

MATHEMATICAL REASONING

1. RECREATIONAL ELEMENTS I

Problems with dominoes. Problems with dice.

2. RECREATIONAL ELEMENTS II

Problems about debts. Problems about mislabeled objects.

3. RECREATIONAL ELEMENTS III

Problems about weighings and balances.

4. RECREATIONAL ELEMENTS IV

Problems about liquid transfers. Problems about relocations.

5. RECREATIONAL ELEMENTS V

Problems about sports situations. Problems about divisions and cuts.

6. FAMILY RELATIONSHIPS

Identifying kinship. Minimum number of people.

7. CERTAINTIES

Problems with urns, locks, playing cards.

8. INFORMATION ORDERING

Linear ordering. Circular ordering. Categorical ordering.

9. LOGICAL INFERENCE I

Truth table problems. Problems with logical connectors. Application of propositional logic laws.

10. LOGICAL INFERENCE II

Contextualized problems with logical connectors. Class logic.

11. CLASS LOGIC

Class logic problems.

12. TRUTHS AND LIES

Problems with contradictory statements. Problems using assumption method.

13. NUMERICAL ARRANGEMENTS I

Arrangements with constant sum condition. Arrangements with other conditions.

14. NUMERICAL ARRANGEMENTS II

Magic squares of order 2. Magic squares of order 4 and 5.



15. CALENDARS

Problems about day variations. Problems about month variations. Problems about year variations.

16. INDUCTIVE REASONING (NUMERICAL AND VERBAL

Application in numerical arrangements. Application in graphic arrangements. Application in letter arrangements.

17. DEDUCTIVE REASONING

Terminal digits. Reconstruction of operations.

18. EQUATION FORMULATION I

Generic problems translating admission exam-type statements.

19. EQUATION FORMULATION II

Diophantine equations with 2 or more variables (addition, subtraction and product).

20. EQUATION FORMULATION III

Age-related problems.

21. EQUATION FORMULATION IV

Movement-related problems.

22. TIMEKEEPING I

Problems about bell tolls. Problems about elapsed and remaining time.

23. TIMEKEEPING II

Problems about clock advances and delays. Problems about clock hands.

24. FIGURE COUNTING

Counting by simple inspection. Counting by combinatorial method. Counting by induction.

25. SHAPE, MOVEMENT AND LOCATION PROBLEMS

Cardinal points. Routes and trajectories in directed paths. Routes and trajectories in undirected paths.

26. FIGURE TRACING

Application of Euler's postulates. Calculation of minimum paths.

27. MAXIMUMS AND MINIMUMS

Application in algebraic situations. Application in arithmetic situations (AM and GM). Application in geometric situations.



28. FREQUENCY OF EVENTS AND INTERPRETATION OF GRAPHS/TABLES

Problems about cuts and stakes. Problems about pills and shots. Interpretation of graphs and tables.

29. FIGURE ROTATION AND WHEELS, PULLEYS AND GEARS

Rotation and translation of figures. Wheels and pulleys. Gear problems.

30. MATHEMATICAL OPERATIONS I

Mathematical operations with explicit definition. Mathematical operations with implicit definition.

31. MATHEMATICAL OPERATIONS II

Mathematical operations defined in double-entry tables. Mathematical laws in operations.

32. PSYCHOTECHNICAL I

Numerical sequences. Literal and alphanumeric sequences. Numerical distributions.

33. PSYCHOTECHNICAL II

Figure series. Figure analogies. Discordant figures.

34. ABSTRACT REASONING I

Composition of solids from their developments.

35. ABSTRACT REASONING II

Main views of a solid.

36. DATA SUFFICIENCY

Problems with unique and infinite solutions, problems with different solutions, data changes, problems with necessary and sufficient data.

37. FRACTIONS I

Generic problems translating admission exam-type statements.

38. FRACTIONS II

Successive profits and losses. Reduction to unit.

39. PERCENTAGES I

Generic problems translating admission exam-type statements. Percentage variation.

40. PERCENTAGES II

Mixture problems. Commercial applications.



41. SEQUENCES

Arithmetic progression. Geometric progression. Quadratic sequence.

42. SERIES I

Arithmetic series. Geometric series. Notable sums.

43. SERIES II

Infinite geometric series. Special series.

44. GEOMETRIC SITUATIONS

Perimeter problems. Area problems.

