UNIFIED CYBER OLYMPIAD

CLASS - 5

Question Paper Code : 3P104

KEY

1. C	2. D	3. B	4. B	5. B	6. A	7. B	8. B	9. C	10. B
11. B	12. C	13. C	14. D	15. D	16. D	17. B	18. B	19. A	20. B
21. B	22. B	23. C	24. C	25. A	26. D	27. B	28. D	29. A	30. C
31. B	32. D	33. C	34. A	35. B	36. D	37. A	38. B	39. D	40. A
41. C	42. B	43. D	44. A	45. D	46. D	47. C	48. A	49. C	50. B

SOLUTIONS

MENTAL ABILITY

01. (C) To maximize the number of songs used, Goutham should use as many of the shortest length songs as possible. (This is because he can always trade a longer song for a shorter songs and shorten the total time used).

If Goutham uses all 50 songs of 3 minutes in length, this takes 150 minutes.

3 hours – 3 × 60 minutes = 180 minutes.

There are 180 – 150 = 30 minutes left, so he can play an additional 30 ÷ 5 = 6 songs that are 5 minutes in length.

In total, he plays 50 + 6 = 56 songs.

02. (D) Since there are 12 squares initially, then the number of squares to be removed is

$$\frac{1}{2} \times \frac{2}{3} \times 12 = \frac{1}{3} \times 12 = 4$$

Therefore, there will be 8 squares remaining.

03. (B) 3 × 2016 = 2016 + 2016 + 2016

= 2018 + 2015 + 2015

Hence, x = 2015

04. (B) By 'guess and check' method,

Pencils	Erasers	Cost of Pencils	Cost of Erasers	Total cost
10	10	10 × ₹ 6 = ₹ 60	10 × ₹ 5 = ₹ 50	₹ 60 + ₹ 50 = ₹ 110
20	20	20 × ₹ 6 = ₹ 120	20 × ₹ 5 = ₹ 100	₹ 120 + ₹ 100 = ₹ 220
18	18	18 × ₹ 6 = ₹ 108	18 × ₹ 5 = ₹ 90	₹ 108 + ₹ 90 = ₹ 198

Zain bought 18 erasers.

05. (B) Diameter = 9 cm $\Rightarrow$ radius = 4.5 cm.

A point at a distance of 4.5 cm from the centre is the same as radius of the circle. Hence, R on the circle.

06. (A) Customers receiving a free gold fish = 5, 10, 15, 20, ... ⑥⓪, 65, ..., ⑫⓪, 125, 130

Customers receiving a free cat fish = 12, 24, 36, 48, ⑥⓪, 72, ... ⑫⓪, 132

Number of customers receiving both free fishes is 2

07. (B) Weight of 3 apples + 2 oranges = 255 g
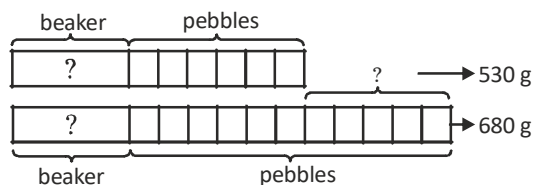
Weight of 2 apples + 3 oranges = 285 g

Hence, weight of 5 apples + 5 oranges

= (255 + 285) g = 540 g

Weight of 1 apple + 1 orange = 540 g ÷ 5

= 108 g

08. (B) $\left(\dfrac{0.7}{0.07} + \dfrac{0.07}{0.7} \right) = (10 + 0.1) = 10.1$

The required number is 10.1.

