Intellify
Igniting the Innovative Self
Intellify
International Science and Creativity Olympiad-2016

## Sample Question Paper

Q1. How much force is required to lift the weight?

A) 40 lbs
B) 50 lbs
C) 60 lbs
D) 70lbs

Q2. Which pattern can be folded to make the cube shown?


Q3. Which group of shapes can be assembled to make the shape shown?


Q4. Which figure completes the grid?

5. Which figure completes the series?

Q. Glaciers begin to form where snow remains year-round and enough of it accumulates to transform into ice. New layers of snow compress the previous layers and this compression forces the icy snow to re-crystallize, forming grains similar in size and shape to cane sugar. Gradually the grains grow larger and the air pockets between the grains get smaller, meaning that the snow slowly becomes more dense. After about two winters, the snow turns into firn, an intermediate state between snow and ice. Over time the larger ice crystals become more compressed and even denser, this is known as glacial ice. Glacial ice, because of its density and ice crystals, often takes a bluish or even green hue.
Q6 Glaciers cannot form where snow does not remain all year round.

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| :---: | :---: | :---: |
| true | false` | can't say |

Q7 Firn is less dense than snow but more dense than ice.

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| :---: | :---: | :---: |
| true | false` | can't say |

Q8 Glacial ice is always greenish or bluish in color.

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| :---: | :---: | :---: |
| true | false` | can't say |

Q9 Snow falls every year in areas where glaciers form.
A
B
C
true
false`
can't say

Q10 The increase in density is caused by the grains becoming smaller.

| $\mathbf{A}$ | $\mathbf{B}$ | C |
| :---: | :---: | :---: |
| true | false | can't say |

Identify the missing number at the end of the series.

|  | Q11 | A | B | $\mathbf{C}$ | $\mathbf{D}$ | $\mathbf{E}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 33 | 35 | 37 | 39 | 41 |
| Q12 | $3,6,11,18, ?$ |  |  |  |  |  |
|  |  | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | $\mathbf{D}$ | $\mathbf{E}$ |
|  | 24 | 25 | 26 | 27 | 28 |  |

Q13. In the Shelbyville election, the Republican candidate received one and a half times as many votes as the Democrat candidate. The Democrat candidate received one third more votes than the Independent candidate. 900 votes were cast for the Independent candidate. How many votes were cast for the Republican candidate?
A
900
B
C
1,600
D
1,000
E
1,800

Q14. Anna and John both drive to their new home 400 miles away. Anna drives the family car at an average speed of 60 mph . John drives the removal truck at an average speed of 50 mph . During the journey, Anna stops for a total of 1 hour and 20 minutes, John stops for half as long. What is the difference in minutes between their arrival times?
A
B
55
C
40
40
D
90
E
80

Q15. Which of these words completes the sentence in the way that makes most sense?

A spirit-level should be used to ensure that the surface is $\qquad$
A) straight
B) flat
C) horizontal
D) parallel
E) aligned

Q16. Which of these words completes the sentence in the way that makes most sense? He avoided $\qquad$ because he was $\qquad$
A) redundency
B) indispensable
C) redundancy
D) indispensible

Q17. Which of these is the missing word?
kick, -----------, walk
A) throw
B) toes
C) shin
D) feet
E) hand

Q18.. Which of these is the missing word?
key, -----------, walk
A) lock
B) stand
C) board
D) fob
E) stone

Q19. Which of these is the missing word?
water, -----------, over
A) ice
B) drive
C) wet
D) flow
E) fall

Q20. Working together, Tom, Dick and Harry need 9 hours to paint a 400 meter long fence. Working alone, Tom could complete the task in 18 hours. Dick can not work as fast and needs 36 hours to paint the fence by himself. If Tom and Dick take the day off, how long will it take Harry to paint the fence by himself?
A) 9
B) 12
C) 18
D) 36

## ANSWERS

Ans 1. C
Ans 2. C
Ans 3. A
Ans 4. A
Ans 5. C

Ans
6 A
7 B

8 B
9 C
10 B
Ans.
11 B
12 D
Ans 13. E
Ans 14 C

Ans 15. C

Ans 16 C, B
Ans.
17. $\mathrm{D}-$ Feet are used for both kicking and walking.

18 C - Board forms the words 'keyboard' and 'boardwalk'
19. E - Fall forms ' waterfall' and 'fall over'

Ans20. D
1.
2.
3. 4
4.
5.
6. $9 \bigcirc \bigcirc$

10. $\bigcirc \bigcirc$
11. $\bigcirc$ 12. $\bigcirc \bigcirc \bigcirc \bigcirc$
13.
14.
15.
16.
17.
18.
19.
20.


