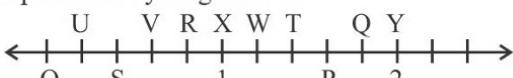


# Sainik School Entrance Exam Solved Paper-2021

## (Class-VI)

### MATHEMATICS

1. Whole numbers are closed under which operation?  
 (a) Subtraction      (b) Division  
 (c) Multiplication    (d) All of these
2. The successor of 1 million is  
 (a) 2 million      (b) 1000001  
 (c) 100001          (d) 10001
3. The points O, U, S, V, R, X, W, T, P, Q and Y on the number line are equidistant. The fraction represented by length OP is
 

$\frac{1}{5}$        $\frac{7}{5}$        $\frac{4}{5}$        $\frac{6}{5}$
4. The two consecutive integers, between which the fraction  $\frac{5}{7}$  lies, are  
 (a) 0 and 1      (b) 5 and 7  
 (c) 5 and 6      (d) 6 and 7
5. Which of the following is the smallest fraction?  
 (a)  $\frac{4}{5}$       (b)  $\frac{5}{3}$   
 (c)  $\frac{5}{6}$       (d)  $\frac{5}{2}$
6. The HCF and LCM of two numbers are 6 and 864 respectively. If one number is 96, find the other numbers  
 (a) 84      (b) 45      (c) 54      (d) 24
7. The HCF of two numbers is 12 and their difference is 12. Which of the following can be the numbers?  
 (a) 84, 96      (b) 66, 78  
 (c) 70, 82      (d) 62, 78
8. Find the smallest number that is divisible by each one of 9, 12 and 15.  
 (a) 60      (b) 90      (c) 120      (d) 180

9. A certain brand of soap-powder is sold at ₹ 15 per packet. It costs ₹ 144 a dozen. What is the profit in percent on 8 dozen packets?  
 (a) 20      (b) 25      (c) 24      (d) 36
10. Find the greatest number that will divide 37, 56, 93 leaving remainder 1, 2 and 3 respectively.  
 (a) 9      (b) 18      (c) 15      (d) 12
11. If 10 men can do a piece of work in 4 days, how many men will be required to get the same work done in 5 days?  
 (a) 10      (b) 8      (c) 40      (d) 12
12. 21 goats eat as much as 15 cows. How many goats eat as much as 35 cows?  
 (a) 38      (b) 49      (c) 37      (d) 41
13. A mechanic earns ₹ 36,000 on 9 cars. How much will he earn in 1 day, if in a day he receives 27 cars  
 (a) ₹ 1,08,000      (b) ₹ 1,80,000  
 (c) ₹ 1,00,800      (d) ₹ 1,00,080
14. If  $x : y = 3 : 5$ , find the ratio  $3x + 4y : 8x + 5y$ .  
 (a) 39 : 49      (b) 29 : 50  
 (c) 29 : 49      (d) 39 : 50
15. Find the value of m, if 3, 18, m, 42 are in proportion.  
 (a) 6      (b) 54  
 (c) 7      (d) 252
16. In an NCC Camp, 1200 trainees are participating out of which 900 are selected for Republic Day Camp. What is the ratio between the number of selected and non-selected cadets?  
 (a) 300 : 120      (b) 4 : 1  
 (c) 3 : 1      (d) 120 : 130
17. If a boy sells a book for ₹ 450, he makes a loss of 10%. To gain 10%, what should be the selling price?  
 (a) ₹ 500      (b) ₹ 600  
 (c) ₹ 550      (d) ₹ 525

18. A man sells one speaker for ₹ 7,500 at a profit of 20% and another speaker for ₹ 8,100 at a loss of 10%. Find his total loss or profit.  
 (a) Loss = ₹ 300      (b) Loss = ₹ 350  
 (c) Profit = ₹ 300      (d) Profit = ₹ 350
19. Simplify  $(8 + 4 - 2) \times (17 - 12) \times 10 - 89 = \underline{\hspace{2cm}}$ .  
 (a) 3950      (b) 411  
 (c) 412      (d) 3949
20. Simplify  $0.05 + 1.5 \times 5 \div 10 \times 0.5 = \underline{\hspace{2cm}}$ .  
 (a) 4.25      (b) 42.5  
 (c) 0.425      (d) 0.42
21. Simplify  $7 + 5 - 2 \times (7 + 89) - 94 \div 2 + (33 \div 3 + 9 \times 2 - 7) \div 11 = \underline{\hspace{2cm}}$ .  
 (a) 254      (b) -225  
 (c) -235      (d) 245
22. The average weight of 20 boys in a class is 160 kg and that of the remaining 5 boys is 50 kg. Find the average weight of all the boys in the class.  
 (a) 138 kg      (b) 183 kg  
 (c) 140 kg      (d) 150 kg
23. The average marks obtained by 7 students in a group is 226. If the marks obtained by six of them are 340, 180, 260, 56, 275 and 307 respectively, find the marks obtained by the seventh student.  
 (a) 160      (b) 162      (c) 163      (d) 164
24. A library has an average of 510 visitors on Sundays and 240 on other days. The average number of visitors in a month of 30 days starting with Sunday is  
 (a) 280      (b) 285      (c) 290      (d) 295
25. A batsman makes a score of 87 runs in the 17<sup>th</sup> match and thus increases his average by 3. Find his average after the 17<sup>th</sup> match.  
 (a) 36      (b) 37      (c) 38      (d) 39
26. Average of 1, 3, 5, 7, 9, 11, 13 is  
 (a) 7      (b) 8      (c) 7.5      (d) 8.5
27. If  $x\%$  of  $y$  is 100 and  $y\%$  of  $z$  is 200, then find the relation between  $x$  and  $z$ .  
 (a)  $z = x$       (b)  $2z = x$   
 (c)  $z = 2x$       (d)  $z = 3x$
28. One-fourth of one-third of two-fifth of a number is 15. What will be 40% of that number?  
 (a) 140      (b) 150      (c) 180      (d) 200
29. If 15% of 40 is greater than 25% of a number by 2, then the number is  
 (a) 14      (b) 16      (c) 18      (d) 20
30. Find the length of a rectangular playground in cm whose area is 700 sq.m and breadth is 25 m.  
 (a) 28      (b) 280  
 (c) 2800      (d) 2500
31. Reena took a loan of ₹ 1,200 with simple interest for as many years as the rate of interest. If she paid ₹ 432 as interest at the end of the loan period, what was the rate of interest?  
 (a) 3.6      (b) 6      (c) 18      (d) 10
32. Write the name of the angle formed when the clock time is 7:15 pm.  
 (a) Acute angle      (b) Right angle  
 (c) Obtuse      (d) Straight angle
33. The table below shows the maximum temperatures in New York City last year. Use the information in this table and answer the following:  
 What was the average maximum temperature (upto 2 decimal places) of three months May, July and September last year in New York City?
- | Month                     | Jan. | Mar. | May | Jul. | Sept. | Nov. |
|---------------------------|------|------|-----|------|-------|------|
| Maximum temperature, in C | 3    | 9    | 21  | 29   | 24    | 11   |
- (a) 21.65 °C      (b) 24.66 °C  
 (c) 25.52 °C      (d) 26.23 °C
34. In the morning, the temperature was -10 °C and it decreased 3 degrees by the evening. What was the temperature in the evening?  
 (a) -7°C      (b) -23°C  
 (c) -13°C      (d) -12°C
35. A rectangular garden is 185 m long and 220 m wide. It has two roads in its centre of uniform width of 4 m, one parallel to its length and the other parallel to its breadth. Find the cost of levelling the roads at ₹ 1.25 per sq.m.  
 (a) ₹ 3,900      (b) ₹ 3,010  
 (c) ₹ 4,010      (d) ₹ 2,005
36. One decimeter is equal to  
 (a)  $1 \times 10^{-1}$  m      (b)  $1 \times 10^{-2}$  m  
 (c)  $1 \times 10^2$  m      (d)  $1 \times 10^3$  m





