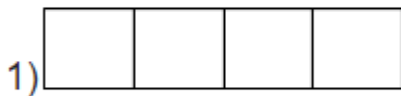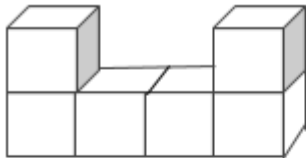# MTSE 2020

Class-7

1. If ELECTRODE is coded as EETLECDOR then how will DOCTRINAL be coded?
   1. LDROCTANI
   2. DCOLTANIR
   3. LADOCTNIR
   4. LDRTOCINA

2. How would the given block model look from the top.

1. Figure-1

2. Figure-2

3. Figure-3

4. Figure-4

3. In the given order, the number of those letters which is preceded by a symbol and followed by a number is/are ....

   $M@A#N2B4O&3C5P+D2

   1. 2
   2. 4
   3. 3
   4. 1

4. If English alphabets are written in reverse order ,what will be 7th letter on the right of the 12th letter from the left end?

1. F
2. G
3. H
4. S

5. In a certain code language, over and above is written as da pa ta and old and beautiful is written as sa na pa. How is over written in that code language?

1. na
2. ta
3. da or ta
4. da

6.If MOBILE = NLYROV, then XYLOGRAPHIES = ?

1. CBOLTLZSRVH
2. CBOITIZKSRVH
3. CBOLTLZKSRWH
4. CBOLTIZKSRVH

Direction (Q.No. 7 - 9):Read the given data carefully and answer the questions based on it.
In the last year of CBSE board exams, 53% passed in Biology, 61% passed in English, 60% passed in Social Studies, 24% passed in Biology and English, 35% passed in English and Social Studies, 27% passed in Biology and Social Studies and 5% did not pass in any subject.

7. What is the ratio of the percentage of students who passed in Biology and Social Studies but failed in English to the percentage of students who have passed in Social Studies and English but failed in Biology?
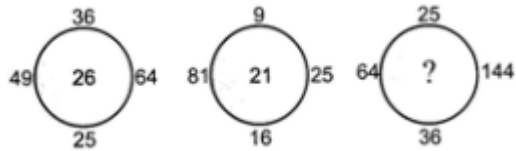
1. 5:7
2. 7:5
3. 4:5
4. 5:4

8. What is the percentage of students who have passed all the subjects?

1. 8
2. 12
3. 7
4. 10

9. If the number of students in the class is 200, then how many students passed in   only one subject?

1. 48
2. 46
3. more than 50
4. Less than 40

10.Find the number which replaces the question mark

I.

1. 24
2. 25
3. 23
4. 31

11. Compare the knowledge of persons X,Y,Z,A,B and C in relation to each other.

1. X knows more than A.
2. Y knows as much as B.
3. Z knows less than C,but more than B.
4. A knows more than Y.

The best knowledgeable person amongst all is ………….
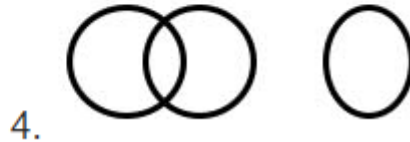
1. X
2. Y
3. A
4. Data insufficient

12. In a joint family, there are father, mother, 4 married sons and three unmarried daughters. Of the sons, two have 2 daughters each, and two have a son and a daughter each. How many female members are there in the family?

1. 15
2. 12
3. 14
4. 11

13. Seismograph : Earthquake :: Taseometer : ?

1. Landslides
2. Strains
3. Resistances
4. Volcanoes

14. Which of the following Venn - diagram correctly illustrates the relationship among the classes : Carrot, Food, Vegetables

1. Figure-1
2. Figure-2
3. Figure-3
4. Figure-4

15.January 1,2007 was Monday.What day of the week lies on January 1,2008?

1. Monday
2. Tuesday
3. Wednesday
4. Sunday

16. If P x Q means P is to the north of Q; P % Q means P is to the south of Q; P + Q means P is to the east of Q and P - Q means P is to the west of Q; then in A % B + C - D, D is in which direction with respect to A?

1. East
2. South-east
3. North-west
4. North

Directions(for Q17 - Q18)
Five people A, B, C, D and E are sitting in a circular path facing the centre. B is next   after one to A on the left. D is after two to C in the right.Then
17. Who is fourth to C in the right?

