UNIFIED COUNCIL
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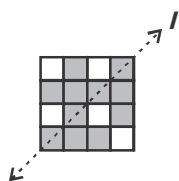
UCO
Unified
Cyber
Olympiad

UNIFIED CYBER OLYMPIAD

Solutions for Sample Questions
class : 8

Mental Ability

1. **(C)**

2. **(A)**

$20142015 \times 20152014 -$
$\qquad 20142014 \times 20152015$

$= 20142015 \times 20152014$
$\qquad - (20142015 - 1)(20152014 + 1)$

$= 20142015 \times 20152014 -$
$\qquad (20142015 \times 20152014$
$\qquad + 20142015 - 20152014 - 1)$

$= \cancel{20142015 \times 20152014} - \cancel{20142015}$
$\times \cancel{20152014} - 20142015 + 20152014 + 1)$
$\qquad\qquad = \mathbf{10000}$

3. **(A)** $\dfrac{(856 + 167)^2 + (856 - 167)^2}{856 \times 856 + 167 \times 167}$

$= \dfrac{2\left(856^2 + 167^2\right)}{856^2 + 167^2} = \mathbf{2}$

[since, $(a + b)^2 + (a - b)^2 = 2(a^2 + b^2)$]

4. **(C)** No. of times a die is thrown = 24

Probability for '4' to come up when a die is

thrown once $= \dfrac{1}{6}$

$\therefore$ If a die is thrown for 24 times the
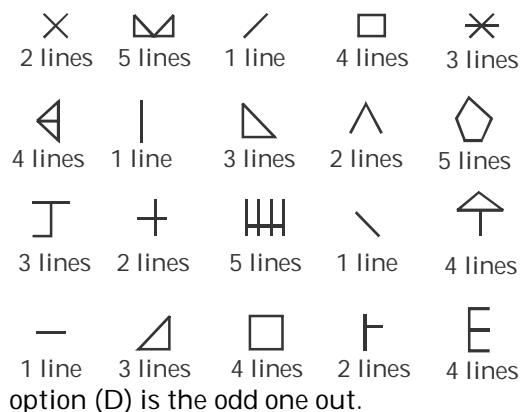
possibility for 4 to come up $= \dfrac{1}{6} \times 24$

$\qquad\qquad = \mathbf{4\ times}$

5. **(B)**

$$7x - 4 \overline{)14x^2 + 13x - 15} \,(2x + 3$$
$$14x^2 - 8x$$
$$\underline{\quad - \qquad + \quad}$$
$$21x - 15$$
$$21x - 12$$
$$\underline{\quad - \qquad + \quad}$$
$$-3$$

Therefore, **–3** must be subtracted.

Reasoning

6. **(A)** The given series is repeating after every five shapes and the shading moves by one shape towards left. Hence, the missing shape is ▬.
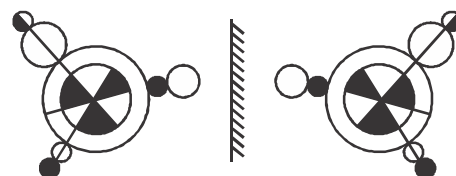
7. **(D)** Count the number of lines in each figure.

× 2 lines ⊔ 5 lines / 1 line □ 4 lines ✳ 3 lines

◁ 4 lines | 1 line ◺ 3 lines ∧ 2 lines ⬠ 5 lines

⅂ 3 lines + 2 lines ⫲ 5 lines \ 1 line ⇧ 4 lines

— 1 line ◿ 3 lines □ 4 lines ⊢ 2 lines ⊨ 4 lines

option (D) is the odd one out.

8. **(D)** In the given group, the figure in third column is obtained by subtracting the figures in the first column from the second column figures.

Hence, the missing figure is option (D).

9. **(A)**

10. **(A)** Line type: A - Vertical; B - Horizontal;
C - Diagonal

Square type: P - Small ; Q - Large;
R - medium

∴ The code for the last figure is **AR**.

Computers

11. **(D)** The largest heading in HTML tag is **<h1>**.
12. **(C)** The shortcut key to change the entered number into date format is **Ctrl + Shift + 3**.
13. **(D)** BIOS is stored in **ROM**.
14. **(B)** **<img>** tag will display a picture in HTML.
15. **(C)** MS-Dos is a **command-driven** operating system.

English

16. **(C)** 'A puzzling question' means riddle. The rhyming word of the riddle is **middle**.
17. **(A)** One who collects coins is known as **Numismatist**.
18. **(B)** Fatigue means **weariness**.
19. **(B)** **Inevitable** × Evitable
20. **(B)** **Only a little** water is left in the jug.