## LANGUAGE

**Direction :** Read the following passage and answer the questions.

### Zeus and Prometheus

From the very first, humans had trouble with the Greek Gods. Most Gods thought of humans as toys. But Gods made friends with the humans. One of those Gods was Prometheus. The first people created by the Gods lived happily together. They thought the Gods were wonderful. But their children were not as grateful or as content. The children argued among themselves, and sometimes even argued with the Gods. Zeus was very disappointed at mankind. He decided to punish mankind by depriving them of a very important tool – fire. Prometheus felt sorry for his human friends. Fire was important for many things such as heat and cooking. Prometheus stole a lighting bolt from Zeus and gave it to mankind. That's when man discovered fire.

Zeus was furious as Prometheus had defied Zeus. He ordered Prometheus be chained to a rock as punishment for stealing his lightning bolt, and for going behind his back to help the humans. To make Prometheus even more miserable, Zeus sent storms to beat angry waves against Prometheus, helplessly chained to his rock. Zeus made the sun shine really brightly now and then to burn his skin. It was Hercules who finally released that helpless God from his chains.

76. Which of the following statements is not true about Zeus and Prometheus?
- (a) Most Greek Gods saw humans as a means of their entertainment.
  - (b) Prometheus was chained to a rock as he was a God.
  - (c) Zeus was an unforgiving God who did not like to be disobeyed.
  - (d) Hercules emerged as the saviour of Prometheus.
77. Why was Zeus angry and disappointed at humans?
- (a) They kept asking him for fire.
  - (b) The humans misused his lightning bolt.
  - (c) The humans were quarrelsome and didn't respect the Gods.
  - (d) The humans were not intelligent enough to discover fire.

78. What is the meaning of the underlined word: 'Proetheus had defied Zeus'?
- (a) Prometheus had worshipped Zeus all his life.
  - (b) Prometheus had defamed Zeus.
  - (c) Prometheus detested Zeus for his attitude.
  - (d) Prometheus had disregarded the authority of Zeus.

Fill in the blanks with the most appropriate option.

79. The news is all \_\_\_\_\_ the internet.
- (a) on
  - (b) through
  - (c) over
  - (d) never
80. We studied about \_\_\_\_\_ Roman Empire in school.
- (a) a
  - (b) an
  - (c) the
  - (d) no article
81. There was no one else in the room \_\_\_\_\_ Collin.
- (a) accept
  - (b) except
  - (c) axcept
  - (d) accept

**Rearrange the following words/phrases to make meaningful sentences. Choose the correct sequence.**

82. the sun (A) / you (B) / of (C) / must (D) / stay out (E)
- (a) ECADB
  - (b) ABCDE
  - (c) BDECA
  - (d) DE CAB
83. I (A) / immediately (B) / salary (C) / my (D) / want (E)
- (a) BAEDC
  - (b) AEDCB
  - (c) DCAEB
  - (d) EADCB
84. Do as directed:  
There are some diseases that are inherited.  
(Identify the kind of Noun)
- (a) 'diseases' is a proper noun
  - (b) 'diseases' is an abstract noun
  - (c) 'diseases' is a collective noun
  - (d) 'diseases' is a common noun
85. After school you and \_\_\_\_\_ must discuss a few things. (Choose the correct pronoun)
- (a) him
  - (b) me
  - (c) I
  - (d) we
86. It is quite warm, \_\_\_\_\_ ? (Use a Question Tag)
- (a) is it
  - (b) wasn't it
  - (c) isn't it
  - (d) was it
87. Leave your bags at the gate. (Identify the type of sentence)
- (a) Imperative
  - (b) Declarative
  - (c) Interrogative
  - (d) Exclamatory

88. Near the equator, the sun \_\_\_\_\_ greater quantities of water. (Choose the correct form of the verb)  
 (a) is evaporating      (b) evaporates  
 (c) has evaporated      (d) evaporate

89. Choose the correct spelling:  
 (a) appartment      (b) apartment  
 (c) apartment      (d) apartmant

90. Today is the \_\_\_\_\_ day of my life. (Choose the correct adjective)  
 (a) more important      (b) less important  
 (c) important      (d) most important

91. Poets are known to fly in their thoughts. (Choose the word nearest in meaning to the underlined word)  
 (a) sore      (b) sour  
 (c) soar      (d) sure

92. Choose the most appropriate option:  
 Which of the following options is the meaning of the word 'exhausted' ?  
 (a) Very hot      (b) Very polluted  
 (c) Very fresh      (d) Very tired

93. A confectioner is a person who \_\_\_\_\_.  
 (a) sells tools      (b) sells confetti  
 (c) sells sweets      (d) sells clothes

94. The captain \_\_\_\_\_ along with the players.  
 (a) was present  
 (b) was presenting  
 (c) have been presenting  
 (d) has been presenting

95. Choose the word that means the opposite of MORTAL.  
 (a) Unmortal      (b) Immortal  
 (c) Inmortal      (d) Dismortal

96. A \_\_\_\_\_ of thieves was caught by the Police.  
 (a) swarm      (b) pack  
 (c) team      (d) batch

97. It has become his habit to \_\_\_\_\_ do his homework and then copy it from others.  
 (a) always      (b) often  
 (c) frequently      (d) never

98. There were several \_\_\_\_\_ at the conference.  
 (a) women      (b) woman  
 (c) wemens      (d) womans

99. 'To beat around the bush' means  
 (a) to turn violent against a stranger.  
 (b) to avoid saying something because it is uncomfortable.