1. D
2. B
3. E
4. A

18. Who is third to A in the left?

1. D
2. C
3. B
4. E

19.If '+' is '-', '-' is '*', and '*' is '+' , then choose the correct one:

A.	2 * 3 - 1	i.	2
B.	3 + 1 - 2	ii.	1
C.	1 * 2 + 1	iii.	5

1. A. -> iii, B -> i, C-> ii
2. A -> iii, B -> ii, C -> i
3. C -> iii, B -> ii, A-> i
4. C -> ii, B-> iii, A-> i

20. If A=26 and STOP=38, then POSTMAN=?

1. 99
2. 97
3. 93
4. 91

21. Statements:

Some pen are fire-works.
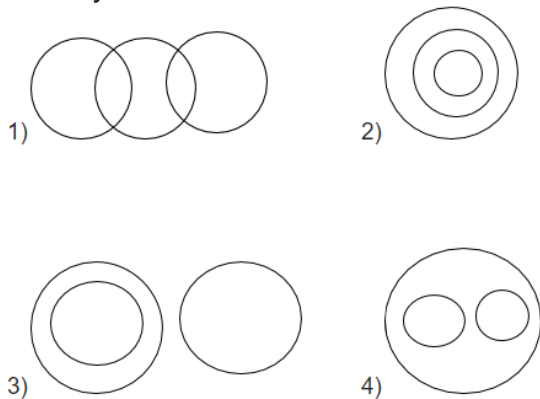All fire-works are toys.
Conclusions:
I. Some toys are pen.
II. Some toys are fire-works.

1. Only conclusion I follows.
2. Only conclusion II follows
3. Neither the conclusion I nor the conclusion II follows.
4. The conclusions I and II both follows.

22. Choose the option which is based on the relationship between table,hospital and study room.

1) 2)

3) 4)

1. Figure-1
2. Figure-2
3. Figure-3

4. Figure-4

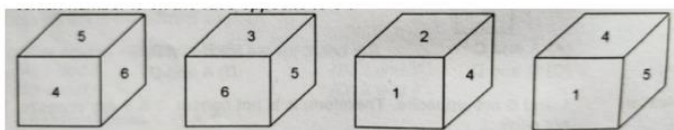23.From the following alternatives, replace '?' the suitable and appropriate numbers:

3	6	8
5	8	4
4	7	?

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

24.Find the relation and choose the correct option.
A + B x C - D = A $$ B * C ! D

P.	A - B x C + D	i.	A ! B * C * D
Q.	A - B - C + D	ii.	A ! B $$ C * D
R.	A - B x C x D	iii.	A ! B * C $$ D
S.	A - B + C x D	iv.	A ! B ! C $$ D

1. P -> i; Q -> ii; R -> iii; S -> iv
2. P -> iv; Q -> iii; R -> ii; S -> i
3. P -> i; Q -> ii; R -> iii; S -> iv
4. P -> iii; Q -> iv; R -> i; S -> ii

25.Which number is on the face opposite to 3?

1. 1
2. 2
3. 4
4. 5

Directions (Q.No. 26-28) : Read and imagine to answer the following. There are five rectangular shaped cards.Each card is numbered as 1, 2, 3, 4 and 5. These were arranged in a way such that 5 is pointing towards 3 but 3 is not pointing towards 2. 1 is at the right of 5 but not to the left of 3. 4 is pointing towards 2 and is in the middle of 5 and 3.

26. Which card is not pointing to any other cards?

    1. 5
    2. 4
    3. 1
    4. None

27. Which card is in the middle of 4 and 2?

    1. 1
    2. 3
    3. 5 and 1
    4. 5,3 and 1

28. What kind of arrangement (shape) is possible?

    1. Pentagon
    2. Square
    3. Circle
    4. None

29.What should come in place of '?' in the following number series?

   57, 74, 91, ?, 161

    1. 135
    2. 132
    3. 130
    4. 124

30. Based on following statements, analyze the scenario and answer the question:
       A,B,C,D,E,F and G are sitting in a row facing North

    1. F is to the immediate left of G.
    2. E is 4th to the right of G.
    3. C is the neighbour of A and D.
    4. Person who is third to the left of D is at on of the ends

Who are the neighbours of A?

