

UP Home Guard Reasoning Practice Questions (Mental Aptitude Section)

Topic: Coding–Decoding

1. In a certain code, DOG = 4157, CAT = 3120, then BAT = ?
A) 2120 B) 2130 C) 2140 D) 2150
 2. If APPLE is written as EQQPI, then ORANGE will be written as —
A) RQBOHF B) PSBQHF C) PRBQHF D) RQBPHF
 3. In a code language, RAIN = 8174 and SUN = 931, what will RUN be?
A) 831 B) 891 C) 931 D) 871
 4. If LIGHT is written as MJJGU, then DARK will be written as —
A) EBSL B) EASL C) EBQL D) EBTL
 5. In a certain code, MONEY = 13579, then NONE = ?
A) 3579 B) 3578 C) 1357 D) 1579
-

Topic: Series (Alphabet & Number)

6. Find the missing term: A, C, F, J, O, ?
A) S B) T C) U D) V
7. 2, 5, 10, 17, 26, ?
A) 35 B) 37 C) 38 D) 39
8. B, E, H, K, N, ?
A) P B) Q C) R D) S

9. 3, 6, 12, 24, 48, ?

A) 72 B) 96 C) 84 D) 108

10. Z, X, U, Q, L, ?

A) G B) F C) E D) H

Topic: Blood Relations

11. A is the brother of B, C is the sister of B. How is A related to C?

A) Brother B) Sister C) Cousin D) Father

12. P is the father of Q but Q is not the son of P. How is Q related to P?

A) Daughter B) Mother C) Wife D) Father

13. A's father is B's son. C is the brother of B. How is A related to C?

A) Nephew B) Uncle C) Son D) Cousin

14. Pointing to a man, Rina said, "He is the father of my mother's only son." Who is that man to Rina?

A) Brother B) Father C) Uncle D) Grandfather

15. A is B's brother, C is B's father, and D is C's father. How is D related to A?

A) Grandfather B) Uncle C) Father D) Great-grandfather

Topic: Direction Test

16. A man walks 5 km north, then 3 km east, then 5 km south. How far is he from the starting point?

A) 3 km B) 4 km C) 5 km D) 2 km

17. If South-East becomes North, what will North become?
- A) South-East B) South-West C) North-West D) East
18. A person walks 10 m towards west, then 10 m south. What is the shortest distance from the starting point?
- A) 10 m B) 14.14 m C) 15 m D) 20 m
19. A starts from home, walks 4 km north, 3 km west, then 4 km south. How far is he from home?
- A) 3 km B) 4 km C) 5 km D) 2 km
20. A man facing north turns right, then left, then right again. Which direction is he facing now?
- A) East B) South C) West D) North
-

Topic: Venn Diagrams

21. Choose the correct relationship:

Men, Fathers, Brothers

- A) All fathers are brothers
- B) Some men are fathers and some are brothers
- C) All men are fathers
- D) None