(c) to come to the main point of the conversation.  
 (d) to start a fire in the forest.

100. My father is a bookworm, he \_\_\_\_\_ books to films and sports.  
 (a) is prefer      (b) prefer  
 (c) prefers      (d) are prefer

### INTELLIGENCE TEST

101. What comes next in the given series ?  
 A, C, F, H, K, M, .....  
 (a) N      (b) Y      (c) P      (d) M

102. Rahul started walking straight towards East. He walks a certain distance and then turns towards his right and walks again. In which direction is he heading now?  
 (a) North      (b) East  
 (c) South      (d) West

103. From the given options, choose the odd one out.  
 (a) Bangladesh : Taka  
 (b) Brazil : Real  
 (c) Cyprus : Dollar  
 (d) Iran : Rial

104. Tanya is older than Eric.  
 Cliff is older than Tanya.  
 Eric is older than Cliff.  
 If the first two statements are true, the third statement is  
 (a) True      (b) False  
 (c) Uncertain      (d) None of these

105. What will come at the place of the question mark ?  
 10, 100, 200, 310, ?  
 (a) 420      (b) 410      (c) 430      (d) 400

106. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then how is A related to D?  
 (a) Grandfather      (b) Grandmother  
 (c) Daughter      (d) Grand-daughter

107. In a certain code language, COMPUTER is written as RFUVQNPC. How will MEDICINE be written in that code language?  
 (a) MFEDJJOE      (b) EOJDEJFM  
 (c) MFEJDJOE      (d) EOJDJEFM

108. If South-East becomes North, North-East becomes West and so on, what will West become?  
 (a) North-East      (b) North-West  
 (c) South-East      (d) South-West

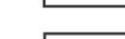
Completer the second pair by selecting the appropriate alternative.



- (a) 

(b) 

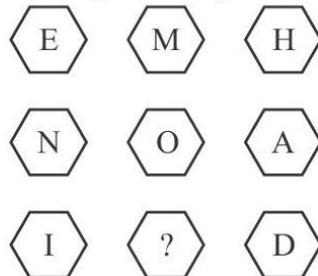
(c) 

(d) 

120. A man walks 6 km south, turns left and walks 4 km, again turns left and walks 5 km. Which direction is he facing now?



121. Which letter replaces the question mark?

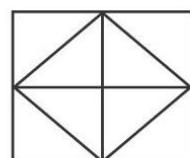


- (a) N      (b) O      (c) P      (d) M

122. The priest told the devotee, "The bell rings at regular intervals of 45 minutes. The last bell rang 5 minutes ago. The next bell is due to be rung at 7:45 am." At what time did the priest give this information to the devotee?



123. How many triangles are there in the figure given below?



- (a) 4      (b) 12      (c) 16      (d) 10

124. In a code, 'BOMBAY' is coded as 'CNNABX', then what will be the #code# of 'DELHI'?



- (c) BEGINS**

Fill in the blank:

# Solutions

## MATHEMATICS

- (c) The whole numbers are closed under multiplication.
- (b) 1 million = 1,000,000  
Successor of 1 million =  $1,000,000 + 1 = 1,001,001$

- (\*)  $x$  is at 1.  
 $y$  is at 2.  
XW, WT, TP, PQ, QY is 5 equal parts from 1 to 2.

Each part =  $\frac{(2-1)}{5} = \frac{1}{5}$ .

From O to P.

OU, US, SV, VR, RX, XW, WT, TP.

8 equal parts, hence OP =  $8\left(\frac{1}{5}\right) = \frac{8}{5}$ .

The fraction represented by length OP is  $\frac{8}{5}$ .

- (a)  $\frac{5}{7} = 0.71$

So, the two consecutive integers, between the fraction  $\frac{5}{7}$  lies, are "0 and 1".

- (a)  $\frac{4}{5} = 0.8$                        $\frac{5}{3} = 1.66$   
 $\frac{5}{6} = 0.83$                        $\frac{5}{2} = 2.5$

So, smallest fraction is " $\frac{4}{5}$ ".

- (c) HCF = 6  
LCM = 864  
One number = 96  
Second number = ?  
Let, the second number is  $x$ .  
LCM  $\times$  HCF = First number  $\times$  Second number  
 $\Rightarrow 864 \times 6 = 96 \times x$   
 $\Rightarrow x = \frac{864 \times 6}{96} \Rightarrow x = 54$ .
- (a) Given that the HCF of two numbers is 12 and their difference is 12.  
Let the two numbers are  $x$  and  $y$ .

Since the HCF of  $x$  and  $y$  is 12.

So,  $x = 12a$  and  $y = 12b$ , where  $a$  and  $b$  are prime to each other.

Also, the difference of  $x$  and  $y$  is 12.

$$\therefore x - y = 12$$

$$\Rightarrow 12a - 12b = 12$$

$$\Rightarrow 12(a - b) = 12$$

Both sides dividing by 12.

$$a - b = 1$$

$a$  and  $b$  are consecutive to each other and also are prime to each other.

Now we will check by the options.

Option (1),

$$\text{Let } x = 96 \text{ and } y = 84$$

$$x - y = 96 - 84$$

$$x - y = 12 \quad \dots(1)$$

Hence, the difference of two numbers is 12 and also the HCF of the two numbers is 12.

Now we will check whether the values satisfy the equation or not.

By dividing  $x$  and  $y$  by 12 and then subtracting

$$\frac{y}{12} \text{ from } \frac{x}{12},$$

$$\text{we get } \frac{x}{12} - \frac{y}{12} = \frac{96}{12} - \frac{84}{12} = 8 - 7 = 1$$

$$\therefore x - y = 1$$

Hence, option (1) is correct.

(d) LCM of 9, 12 and 15

3	9,	12,	15
3	3	4	5
4	1	4	5
5	1	1	5
	1	1	1

$$= 3 \times 3 \times 4 \times 5 = 180.$$

So, smallest number that is divisible by 9, 12 and 15 is 180.