    1. C and D
    2. C and G
    3. G and F
    4. C and E

31. Reaching the place of meeting on Tuesday 15 minutes before 8.30 hours, Anuj
found himself half an hour earlier than the man who was 40 minutes late.What was
the scheduled time of the meeting?

    1. 8.00 hrs
    2. 8.05 hrs
    3. 8.15 hrs

4. 8.45 hrs

Directions:(Q32-Q33): A solid cube of edge length 4 cm has been painted red, green and black on pairs of opposite faces. It has then been cut into smaller cubical blocks of edge length 1 cm.
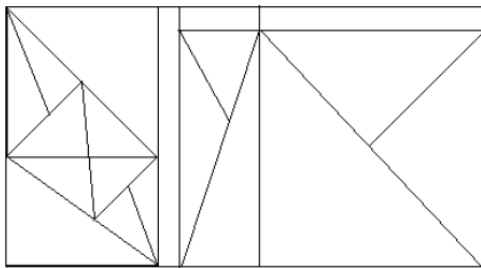
32. How many smaller cubes have only one face painted?

1. 0
2. 8
3. 16
4. 24

33. How many cubes have only two faces painted?

1. 0
2. 8
3. 16
4. 24

34. Count the number of triangles in the given figure. (Assume all lines are perfectly straight and connected from corner to other corner)

1. 26
2. 27
3. 28
4. 29

35. Rahul ranked ninth from the top and thirty eighth from the bottom in a class.How many students are there in the class?

1. 45
2. 46
3. 47
4. 48

36.What number is one third of the way from ¼ to ¾ ?

1. 1/3
2. 5/12
3. 1/2
4. 7/12

37.Monu starts running towards the mirror. He travelled 10 m in 2 s then, at what speed his image seems to be running to him in plane mirror?

    1.10 m/s
    2.5 km/s
    3.2 m/s
    4.5 m/s

38."What is the reason of his failure in exams?"

    Which of the above word is an abstract noun?

    1.reason
    2.failure
    3.exams
    4.What

39.The ideals of the political party are contained in the

    1.manifesto
    2.EVM
    3.coalition
    4.campaign

40.Who was India's only woman President elected in the new millenium?

1) Anandiben Patel   2) Pratibha Devisingh Patil   3) Sushma Swaraj   4) Smriti Irani

    1.Figure-1 (Anandiben Patel)
    2.Figure-2 (Pratibha Singh DeviPatil)
    3.Figure-3 (Sushma Swaraj)
    4.Figure-4 (Smriti Irani)

41.To test the presence of starch,which part of plant is covered with spirit and why?

    1.Part covered is leaf and to dissolve chlorophyll.
    2.Part covered is leaf and to prevent sunlight to fall on it.
    3.Part covered is root and to prevent production of starch.
    4.Part covered is leaf and to prevent UV rays to fall on it.

42.Rearrange to form a meaningful sentence:

only 26 / of relativity, which / Albert Einstein / is / for / his / when he was / best known / he / first / advanced / theory

1.Albert Einstein is best known for his theory of relativity, which he first advanced when he was only 26.
2.Albert Einstein advanced his theory of relativity, which he is best known for first when he was only 26.
3.For his theory of relativity, which he first advanced when he was only 26,Albert Einstein is best known.
4.His theory of relativity, which he first advanced when he was only 26, Albert Einstein is best known for.

43.A mistake was made in simplifying the expression given below.

Simplify: $5+2(6+4)^2-2^3$
step 1: $5+2(10)-2^3$,
step 2: $5+20-8$,
step 3: $25-8$,
step 4: 17.
In which step did the first mistake appear?

1.step 1
2.step 2
3.step 3
4.step 4

44.When ice is heated ,it changes to water and water is further heated and get converted into steam.What happens when steam is condensed ?

1.A new substance is formed
2.No new substance is formed
3.Gaseous phase changes into liquid phase.
4.Both (b) and (c) are present

45.Tiny filters present in kidney are:

1.Neurons
2.Ureters
3.Nephrons
4.Neuroglias

46.The chemical reaction between methane and oxygen is used to obtain which one of the following?