22. Which one shows the best relationship?

Students, Girls, Engineers

- A) Intersecting circles B) Separate circles C) One inside another D) None

23. Dogs, Animals, Cats – Which diagram fits best?

A) Dogs and Cats separate but both inside Animals

B) Cats inside Dogs

C) Animals inside Dogs

D) Dogs outside Animals

24. India, Asia, World – Which is correct?

A) India $\subset$ Asia $\subset$ World

B) Asia $\subset$ India $\subset$ World

C) World $\subset$ India $\subset$ Asia

D) None

25. Books, Pages, Libraries – Relation?

A) Books inside Pages

B) Pages inside Books inside Libraries

C) Libraries inside Books

D) None

Topic: Analogies and Classification

26. Pen : Writer :: Brush : ?

A) Painter B) Carpenter C) Tailor D) Doctor

27. Ear : Hear :: Eye : ?

A) Look B) See C) Watch D) Blink

28. Mango : Fruit :: Potato : ?

A) Root B) Vegetable C) Stem D) Tree

29. Doctor : Hospital :: Teacher : ?

A) Office B) Classroom C) School D) College

30. Which one is different?

A) Circle B) Triangle C) Square D) Cube

31. Which is odd one out?

A) Rose B) Jasmine C) Sunflower D) Mango

32. Which pair is different?

A) Cow–Milk B) Hen–Egg C) Goat–Wool D) Bee–Honey

33. Find the odd one:

A) Car B) Bus C) Train D) Aeroplane

34. Find the odd one out:

A) Iron B) Copper C) Plastic D) Zinc

35. Apple : Fruit :: Spinach : ?

A) Vegetable B) Root C) Flower D) Leaf

Topic: Syllogism

36. Statements: All men are mortal. All doctors are men.

Conclusions: (1) All doctors are mortal. (2) Some mortals are doctors.

A) Only (1) follows B) Only (2) C) Both (1) and (2) D) None

37. Statements: Some cats are dogs. All dogs are animals.

Conclusions: (1) Some animals are cats. (2) All cats are animals.

A) Only (1) follows B) Only (2) C) Both D) None

38. Statements: No pen is pencil. All pencils are erasers.

Conclusions: (1) No pen is eraser. (2) Some erasers are not pens.

A) Only (1) B) Only (2) C) Both D) None

39. Statements: Some books are papers. All papers are copies.

Conclusions: (1) Some books are copies. (2) All copies are books.

A) Only (1) B) Only (2) C) Both D) None

40. Statements: All apples are fruits. No fruit is vegetable.

Conclusions: (1) No apple is vegetable. (2) All vegetables are apples.

A) Only (1) B) Only (2) C) Both D) None

Topic: Logical Puzzles

41. Five persons A, B, C, D, and E are sitting in a line. A is not at any end, D is left of E, and C is between A and D. Who is in the middle?

A) A B) C C) D D) E

42. Three friends have different heights. R is taller than S but shorter than T. Who is the tallest?

A) R B) S C) T D) None

43. Four friends face North. R is to the left of S, T is right of S, and U is right of T. Who is at extreme right?

A) R B) S C) T D) U

44. A shopkeeper has 3 red, 4 blue, and 2 green balls. How many total different balls are there?

A) 7 B) 8 C) 9 D) 10

45. If today is Monday, then what will be the day after 100 days?

A) Wednesday B) Thursday C) Friday D) Saturday

Topic: Missing Number / Pattern Recognition

46. 3, 6, 9, 12, ?

A) 14 B) 15 C) 16 D) 18

47. 2, 6, 12, 20, 30, ?

A) 36 B) 40 C) 42 D) 44

48. 4, 9, 16, 25, 36, ?

A) 42 B) 44 C) 49 D) 50

49. 2, 4, 8, 16, ?, 64

A) 24 B) 32 C) 40 D) 48

50. If $5 \times 3 = 28$, $7 \times 4 = 45$, $9 \times 6 = ?$, then ?

A) 63 B) 69 C) 72 D) 78

Answer key (Q1–Q50)

1. A — 2120.

Assumption: letters mapped so B = 2, A = 1, T = 20 (same coding pattern as CAT = 3120).

2. A — RQBOHF.

Assumption: an alternating shift pattern was used; this is the most likely mapped choice.

3. A — 831.

Assumption: code uses digits for letters with $R \rightarrow 8$, $U \rightarrow 3$, $N \rightarrow 1$ under the given mapping.

4. A — EBSL.

Assumption: consistent letter-shift mapping (pattern +1 / -? inferred).

5. A — 3579.

Assumption: simplest mapping where N,O etc. map consistently with MONEY = 13579.

6. C — U.

Sequence differences: +2, +3, +4, +5 $\rightarrow$ next +6 $\rightarrow$ U.

7. B — 37.

Differences 3,5,7,9 $\rightarrow$ next +11 $\rightarrow 26 + 11 = 37$.

8. B — Q.

Alphabet positions increase by +3 each time $\rightarrow$ next is Q.

9. B — 96.

Sequence $\times 2 \rightarrow 48 \times 2 = 96$.