(b) Cost price of one dozen soap powder = ₹144  
 $\therefore$  Cost price of 8 dozen soap powder

$$= ₹144 \times 8 = ₹1152$$

Selling price of one soap powder packet = ₹15

9.

- Selling price of one dozen soap-powder packet  
 $= ₹15 \times 12 = ₹180$ .  
 Selling price of 8 dozen soap-powder packet  
 $= ₹180 \times 8 = ₹1440$   
 Profit on 8 dozen soap-powder =  $1440 - 1152 = ₹288$ .  
 Profit percentage  
 $= \frac{\text{Profit}}{\text{Cost Price}} \times 100 = \frac{288}{1152} \times 100 = 25\%$ .
10. (b) To find the greatest number that will divide 37, 56, 93 leaving remainder 1, 2 and 3 respectively we should find the HCF of  
 $37 - 1 = 36, 56 - 2 = 54$  and  $93 - 3 = 90$   
 The factors of  
 $36 = 1, 2, 3, 4, 6, 9, 12, 18, 36$   
 $54 = 1, 2, 3, 6, 9, 18, 27, 54$   
 $90 = 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90$   
 So, HCF is 18.  
 $\therefore$  The greatest number is 18.
11. (b)  $M_1 = 10$  men  
 $D_1 = 4$  days  
 $D_2 = 5$  days  
 $M_2 = ?$   
 Let  $x$  men will be required.  
 Then,  $M_1 \times D_1 = M_2 \times D_2$   
 $\Rightarrow 10 \times 4 = x \times 5$   
 $\Rightarrow x = \frac{10 \times 4}{5} = 8$  men.  
 So, "8" men will be required.
12. (b) 15 cows = 21 goats  
 $1 \text{ cow} = \frac{21}{15} \text{ goats}$   
 $35 \text{ cows} = \frac{21}{15} \times 35 = 49 \text{ goats}$   
 So, 49 goats eat as much as 35 cows.
13. (a) A mechanic earns on 9 cars = ₹36,000  
 A mechanic earns on 1 car  
 $= \frac{36000}{9} = ₹4000$   
 A mechanic earns on 27 cars =  $4000 \times 27 = ₹1,08,000$ .  
 So, he will receive in 1 day = ₹1,08,000.
14. (c)  $x : y = 3 : 5$   
 Or,  $\frac{x}{y} = \frac{3K}{5K}$   
 So,  $x = 3K, y = 5K$
- $3x + 4y : 8x + 5y$   
 Putting the values of  $x$  and  $y$ .  
 $3 \times 3K + 4 \times 5K : 8 \times 3K + 5 \times 5K$   
 $\Rightarrow 9K + 20K : 24K + 25K$   
 $\Rightarrow 29K : 49K$   
 $\therefore$  Required ratio = 29 : 49.  
 15. (c) If 3, 18,  $m$ , 42 are in proportion.  
 Then,  $\frac{3}{18} = \frac{m}{42}$   
 $\Rightarrow \frac{1}{6} = \frac{m}{42} \Rightarrow m = \frac{42}{6}$   
 So,  $m = 7$ .
16. (c) Total trainees in NCC camp = 1200  
 Selected for Republic Day camp = 900  
 Not selected =  $1200 - 900 = 300$ .  
 The ratio between the number of selected and non-selected candidates  
 $= 900 : 300 = 3 : 1$ .
17. (c) Let the cost price of the book = ₹ $x$ .  
 Selling Price of the book = ₹450.  
 Loss percentage = 10%  
 $\therefore CP \times 90\% = SP$   
 $\Rightarrow x \times \frac{90}{100} = 450$   
 $\Rightarrow x = ₹500$ .  
 To gain 10% profit, the selling price should be 110% of CP  
 $= 500 \times \frac{110}{100} = ₹550$ .
18. (d) Selling price of first speaker = ₹7,500  
 Profit percentage = 20%  
 $\therefore$  Cost price of first speaker  
 $= \frac{7500}{120} \times 100 = ₹6250$ .  
 Selling price of second speaker = ₹8100.  
 Loss percentage = 10%  
 $\therefore$  Cost price of second speaker  
 $= \frac{8100 \times 100}{90} = ₹9000$   
 Cost price of both the speakers  
 $= 6250 + 9000 = ₹15250$ .  
 Selling price of both the speakers  
 $= 8100 + 7500 = ₹15600$ .  
 Profit =  $15600 - 15250 = ₹350$ .

19. (b)  $(8+4-2)\times(17-12)\times10-89=?$   
 $\Rightarrow (10)\times(5)\times10-89=?$   
 $\Rightarrow 50\times10-89=?$   
 $\Rightarrow 500-89=? \Rightarrow ?=411.$
20. (c)  $0.05+1.5\times5\div10\times0.5=?$   
 $\Rightarrow 0.05+1.5\times\frac{5}{10}\times0.5=?$   
 $\Rightarrow 0.05+1.5\times\frac{1}{2}\times0.5=?$   
 $\Rightarrow 0.05+\frac{.75}{2}=?$   
 $\Rightarrow 0.05+0.375=? \Rightarrow ?=0.425.$
21. (b)  $7+5-2\times(7+89)-94\div2$   
 $+ (33\div3+9\times2-7)\div11=?$   
 $\Rightarrow 12-2\times(96)-47+(11+18-7)\div11=?$   
 $\Rightarrow 12-192-47+(22)\div11=?$   
 $\Rightarrow 12-192-47+2=?$   
 $\Rightarrow 14-239=? \Rightarrow ?=-225.$
22. (a) The average weight of 20 boys = 160 Kg.  
Total weight of 20 boys =  $20 \times 160 = 3200$  Kg.  
The weight of remaining 5 boys  
 $= 50 \times 5 = 250$  Kg.  
Total weight of 25 boys =  $3200 + 250 = 3450$  Kg.  
Average weight of all 25 boys  
 $= \frac{3450}{25} = 138$  Kg.
23. (d) The average marks obtained by 7 students  
 $= 226.$   
Total marks obtained by 7 students  
 $= 226 \times 7 = 1582$   
The sum of six students' marks  
 $= 340 + 180 + 260 + 56 + 275 + 307 = 1418.$   
Marks obtained by 7th student  
 $= 1582 - 1418 = 164.$
24. (b) If a month starting with Sunday, then there will be 5 Sundays.  
Average visitors on Sunday = 510  
Total visitors in 5 Sundays =  $510 \times 5 = 2550$   
Average visitors on other days = 240  
Total visitors in on other days  
 $= 240 \times (30-5) = 240 \times 25 = 6000.$   
The average number of visitors in a month  
 $= \frac{6000 + 2550}{30} = \frac{8550}{30} = 285.$