    1.Polythene
    2.Polyester
    3.Carbon dioxide and water
    4.All the above

47.Which is the demonstrative pronoun in the sentence:

   "That is my town, itself is not very large as cities are."

    1.My
    2.That
    3.As
    4.Not

48.Pascal is equal to

    1.N/m^2
    2.N/m
    3.N/(ms)
    4.N/m^3

49.On which date is the "World Population Day" observed?

    1.July 11th
    2.August 11th
    3.September 11th
    4.October 11th

50.45°C = …°F.

    1.57
    2.45
    3.113
    4.318

51.Which one of the following statements is incorrect?

    1.Maize and wheat are plants with fibrous roots.
    2.Tulsi plant has soft green stem and it is a herb.
    3.Money plant is a climber as it has weak stem and needs support to stand .
    4.Potato is an underground tuberous root.

52.What is the name given to the solution in which no more substance can be dissolved at the given point of temperature?

      1.Partially saturated solution
      2.Saturated solution
      3.Diluted solution
      4.All the above

53.The shipping industry has to bear a huge financial loss because of rusting of ships.The rusting of ships occur because

      1.The body of ship is always in contact with water .
      2.The air around the ships is humid
      3.Presence of salts in Seawater speed up the process of rusting.
      4.All the above

54.ASSERTION(A):Trees are plants which are very tall.They have a hard and thick brown stem .

 REASON(R): Lamina is thin ,flat and broad green part of a leaf.

    1.BOTH (A) and (R) are true and (R)is the correct explanation of (A)
    2.BOTH (A) and (R) are true and (R)is not the correct explanation of (A).
    3.(A) IS TRUE but (R)is false.
    4.(A) IS false but (R)is true.

55.Find the value of the expression given below?

    $\{(3a_2 + 2a \times 5 - 4)/4\}+5a-2$,when a=4

     1.24
     2.39
     3.27
     4.36

56.It was his birthday _____ we decided to buy him a present.

      1.because
      2.so
      3.although
      4.that

57.Let x and y be positive integers such that x is prime and y is composite. Then,

      1.y – x cannot be an even integer
      2.xy cannot be an even integer
      3.(x+y)/x cannot be an even integer
      4.None of these

58.Which one of the following is a dedicated web portal launched by the Union Human Resource Development Minister Prakash Javadekar, for the Sarva Shiksha Abhiyan (SSA) on 18th January 2017 ?

    1.SakSham
    2.SaChet
    3.SarThak
    4.ShaGun

59.Which one the following acts as a translucent medium?

    1.Water
    2.Muddy water
    3.Alcohol
    4.Milk

60.He said, "Alas! I am failed in my exams".

    1.He exclaimed with sorrow that he failed in his exams.
    2.He exclaimed with sorrow that he was failed in his exams.
    3.He exclaimed with sorrow that I am failed in my exams.
    4.He exclaimed with sorrow that he is failed in his exams.

61.In a coconut grove, (x+2) trees yield 60 coconuts per year, x trees yield 120 coconuts per year and (x-2) trees yield 180 coconuts per year. If the average yield per year per tree is 100,find x.

    1.4
    2.3
    3.2
    4.1

62.DIRECTIONS:(Q62-Q66)

Garbage is a great environmental hazard. It comes from various sources—used paper, tiffin packings, plastic bags, ice-cream wrappers, bottle caps, fallen leaves from trees, and many more. Garbage makes the premises ugly, unkempt, and breeds diseases.
A lot of trash that is thrown away contains material that can be recycled and reused, such as paper, metals, and glass, which can be sent to the nearest recycling center or disposed of to the junk dealer. It also contains organic matter such as leaves, which can enrich soil fertility. A compost pit can be made at a convenient location where the refuse can be placed with layers of soil and an occasional sprinkling of water. This would help decomposition to

make valuable fertilizer. This would also prevent pollution that is usually caused by burning such organic waste.

62. Garbage originates from

    1.used paper, tiffin, packings, plastic bags and fallen leaves from trees
    2.leftovers of food
    3.fallen branches from trees
    4.building materials.