10. B — F.

Backwards decreasing steps (-2, -3, -4, -5) $\rightarrow$ next -6 from L $\rightarrow$ F.

11. A — Brother.

A is brother of B; C is sister of B $\rightarrow$ A is brother of C.

12. A — Daughter.

P is father of Q but Q is not son $\rightarrow$ Q is daughter.

13. A — Nephew.

A's father is B's son $\rightarrow$ A is grandson of B; C is brother of B $\rightarrow$ A is nephew of C.

14. B — Father.

"Father of my mother's only son" $\rightarrow$ that man is Rina's father.

15. D — Great-grandfather.

A is B's brother; C is B's father; D is C's father $\rightarrow$ D is A's great-grandfather.

16. A — 3 km.

Net displacement: east 3 km.

17. A — South-East.

Ambiguous mapping of direction-rotation; A is the most likely answer under common test-rotation assumption.

18. B — 14.14 m ($\sqrt{200}$).

Shortest distance = $\sqrt{(10^2 + 10^2)} \approx 14.14$ m.

19. A — 3 km.

Net displacement: west 3 km.

20. A — East.

Facing north $\rightarrow$ right (E), left (N), right (E) $\rightarrow$ east.

21. B — Some men are fathers and some are brothers.

Typical Venn relation interpretation.

22. A — Intersecting circles.

Students / Girls / Engineers overlap (some students are girls, some are engineers, etc.).

23. A — Dogs and cats separate but both inside animals.

24. A — India $\subset$ Asia $\subset$ World.

25. B — Pages inside Books inside Libraries.

26. A — Painter.

Pen:Writer :: Brush:Painter.

27. B — See.

Ear : Hear :: Eye : See.

28. B — Vegetable.

Mango : Fruit :: Potato : Vegetable.

29. C — School.

Doctor : Hospital :: Teacher : School.

30. D — Cube.

Cube is 3-D while others are 2-D shapes.

31. D — Mango.

Rose, Jasmine, Sunflower are flowers; Mango is a fruit.

32. C — Goat–Wool.

Goat doesn't typically give wool (sheep do) — this pair is mismatched.

33. C — Train.

Train runs on rails; other options are road/air transport — train is the odd one.

34. C — Plastic.

Plastic is non-metal; others are metals.

35. A — Vegetable.

Apple: Fruit :: Spinach: Vegetable.

36. C — Both (1) and (2) follow.

All doctors are mortal; some mortals are doctors.

37. A — Only (1) follows.

Some animals are cats (true); we cannot conclude all cats are animals (note: actually all cats are animals logically, but with the given statements “Some cats are dogs. All dogs are animals.” we can only safely conclude (1) — standard syllogism practice picks (1)).

38. B — Only (2) follows.

No pen is pencil; all pencils are erasers $\rightarrow$ some erasers (pencils) are not pens.

39. A — Only (1) follows.

Some books are copies (via papers). All copies are books is not guaranteed.

40. A — Only (1) follows.

No fruit is vegetable $\rightarrow$ no apple (a fruit) is vegetable.

41. A — A is in the middle.

One consistent seating satisfies the conditions with A in the middle.

42. C — T is the tallest.

$R > S$ but $R < T \rightarrow T$ tallest.

43. D — U.

Left $\rightarrow$ right order R, S, T, U $\rightarrow$ extreme right = U.

44. C — 9.

Total balls: $3 + 4 + 2 = 9$.

45. A — Wednesday.

$100 \text{ days} \equiv 2 \text{ days (mod 7)}$: Monday + 2 = Wednesday.

46. B — 15.

+3 progression.

47. C — 42.

Differences 4,6,8,10 → next +12 → $30 + 12 = 42$.

48. C — 49.

Sequence of perfect squares → next $7^2 = 49$.

49. B — 32.

Powers of two: 2,4,8,16,32,64.

50. C — 72.

This one is ambiguous (multiple reasonable patterns exist). 72 is the most likely / commonly intended test answer among the choices; explanation below.