25. (d) Let his average in 16th match was  $x$ .  
Then, ATQ -  
 $16 \times x + 87 = 17(x+3)$   
 $\Rightarrow 16x + 87 = 17x + 51$   
 $\Rightarrow 17x - 16x = 87 - 51 \Rightarrow x = 36$   
 $\therefore$  His average after 17th match =  $(x+3)$   
 $= 36 + 3 = 39.$
26. (a) Average of 1, 3, 5, 7, 9, 11, 13  
 $= \frac{1+3+5+7+9+11+13}{7} = \frac{49}{7} = 7.$
27. (c)  $x\% \text{ of } y = 100$   
 $\Rightarrow y \times \frac{x}{100} = 100$   
 $\Rightarrow \frac{y}{100} = \frac{100}{x}$  ... (1)  
 $y\% \text{ of } z = 200$   
 $\Rightarrow z \times \frac{y}{100} = 200$  ... (2)

Put the value of  $\left(\frac{y}{100}\right)$  in eqn. (2) from the eqn. (1)

$$z \times \left(\frac{100}{x}\right) = 200$$

$$\Rightarrow \frac{z}{x} = 2 \Rightarrow z = 2x.$$

28. (c) Let the number is 'a'.  
According to the question -

$$a \times \frac{1}{4} \times \frac{1}{3} \times \frac{2}{5} = 15$$

$$\Rightarrow a = 15 \times 30 = 450.$$

Now, 40% of the number =  $\frac{450 \times 40}{100} = 180.$

29. (b) Let the number is 'a'.  
According to the question :

$$40 \times 15\% = a \times \frac{25}{100} + 2$$

$$\Rightarrow 40 \times \frac{15}{100} = a \times \frac{1}{4} + 2$$

$$\Rightarrow 6 = \frac{a}{4} + 2 \Rightarrow \frac{a}{4} = 6 - 2$$

$$\Rightarrow \frac{a}{4} = 4 \Rightarrow a = 16.$$

30. (c) Area of rectangular playground = 700 sq. m.  
 Breadth of rectangular playground = 25 m.  
 Let the length of rectangular playground =  $l$  m.  
 Area of rectangle = Length  $\times$  Breadth

$$\Rightarrow 700 = l \times 25$$

$$\Rightarrow l = \frac{700}{25} = 28 \text{ m.}$$

$$\Rightarrow l = 28 \times 100 = 2800 \text{ cm } (\because 1 \text{ m} = 100 \text{ cm})$$

31. (b) Principal amount = ₹1200.  
 Interest = ₹432.  
 Let the rate of interest is  $r$ ; then time period =  $r$ .

$$\text{Simple interest} = \frac{\text{Principal} \times \text{rate} \times \text{time}}{100}$$

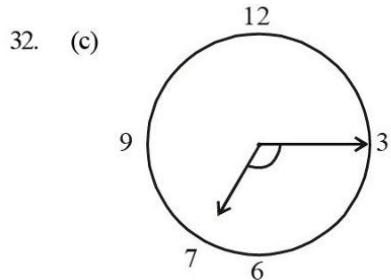
$$\Rightarrow 432 = \frac{1200 \times r \times r}{100}$$

$$\Rightarrow r^2 = \frac{432}{12} = 36$$

$$\Rightarrow r^2 = 36 \Rightarrow r = \sqrt{36}$$

$$\therefore r = 6.$$

$$\therefore \text{Rate of interest} = 6\%.$$



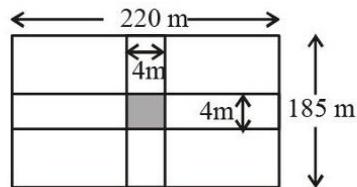
Obtuse angle will be formed.

33. (b) The maximum temperature of May, July and September in New York City last year = 21°C, 29°C and 24°C  
 Average maximum temperature in these months last year

$$= \frac{21 + 29 + 24}{3} = \frac{74}{3} = 24.66^\circ\text{C}$$

34. (a) In the morning, temperature = -10°C  
 In the evening, temperature = -7°C  
 ( $\because$  It decreases 3° by the evening)

35. (d) Length of rectangular garden = 185 m  
 Breadth of rectangular garden = 220 m



$$\text{Area of road parallel to its breadth} = 220 \times 4 = 880 \text{ m}^2$$

$$\text{Area of road parallel to its length} = 185 \times 4 = 740 \text{ m}^2$$

$$\text{Common area of road} = 4 \times 4 = 16 \text{ m}^2$$

$$\therefore \text{Total area of road} = (880 + 740) - 16 = 1620 - 16 = 1604 \text{ m}^2$$

$$\text{Cost of levelling the road} = \text{₹}1.25 \text{ per sq. m.}$$

$$\text{Total cost of levelling the road} = 1604 \times 1.25 = \text{₹}2005.$$

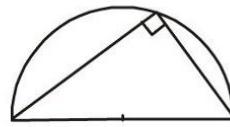
36. (a) 1 decimeter = 10 cm or 0.1 m.

$$\therefore 1 \text{ decimeter} = \frac{1}{10} \text{ m} = 1 \times 10^{-1} \text{ m.}$$

37. (b) It is a false statement.

In roman numeration, if a symbol is repeated, its value is added as many times as it occurs.

38. (c) The angle subtended by the diameter of a semicircle on any point on the circle is 90°.



39. (b) Length of each portion of big cube = 44 cm  
 Length of each portion of tiny cube = 4 cm

$$\text{Total length is divided into } = \frac{44}{4} = 11 \text{ parts}$$

$$\text{So, } x + 2 = 11$$

$$\Rightarrow x = 11 - 2 = 9 \text{ cm.}$$

$\therefore$  The number of cubes will be formed such that each face of these cubes is surrounded by other cubes is

$$(x)^3 = (9)^3 = 729.$$

40. (d) Length of rectangular tank = 15 cm

Breadth of rectangular tank = 12 cm

Height of rectangular tank = 8 cm

Volume of rectangular tank

$$= \text{Length} \times \text{Breadth} \times \text{Height}$$

$$= 15 \times 12 \times 8 = 120 \times 12 = 1440 \text{ cm}^3.$$

41. (d)  $\frac{5}{8}, \frac{7}{12}, \frac{3}{4}$  and  $\frac{13}{16}$

LCM of 8, 12, 4 and 16 =

4	4	8	12	16
2	1	2	3	4
3	1	1	3	2
2	1	1	1	2
	1	1	1	1

$$= 4 \times 2 \times 3 \times 2 = 48.$$

$$\frac{5}{8} \times 48 = 30$$

$$\frac{7}{12} \times 48 = 28$$

$$\frac{3}{4} \times 48 = 36$$

$$\frac{13}{16} \times 48 = 39.$$

So, ascending order of fractions is

$$\frac{7}{12} < \frac{5}{8} < \frac{3}{4} < \frac{13}{16}.$$

42. (d)  $945.341 - 1042.792 + 875.435 + 31.025 = ?$   
 $\Rightarrow 1851.801 - 1042.792 = ?$   
 $\therefore ? = 809.009.$

43. (c) First distance = 160 Km  
First speed = 64 Km/h.