09. (C)

5 units → 680 g − 530 g = 150 g

1 unit → 150 ÷ 5 = 30 g

6 units → 6 × 30 = 180 g

530 g − 180 g = 350 g

The mass of the beaker is 350 g

10. (B) Smallest 6 digit odd number = 100001

Largest 4 digit even number = 9998

Difference = 90003

11. (B) ☐ : 56 : 72 = 6 : ☐ : 18

$\Rightarrow$ ☐ : 56 : 72 = 6 × 4 : ☐ × 4 : 18×4

$\Rightarrow$ 24 : 56 : 72 = 24 : 14 × 4 : 72

∴ The missing numbers are 24 and 14 whose sum is 38

12. (C) 970 − 24 ÷ (3 × 4) + 132 = ☐ × 100

$\Rightarrow$ 970 − 24 ÷ 12 + 132 = ☐ × 100

$\Rightarrow$ 970 − 2 + 132 = ☐ × 100

$\Rightarrow$ 1100 = ☐ × 100

$\Rightarrow$ The missing number is $\dfrac{1100}{100} = 11$

13. (C) Half of 220 = 220 ÷ 2 = 110

110 ÷ 10 = 11

11 × 5 = 55

55 − 10 = 45

14. (D) Common factors of 36 and 24 are 1, 2, 3, 4, 6, 12

P is the 2-digit common factor of 36 and 24

∴ P = 12

Q is a factor and multiple of 28, which is 28.

∴ P + Q = 12 + 28 = 40

15. (D) Increased salary of the man

= 120% of his salary before increase

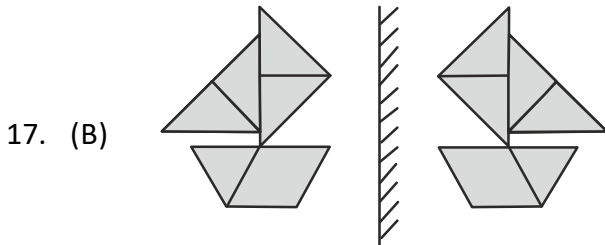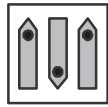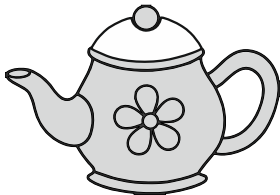∴ His salary before increase

= Increased salary × $\dfrac{100}{120}$

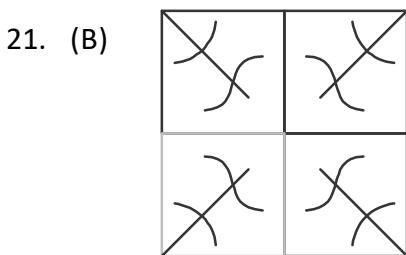= ₹ 3000 × $\dfrac{100}{120}$ = ₹ 2500

REASONING

16. (D) The two last figures are same and the middle one is reverse.

17. (B)

18. (B) % $ & % $ & % $ $ & & % $ $ % % $

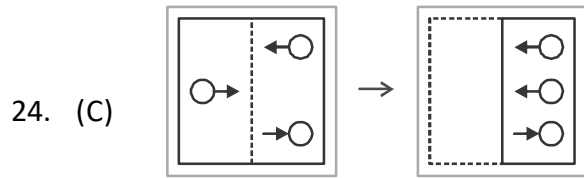$ follows % five times in the given sequence.

19. (A)

20. (B) AT = 1 × 20 = 20

BAT = 2 × 1 × 20 = 40

Similar manner code of

CAT = 3 × 1 × 20 = 60

21. (B)

22. (B) (3 × 3) + (5 × 6) = 39(4 × 4) + (7 × 5) = 51

(3 × 4) + (5 × 5) = 37

23. (C) Each term shifts one letter forward in the alphabet.

∴ The next term after DEFG should be start with E and the next letters are F, G and H.

24. (C)

25. (A) Identify the pattern "Z A B" and determine the positions in the series. Each position where 'A' is immediately preceded by 'Z' and followed by 'B' indicates a match.

Series: M B Z A N A A B Z A B A Z B A P Z A B A Z A B

Positions of 'Z A B':

Z A B (3rd, 4th, and 5th positions)

Z A B (9th, 10th, and 11th positions)

Z A B (16th, 17th, and 18th positions)

26. (D) Except option (D) remaining all shapes are over lapping at 2 points.
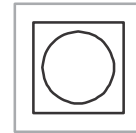
27. (B) The answer is SEAT because this is hidden between the two words " EXERCISE" and "AT". The last 2 letters of "EXERCISE" and the 2 letters of "AT" form the hidden word, as shown by the underlining.