63. Garbage can create havoc to mankind by

    1.spreading foul smell
    2.slowing our vehicles on the road
    3.spreading several diseases
    4.all the above.

64.What happens to the disposed of material at the recycling centre?

    1.It is thrown away
    2.It is recycled for reuse
    3.It is sold to the rag pickers
    4.It is dumped into the ground.

65.Fallen leaves from trees are useful because they

    1.solve the problem of fuelwood in village households
    2.enrich water quality
    3.enrich soil fertility
    4.beautify landscape.

66.Which of these is correct with reference to a composite pit?

    1.The refuge is placed with layers of soil with an occasional sprinkling of water
    2.It contributes to the manufacture of useful fertilizer
    3.It prevents pollution
    4.All the above.

67.Who was crowned Miss World 2019?

    1.Suman Rao(India)
    2.Ophely Mezino(France)
    3.Nyekachi Douglas(Nigeria)
    4.Toni-Ann Singh(Jamaica)

68.Match the following vitamins and minerals with their sources .

COLUMN I	COLUMN II
(i) amla	(a)calcium
(ii) carrot	(b)iodine
(iii)milk	(c)vitamin C
(iv)salt	(D) vitamin A

1.(i)-d ,(ii)-c,(iii)-b ,(iv)-a
2.(i)-c ,(ii)-d,(iii)-a ,(iv)-b
3.(i)-a ,(ii)-b,(iii)-c ,(iv)-d
4.(i)-b ,(ii)-a,(iii)-c ,(iv)-b

69.A certain number, when divided by 899, leaves a remainder 63. Find the remainder when the same number is divided by 29.

1.5
2.3
3.7
4.Can't be determined

70.In a Battery

1.Cells are connected in series
2.Cells are connected in parallel
3.Both a and b
4.None of the above

71.Karl had his salary reduced by 10%. He was later promoted and his salary was increased by 10%. If his original salary was $ 20 000, what is his present salary?

1.$16 200
2.$19 800
3.$20 000
4.$20 500

72.He has been described as 'Father of Indian IT sector' by Time magazine. He co-founded Infosys Technologies. He has been honoured with the Padma Vibhushan and Legion of Honour awards. Who is he?

1.Dhirubhai Ambani
2.Dr. Pratap C. Reddy
3.JRD Tata

4.N. R. Narayana Murthy

73..Who is the head of the revenue management at the district level?

    1.Senior Superintendent of Police
    2.District Magistrate
    3.Commissioner
    4.Mayor

74.The Buddha believed that:

    1.Rituals and sacrifices were important
    2.Ceremonies were necessary
    3.There are many gods
    4.Desire is the cause of all suffering

75.Which of the following is equal to the product

$$\frac{8}{4} \cdot \frac{12}{8} \cdot \frac{16}{12} \cdots\cdots \frac{4n+4}{4n} \cdots\cdots \frac{2008}{2004}?$$
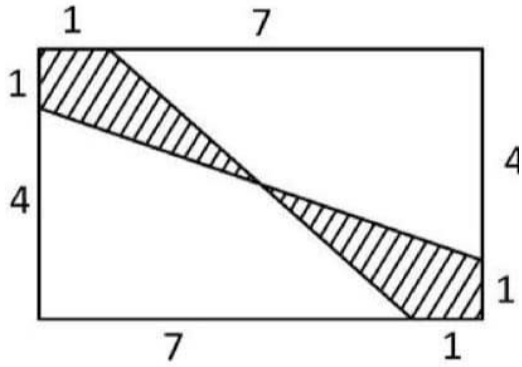
    1.365
    2.502
    3.1445
    4.5002

76.In which of the following heat transfer occur in wave form

    1.Conduction
    2.Convection
    3.Radiation
    4.None of the above

77.The chief crop of Leh and Ladakh is

    1.Rice
    2.Wheat
    3.Barley
    4.Maize

78.What is the area of the shaded region of the given 8 × 5 rectangle?

1.13/2
2.5
3.25/4
4.8

79.Of the following rivers which one is a perennial river?

1.Betwa
2.Son
3.Sutlej
4.Kaveri

80. If a, a + 2 and a + 4 are prime numbers, then the number of possible solutions for a is

1. One
2.Three
3.Two
4.More than three