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{160}{64} = 2.5 \text{ hr.}$$

Second distance = 160 Km.

Second speed = 80 Km/h.

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{160}{80} = 2 \text{ hr.}$$

Total distance = 320 Km.

Total time =  $2.5 + 2 = 4.5$  hr.

Average speed of the tour

$$= \frac{320}{4.5} = 71.11 \text{ Km/hr.}$$

44. (a) On dividing 2272 as well as 875 by 3-digit number  $N$ , we get the same remainder.  
Clearly  $2272 - 875 = 1397$ , is divisible by  $N$ .

Now, Factors of  $1397 = 11 \times 127$

So, required 3-digit number is 127.

And the sum of 3-digit number =  $1 + 2 + 7 = 10$ .

45. (a) Julia takes to wash, comb and put on her clothes =  $\frac{1}{2}$  hour.

$$\text{Julia takes to have her breakfast} = \frac{1}{4} \text{ hour.}$$

Required time for Julia to be ready for school

$$= \frac{1}{2} + \frac{1}{4} = \frac{2+1}{4} = \frac{3}{4} \text{ hour.}$$

46. (c) LXII = 62  
XCI = 91  
XLIV = 44  
So, LC is incorrect.
47. (a) A cuboid has 6 faces.
48. (a) A flat surface which extends indefinitely in all directions is called 'Plane'.
49. (b) Let both the angles are  $a$  and  $b$ .  
If two angles make  $90^\circ$  angle then they are called complementary.  
Then,  $a + b = 90$   
and  $a - b = 10$  (given)  
By adding :  $2a = 100 \Rightarrow a = 50^\circ$   
By subtracting :  $2b = 80 \Rightarrow b = 40^\circ$ .
50. (b) Total weight of Brinjal, Lady-finger and Onion = 48.057 Kg.  
Weight of Brinjal = 5.35 Kg.  
Weight of Lady-finger = 24.52 Kg.  
Weight of Onion =  $48.057 - (5.35 + 24.52)$   
 $= 48.057 - 29.87 = 18.187$  Kg.

### GENERAL KNOWLEDGE]

51. (b) Speedometer is a instrument that indicates the speed of a vehicle, usually combined with a device known as an odometer that records the distance travelled.
52. (c) The national emblem of India is an adaptation of the Lion Capital atop the Ashoka Pillar of Sarnath, Uttar Pradesh.
53. (c) Bharatanatyam is the dance form in which the themes are taken from Ramayana and Mahabharata. It is a genre of Indian classical dance. Bharatanatyam was originated in Tamil Nadu.
54. (a) Saka Samvat has been adopted as an official civil calendar by India. Saka Samvat starts from 78 AD, The months in the Saka Samvata are Chaitra, Vaisâkha, Jyçshtha, Âshâdha, Shrâvana, Bhâdra, Âshwin, Kârtika, Agrahâyana, Pausha, Mâgha and Phâlguna respectively. Hence (1) is the correct answer.
55. (a) Combat aircraft are designed to destroy enemy equipment using their own aircraft ordnance. Combat aircraft are typically developed and procured only by military forces. Tejas, MiG 21, MiG 29, Sukhoi Su-30, Dassault Rafale, Mirage 2000, SEPECAT Jaguar are combat aircrafts in India.

56. (c) Santosh Trophy is associated Football. It is an Indian football tournament in which the states of the country along with some government institutions participate. Davis Cup is associated with Lawn Tennis, 'Champion Trophy' with hockey while the Deodhar Trophy is associated with the game of cricket.
57. (c) Every ant of a constant group has a different claw and characteristics smell. So by this they can recognize the ants from their group.
58. (c) Poultry farming is the form of animal husbandry which raises domesticated birds such as Hens, ducks, turkeys and geese to produce meat or eggs for food.
59. (a) Taste buds are sensory organs that are found on your tongue and allow you to experience tastes that are sweet, salty, sour, and bitter.
60. (c) Freezing delays spoilage and keeps foods safe by preventing microorganisms from growing and by slowing down the enzyme activity that causes food to spoil.
61. (a) Various seeds and fruits have some special feature due to which they are carried away in a particular way (by wind, water or animal). Seeds of drumstick and maple have wings which help them to be easily carried away by wind.
62. (a) A taanka, are also known as a tanka or kunds, is a traditional rainwater harvesting technique, common to the Thar desert region of Rajasthan, India.
63. (c) Salt and Sugar are soluble substances. Soluble substances are those which disappear when mixed with water while Insoluble substances are those which don't disappear or dissolve when mixed with water. Eg: sand, chalk, sawdust etc.
64. (b) Communicable diseases spread from one person to another or from an animal to a person. The spread often happens via airborne viruses or bacteria, but also through blood or other bodily fluid.
- Non-communicable diseases (NCDs) include a range of chronic conditions, including cancer, diabetes, cardiovascular disease, hypertension, as well as Alzheimer's and other dementias. Chickenpox is a highly contagious disease caused by the varicella-zoster virus (VZV). The virus spreads mainly through close contact with someone who has chickenpox.
65. (a) To climb the mountains we have to bend forward.
66. (c) Jantar Mantar was built in 1724 by Maharaja Jai Singh II of Jaipur, it is among the five observatories, the biggest one located in Jaipur. The rest are in Ujjain, Varanasi and Mathura.
67. (d) The geosphere is the part of the planet composed of rock and minerals; it includes the solid crust, the molten mantle and the liquid and solid parts of the earth's core.
68. (b) Fossil fuels are made from decomposing plants and animals. These fuels are found in the Earth's crust and contain carbon and hydrogen, which can be burned for energy. Coal, oil, and natural gas are examples of fossil fuels.
69. (a) Rasgulla is a popular bengali sweet made of milk and sugar. It is made from ball-shaped dumplings of chhena (an Indian cottage cheese) and semolina dough, cooked in light syrup made of sugar.
70. (c) Bhils are one of the tribal community of India. A large number of Bhils live in the neighbouring States of Maharashtra, Gujarat and Rajasthan. They constitute the third largest tribe of India.
71. (c) A cloud is made of water drops or ice crystals floating in the sky. The drops of water are too small to see. They have turned into a gas called water vapor. As the water vapor goes higher in the sky, the air gets cooler. The cooler air causes the water droplets to start to stick to things like bits of dust, ice or sea salt.
72. (b) Sindhi writer Vasdev Mohi conferred with 29th Saraswati Samman. He has been selected for this prestigious literary award for his short stories collection- Chequebook.
73. (c) Vijaya Lakshmi Pandit was the first female elected to 6th Governor of Maharashtra and 8th President of the United Nations General Assembly.
74. (c) Sweat glands are absent in the vermillion border of the lips, external ear canal, nail beds, clitoris and labia minora. The inability to sweat can cause overheating. It can affect the entire body.
75. (c) The young of a kangaroo is called a joey. Female kangaroos sport a pouch on their belly, made by a fold in the skin, to cradle baby kangaroos called joeys.

