UIM
Unified International Mathematics Olympiad

UNIFIED INTERNATIONAL MATHEMATICS OLYMPIAD

CLASS - 3
Question Paper Code : UM9267

KEY

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

EXPLANATIONS

MATHEMATICS

01. (C) ☆ = 4521 − 1000 = 3521

    ◯ = 3521 − 1967 = 1554

    3521 + 1554 = 5075

02. (B)

180g 25g

?
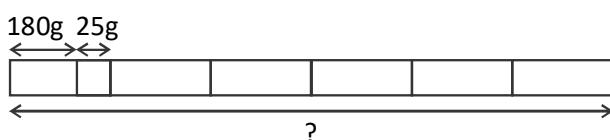
180 g + 25 g = 205 g

205 g × 6 = 1230 g

She needs to use 1230 g of flour and sugar altogether.

03. (D) $12l = 12\,000\ ml$

    $12\,000\ ml − 10\,879\ ml = 1121\ ml = 1l$ $121\ ml$

04. (C) Cost of rocket = ₹71

    Cost of ball = ₹(71 − 29) = ₹42

05. (A)   Cost of book = 9 + 14 = ₹ 23

Cost of post cards = ₹ 9

= ₹ 23 × 2 + ₹ 9 × 2

= ₹ 46 + ₹ 18

It cost ₹64 to buy 2 books and 2 boxes of postcards

06. (B)   56 (>) 42

07. (A)

Rotten fruits

Fruits not Rotten

684

5   ?

Number of fruits that were not rotten

= 684 ÷ 6 = 114

Number of bags = 114 ÷ 5

= 22 R 4

Number of fruits unpacked = 4

4 fruits will be left unpacked

08. (C)   Capacity of a cup = 200 ml

Capacity of a flask = 200 × 4 = 800 ml

Capacity of pail = 800 × 5 = 4000 ml = 4l

A pail can hold 4l of water.

