of the first 300 terms of the sequence –  
(A) -1 (B) 0.5  
(C) 0 (D) -0.5
75. The difference between two numbers is 2. Their product is 84 greater than the square of the smaller number. The sum of the number is :  
(A) 164 (B) 86  
(C) 84 (D) 42
76. If  $a = 2 + \sqrt{3}$  and  $b = 2 - \sqrt{3}$  then  $\frac{1}{a^2} - \frac{1}{b^2}$  is equal to  
(A) 14 (B) -14  
(C)  $8\sqrt{3}$  (D)  $-8\sqrt{3}$

77. If the perimeter of a rectangle is 'p' and its diagonal is 'd', then the difference between the length & width of the rectangle is :
- (A)  $\sqrt{\frac{8d^2 - p^2}{4}}$  (B)  $\sqrt{\frac{8d^2 + p^2}{4}}$   
(C)  $\sqrt{\frac{6d^2 - p^2}{4}}$  (D)  $\sqrt{\frac{6d^2 + p^2}{4}}$
78. Both roots of the quadratic equation  $x^2 - 63x + k = 0$  are prime numbers. The number of possible values of k is
- (A) 0 (B) 1  
(C) 2 (D) 3
79. If  $(18)^{3x+2} = (54\sqrt{2})^{4x-7}$ , then the value of x is :
- (A)  $\frac{2}{3}$  (B)  $1\frac{1}{3}$   
(C)  $4\frac{1}{6}$  (D)  $5\frac{1}{3}$
80.  $\frac{\sqrt{6}}{\sqrt{2} + \sqrt{3}} + \frac{3\sqrt{2}}{\sqrt{6} + \sqrt{3}} - \frac{4\sqrt{3}}{\sqrt{6} + \sqrt{2}}$  is :
- (A) 0 (B) 1  
(C) -1 (D)  $\frac{1}{2}$
81. 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
82. If a, b are coprime, then  $a^2, b^2$  are :
- (A) Co-prime (B) Not coprime  
(C) odd numbers (D) Even numbers
83. If one of the zeroes of the quadratic polynomial  $(k - 1)x^2 + kx + 1$  is (-3), then k equals to :
- (A)  $\frac{4}{3}$  (B)  $-\frac{4}{3}$   
(C)  $\frac{2}{3}$  (D)  $-\frac{2}{3}$
84. If  $a + b + c = 8$ ,  $ab + bc + ca = 17$ ,  $abc = 10$  then the value of  $(2 + a)(2 + b)(2 + c)$  is \_\_\_\_\_.
- (A) 94 (B) 84  
(C) 68 (D) 88
85. The mean age of a group of persons is 40. Another group has mean age 48. If the ratio of number of persons in two groups is 5 : 3, then mean age of all the persons in two groups is :
- (A) 42 (B) 43  
(C) 44 (D) 45

86. A motor boat takes 2 hours to travel a distance 9 km down the current, and it takes 6 hours to travel the same distance against the current. The speed of the boat in still water and that of the current (in km/hour) respectively are

- (A) 3, 1.5 (B) 3, 2  
(C) 3.5, 2.5 (D) 3, 1

87.  $\frac{(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3}{(a - b)^3 + (b - c)^3 + (c - a)^3}$  is equal to :

- (A)  $(a + b)(b + c)(c + a)$  (B)  $(a + 2b)(b + 2c)(c + 2a)$   
(C)  $(a + b + c)(a + b - c)$  (D) none

88. If HCF of 65 and 117 is expressible in the form of  $65m - 117$ , then the value of  $m$  is :

- (A) 4 (B) 2  
(C) 1 (D) 3

89. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $f(x) = x^2 + px + q$ , then polynomial having  $\frac{1}{\alpha}$  and  $\frac{1}{\beta}$  as its zeroes is :

- (A)  $X^2 + qx + p$  (B)  $x^2 - px + q$   
(C)  $qx^2 + px + 1$  (D)  $px^2 + qx + 1$

90. The value of  $\frac{1}{3 \times 7} + \frac{1}{7 \times 11} + \frac{1}{11 \times 15} + \frac{1}{15 \times 19}$  is

- (A)  $\frac{15}{57}$  (B)  $\frac{57}{15}$   
(C)  $\frac{4}{57}$  (D)  $\frac{57}{59}$

XXXXXXXXXXXXXXXXXXXX

## ANSWER KEY\_NTSE - 2

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