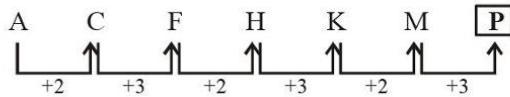
## LANGUAGE

76. (d) Option (a) is correct as it is mentioned that most Gods thought of human as toys but Gods made friends with humans. In other words, it can be said that the Gods treated humans as their ‘entertainment’.  
Option (b) is wrong. However, it is mentioned that ‘*Prometheus was chained to a rock as punishment*’ **but not because he was a God.**  
Option (c) is correct as per the information as given in the passage. There is no direct mention about Zeus being an unforgiving God who did not like to be disobeyed. But it is written in the second paragraph that Zeus was furious because Prometheus had defied him. So that justifies the fact given in option (c).  
Option (d) also stands correct as per the information given in the passage.  
Read the last line of the given passage, ‘*It was Hercules who finally released the helpless God from his chains.*’  
Hence, option (b) is not true about Zeus and Prometheus.
77. (c) Read the lines of first paragraph, ‘*The first people created by the Gods lived happily together. They thought the Gods were wonderful. But their children were not as grateful or as content. The children argued among themselves, and sometimes even argued with the Gods. Zeus was disappointed at mankind.*’  
Hence, option (c) is the reason that Zeus was angry and disappointed at humans.
78. (d) The meaning of the underlined word: ‘Prometheus had defied Zeus.’ is that Prometheus had disregarded the authority of Zeus. For clarification, read the lines of first paragraph, ‘*Zeus was very disappointed at mankind. He decided to punish mankind by depriving them of a very important tool-fire. Prometheus felt sorry for his human friends. Fire was important for many things such as heat and cooking. Prometheus stole a lightning bolt from Zeus and gave it to mankind.*’  
In this was Prometheus defied Zeus.  
To defy means to openly resist or refuse to obey. Hence, option (d) is the right answer choice.
79. (c) The news is all over the internet.
80. (c) We studied about the Roman Empire in school.
81. (b) There was no one else in the room except Collin.  
82. (c) The correct sequence will be BDECA.  
**You must stay out of the sun.**  
83. (b) The correct sequence is AEDCB.  
**I want my salary immediately.**  
84. (d) ‘Diseases’ is a common noun. ‘Diseases’ are common nouns however diseases named after people/ inventors/ discoverers are proper noun e.g., Alzheimer’s disease.  
85. (c) **After school you and I must discuss a few things.**  
There is a simple way to tell which one to use, by imagining the clause without the “you and” part:  
Example: You and (**I/me?**) should spend more time together  
Imagine: “Me should...” (this is clearly wrong)  
Imagine: “I should...” (correct!)  
Answer: You and I should spend more time together  
Example: He should have spoken to you and (**I/me?**).  
Imagine: “He should have spoken to me” (correct!)  
Imagine: “He should have spoken to I” (wrong)  
Answer: He should have spoken to you and me.  
86. (c) It is quite warm, isn’t it?  
87. (a) The given sentence is a command hence, it is an imperative sentence.  
88. (b) Near the equator, the sun evaporates greater quantities of water.  
**Simple Present** tense is used when we talk about the **universal truth or fact**.  
89. (c) ‘Apartment’ is the correct spelling here. Other words are misspelt.  
90. (d) Today is the most important day of my life.  
91. (c) Soar: to fly aloft or about.  
(1) : to sail or hover in the air often at a great height : glide.  
(2) of a glider : to fly without engine power and without loss of altitude  
Sore: (of a part of one’s body) painful or aching.  
Sour: having an acid taste like lemon or vinegar.  
Sure: completely confident that one is right.  
92. (d) Exhausted means very tired.  
OR (of resources or reserves) completely used up.  
93. (c) A confectioner is a person who sells sweet.  
94. (a) The captain was present along with the players.

95. (b) The opposite of 'Mortal' is 'Immortal'.  
**Mortal:** (of a living human being, often in contrast to a divine being) subject to death.  
**Immortal:** living forever; never dying or decaying.
96. (b) **A pack of thieves was caught by the Police.**  
**A swarm of bees**  
**A team of players**  
**A batch of letters**
97. (d) It has become his habit to never do his homework and then copy it from others.
98. (a) There were several **women** at the conference.
99. (b) To beat around the bush: To avoid getting to the point of an issue:  
 "Your worries have nothing to do with the new proposal.  
 Stop **beating** around the **bush**, and cast your vote!"
100. (c) The sentence is in present tense so the verb will be used with 's', i.e. "**prefers**".  
 "*My father is a bookworm; he prefers books to films and sports.*"

## INTELLIGENCE TEST

101. (c) The series is as -

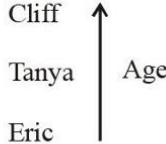


102. (c) Starting Point → End Point

So, now he is heading towards south.

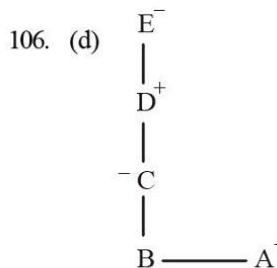
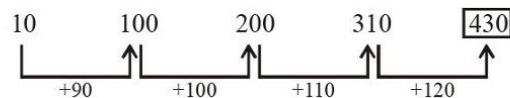
103. (c) These are the currency of country except 'Cyprus'.  
 The currency of Cyprus is 'Euro'.