28. (D) Shape moves to next side and turn 90° CW.

29. (A) 4 × 2 + 6

8 + 6 = 14

30. (C) The same shapes are overlapping one by one.

COMPUTERS

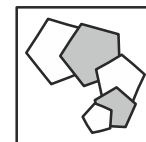31. (B) Volatile memory is temporary memory that loses its stored information when the power is turned off or lost. RAM (Random Access Memory) is a type of volatile memory commonly used in computers. It is used to store data and programs that are actively being used by the computer's operating system and applications. When the computer is turned off, the data stored in RAM is erased. This is in contrast to non-volatile memory, such as a hard disk drive or USB flash drive, which retains data even when the power is turned off. Therefore, the correct answer is (B) Random Access Memory (RAM).

32. (D) macOS is an example for application software.

33. (C) Microsoft Office is a suite of productivity software applications, including Word, Excel and PowerPoint.

34. (A) The correct application in Windows 10 that provides both free and paid apps to users is called the "Microsoft Store." It is a digital distribution platform developed by Microsoft, where users can browse, download, and purchase various applications, games and other digital content for their Windows devices.

35. (B) Microsoft Zing

36. (D) In the first generation of computers, which spanned the late 1940s through the early 1960s, punch cards and paper tape were the primary input devices. Users would punch holes in cards or paper tape to represent data or instructions, which were then read by the computer's card reader or tape reader.

   These punched cards and paper tapes were used to input programs and data into the computer. The computer would process the information and produce output, typically in the form of printed results. While keyboards and monitors became prevalent in later generations, they were not commonly used in the first generation of computers.

   Therefore, punch cards and paper tape were the main input and output devices used during this period.

37. (A) Oil brush

38. (B) When dealing with formatting issues such as bullets being too close to the text in a bulleted list, adjusting the indent markers on the Ruler is the most appropriate solution. By dragging the First Line Indent marker on the Ruler to the right, you can increase the space between the bullets and the text, improving the overall appearance of the list. Options A, C, and D are not relevant to adjusting the spacing in a bulleted list and do not address the issue described in the question. Therefore, option B) Adjust the indent markers on the Ruler is the correct answer.

39. (D) The logos displayed in the picture likely represent various Internet Service Providers (ISPs). Internet Service Providers are companies that provide individuals and organizations with access to the internet. They typically offer various services such as internet connectivity, email services, web hosting, and more. The logos shown likely represent different ISPs operating in the local area.

40. (A) The correct answer is (A) Only (i) is false.

   (i) Pressing Ctrl + N in MS PowerPoint does not add a new slide to your presentation. Instead, Ctrl + M is the shortcut to add a new slide.

   (ii) Presentations can indeed be saved as PDF in MS PowerPoint 2016. This feature allows users to share presentations in a format that is widely compatible and preserves the layout and formatting of the slides.

41. (C) The image depicts a network switch. A switch is a networking device that connects multiple devices within a local area network (LAN) and forwards data packets between them. It operates at the data link layer (Layer 2) of the OSI model and uses MAC addresses to determine the destination of data packets. Switches are commonly used in Ethernet networks to improve network performance and efficiency by reducing network congestion and enabling simultaneous communication between devices.

42. (B) File sharing allows computers exchange files over the internet.

43. (D) Google Assistant is a special helper on your phone, tablet or smart speaker. You can talk to it and ask it questions or give it commands and it will help you by answering your questions, setting, remainders, playing music or even telling jokes, its like having a smart friend who can help you with many different things just by using your voice.

44. (A) repeat 5 [fd 100 rt 144 fd 100 lt 72]

45. (D) ARPANET, which stands for Advanced Research Projects Agency Network, was the pioneering computer network developed by the United States Department of Defense's Advanced Research Projects Agency (ARPA). ARPANET is widely considered to be the precursor to the modern Internet. It was created in the late 1960s and served as a foundation for the development of network communication protocols and technologies. Therefore, option (D), "ARPANET," is the correct choice.

ENGLISH

46. (D)
47. (C)
48. (A)
49. (C)
50. (B)

━━━━━━ *The End* ━━━━━━