09. (B) $\dfrac{21}{30} = \dfrac{7}{10}$

10. (B)   No. of blue balloons = 2470

No. of red ballons = 2470 + 120 = 2590

Total balloons = 2590 + 2470 = 5060

11. (B)   21 × 3 = 63

Sum = 693 + 63 = 756

12. (D)   Number of parts divided = 14

Number of parts shaded = 8

Fraction of shaded figure = $\dfrac{8}{14} = \dfrac{\boxed{4}}{7}$

13. (C)   10000 – 999 = 9001

14. (D)   3 bottles of orange juice = 2 bottles of mango juice

? = 6 bottles of Mango juice

3 × 3 = 6 bottles of Mango juice

9 bottles of Orange juice = 6 bottles of Mango juice

15. (D)   17 (–) (16 ÷ 2) = 9

16. (C)   The 3-digit even number = 246

Sum = 2 + 4 + 6 = 12

First digit = 2

Second digit = 4

Third digit = 6

17. (B)   15 g + y = 40 g

y = 40 g – 15 g = 25 g

y + x = 55 g

25 g + x = 55 g

x = 55 g – 25 g = 30 g

18. (A)   Capacity of the milk jug = 5 l

No. of glasses she used to pour the milk = 3

Quantity of milk left in the jug = 2 l

= 5 l – 2 l = 3 l

Capacity of each glass = 3 l ÷ 3 = 1 l

19. (D)   4 × 5 = 2 × 10

20 = 20

20. (D)   No. of cards Ravi had = 576

No. of cards Ravi had at first = 576 + 88 – 20

= 664 – 20 = 644

21. (D)   The minute hand points to the number 10 on the clock

22. (C)   The smallest 4-digit number = 1234

The largest 3-digit number = 987

Their sum = 1234 + 987 = 2221

23. (B) 1 rupee → 100 paise

? → 3700 paise

3700 ÷ 100 = 37 rupees

24. (B) 458 ÷ 7

$$7\overline{)458}(65$$
$$\underline{-42}$$
$$38$$
$$\underline{-35}$$
$$3$$

Q = 65, R = 3

Differrence = 65 − 3 = 62

25. (D) Given digits = 8, 3, 1 and 6

Smallest odd number = 1683

26. (B) 8 out of 20 squares are shaded

∴ The required fraction is $\dfrac{8}{20} = \dfrac{2}{5}$

27. (C) Smallest 3-digit number = 100

Largest 1-digit number = 9

$$9\overline{)100}(11$$
$$\underline{-9}$$
$$10$$
$$9$$
$$\underline{}$$
$$1$$

Q = 11, R = 1

28. (A) Length of building A = 324 − 134 = 190 m

Length of building B = 324 m

Length of building C = 303 m

Total length = 190 m + 324 m + 303 m

= 817 m

29. (A) Cost of 1 plain balloon = ₹12

Cost of 1 fancy balloon = ₹16

Cost of 5 plain balloons = ₹12 × 5 = ₹60

Cost of 5 fancy balloons = ₹16 × 5 = ₹80

= ₹80 + ₹60 = ₹140

30. (C) 3718, 3871, 7183, 8173

31. (B) 1 hr = 60 min

5 hrs = 60 × 5 = 300 min

300 + 55 = 355 min

32. (B)
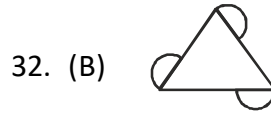
33. (D) If the boy chooses the digit 2, he should occupy the 20th place

34. (A) 1 bucket = 3 cups

1 pot = 1 cup + 3 cups + 3 cups

1 pot = 7 cups

1 basin = 3 cups + 7 cups + 7 cups + 7 cups

1 basin = 3 cups + 3 cups + 3 cups + 3 cups + 3 cups + 3 cups + 3 cups + 3 cups

1 basin = 8 buckets

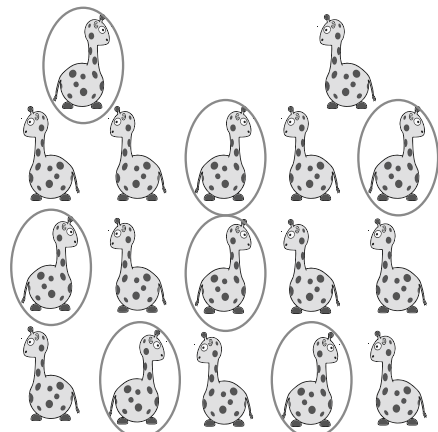**35.** (A) Option (A) has 10 quarter circles

REASONING

36. (A)
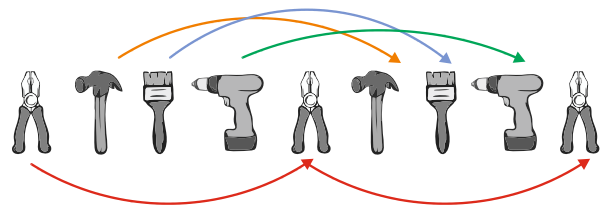
37. (B) In option (B) last two letters positions are different.

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38. (C)

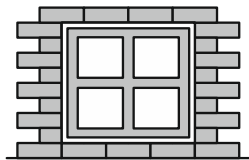**39.** (B)

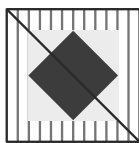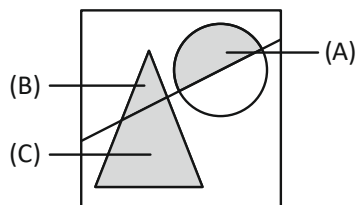**40.** (C)

41. (A)

42. (B)

43. (D)   Both q & w

44. (D)

45. (D)

CRITICAL THINKING

46. (B)   I will give the wallet to my teacher.

47. (C)

48. (B)   Z : 4 − 1 = 3

⇒ Z = 3

Y : 4 + 1 = 5

Y : 5 − 3 = 2 ⇒ Y = 2

X : 4 + 3 = 7

Y has minimum number of chocolates.

49. (C)   Number '6' will not be overlapped on square.

50. (A)   Option (A) : 15 paths

Option (B) : 13 paths

Option (C) : 12 paths

Option (D) : 12 paths