104. (b) From first two statement :

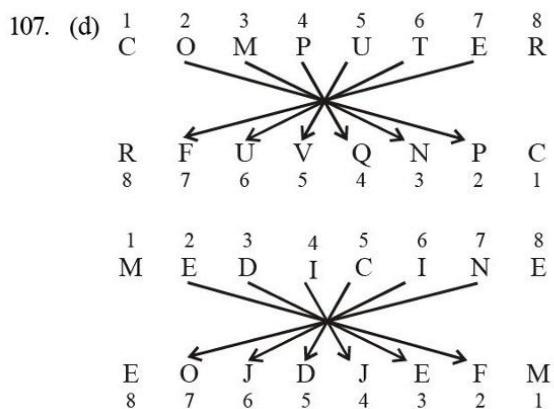


If first two statements are true, the third statement is 'False'.

105. (c) The pattern of the series is as :



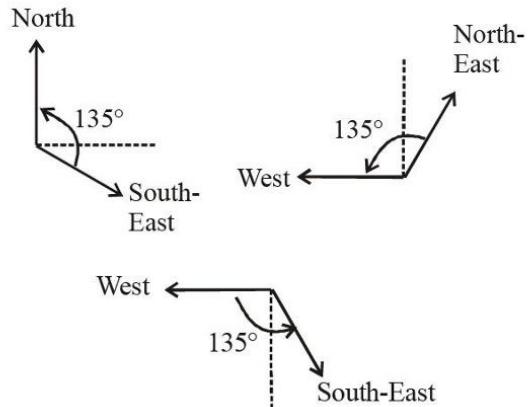
Where (-) shows Female and (+) shows Male.  
 So, A is the Grand-daughter of D.



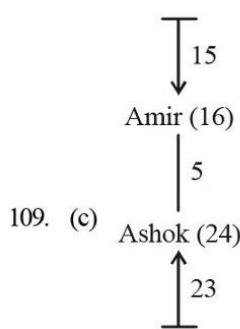
First of all exchange first and second letter with each other. Then, add 1 in second letter and put it on second last position.

Similarly the same order follow in the next letters.

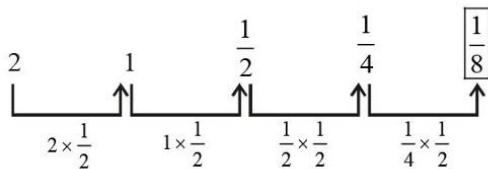
108. (c)



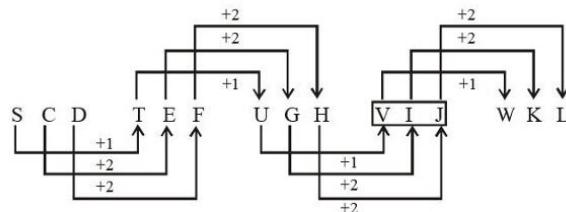
We can clearly see that the rotation is 135° anti-clock wise. So, West will become South-East.



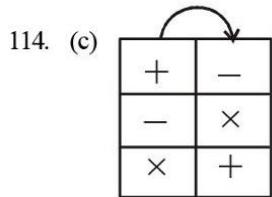
109. (c) So, Ashok's Rank from bottom is 24<sup>th</sup>.  
 110. (d) a a b a b / a a b a b / a a b a b.  
 111. (b) The series is as :



112. (c) The pattern is as :



113. (a)  $\begin{array}{ccc} W & A & Y \\ \downarrow & \downarrow & \downarrow \\ 6 & 7 & 9 \end{array}$      $\begin{array}{ccc} M & A & Y \\ \downarrow & \downarrow & \downarrow \\ 5 & 7 & 9 \end{array}$      $\begin{array}{ccc} Y & A & W \\ \downarrow & \downarrow & \downarrow \\ 9 & 7 & 6 \end{array}$



$$10 \times 5 + 3 - 2 = ?$$

By exchanging the signs -

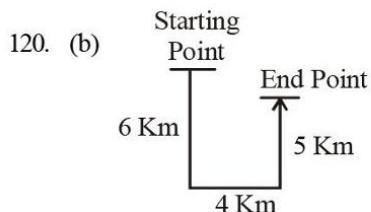
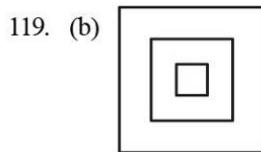
$$10 + 5 - 3 \times 2 = ?$$

$$\Rightarrow 15 - 6 = ? \Rightarrow ? = 9.$$

115. (b) As, Mend : Sewing  
 Similarly, Edit : Repair.

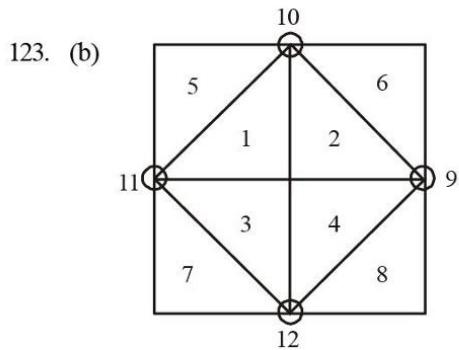
116. (c) A rider uses a Rein to guide a Horse;  
 A pilot uses the Control Panel to guide a Plane.  
 117. (a) All other are social media platforms, except  
 MS Paint.  
 MS Paint is a graphics editor.

118. (d) "Strings" is a necessary part of the Guitar.

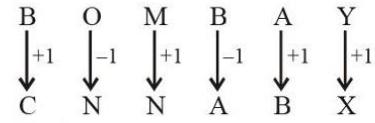


So, now he is facing in North direction.

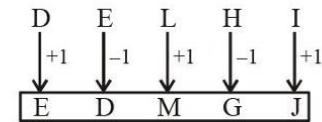
121. (d) The pattern is as :  
 $E(5) + H(8) = M(13)$   
 $N(14) + A(1) = O(15)$   
 $I(9) + D(4) = \boxed{M}(13)$   
 122. (c) The bell rings at regular intervals of 45 minutes.  
 If last bell rang 5 minutes ago and next bell is due to be rung at 7:45 am then, the Priest give this information to the devotee at 7:05 am.



124. (d) As,



Similarly,



125. (c) As Unify is the Antonyms of Segregate;  
 Similarly Damage is the Antonyms of Repair.