Programming Aptitude 1

Answer all questions on the green mark sense (Scantron) cards.

Do not mark the questions in this test paper.

Do not open this test until instructed to do so.

Any corrections should be erased thoroughly. If, after making a correction, some black mark remains, you may need to copy your answers to a new card.

This aptitude test will not influence your grade in any way. I will use information gathered through this test to adjust my approach to teaching. So please, try your best to help me with my planning, but don't worry about the outcome.

There are six different question types in this test. The types are listed in the box in the upper-right corner of this page.

Question Types

Vocabulary: From among the five answer choices given, select the word or phrase which best defines the word in UPPERCASE letters.

Figural Relations: Identify the answer figure that logically completes the problem figures series.

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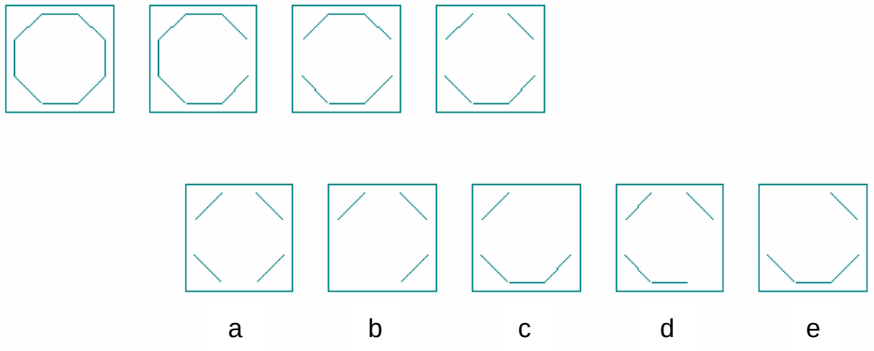
1. Vocabulary: OSTRACIZE

a) exile, shun
b) criticize, reproach
c) free, release
d) sever, cut
e) penalize, punish

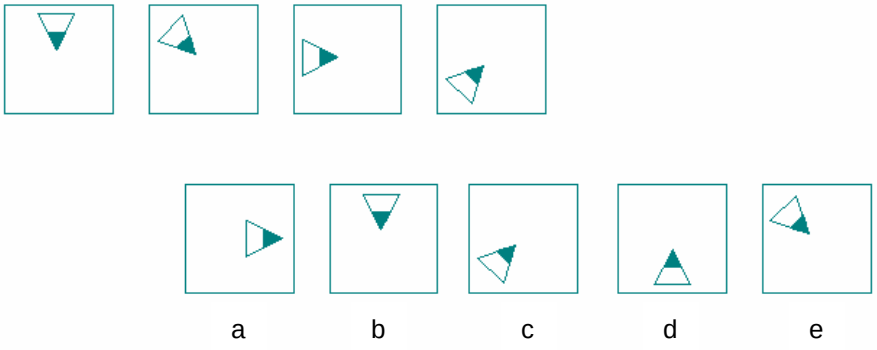
2. Vocabulary: SUCCINCT

a) resulting or terminating favourably
b) filled with juice
c) serving to draw in by suction
d) mentally acute, ingenious
e) terse, concise, briefly expressed

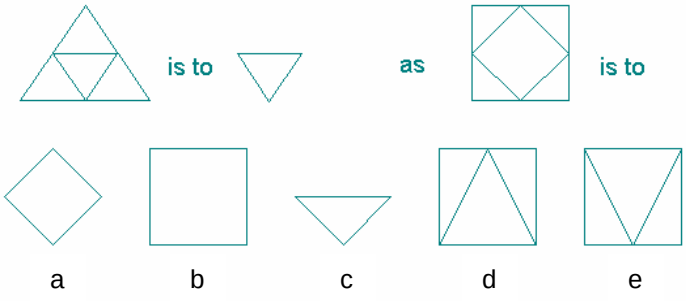
3. Figural Relations



4. Figural Relations



5. Figural Relations



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6. Arithmetic Question

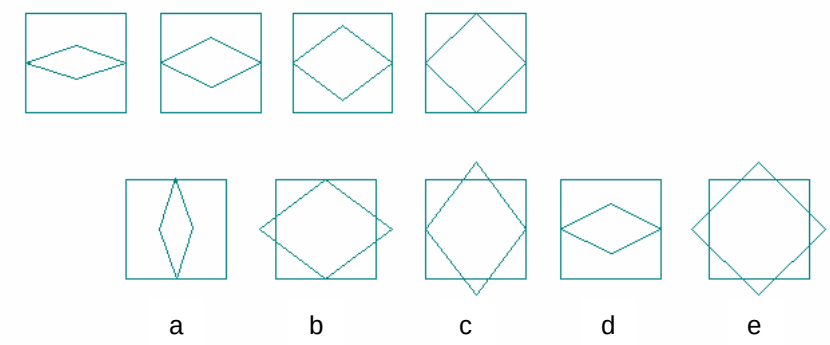
A flagpole casts a ten metre (m) shadow at the same time as a six metre statue beside it casts a two metre shadow. What is the height of the flagpole?

a) 24m
b) 27m
c) 30m
d) 32m
e) 34m

7. Number/Letter Series: 5, 10, 16, 23, 31,

a) 45
b) 37
c) 42
d) 38
e) 40

8. Figural Relations



Analytical Reasoning Question Set: 9 to 11 (Parts A – C)

Questions 9 to 11 are based on the following passage:

A committee to monitor the effects of new policies on AIDS is to be formed from 3 Psychologists (Patricia, Peter, Pauline), 3 Physicians (Michael, Mary, Maureen), 2 Social Workers (Steve, Susan), and 3 Economists (Edward, Eileen, Edith). The committee must include exactly 2 Psychologists, 2 Physicians, 1 Social Worker, and 1 Economist. The individuals who make up the committee or group can vary from one meeting to the next. Peter cannot meet in the second half of any month. Furthermore, Maureen cannot be paired with Steve because they do not get along, and Pauline cannot be on any committee in which Steve is a member. Mary cannot meet on Wednesdays.

9. Analytical Reasoning: Part A

How many committees can be formed if Steve is a member?

a) 2
b) 3
c) 9
d) 10
e) 12

10. Analytical Reasoning: Part B

How many committees that include Edward and Susan and that will meet on Tuesday, April 11, can be formed?

a) 1
b) 3
c) 9
d) 12
e) 18

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Arithmetic Problem: Determine the formula for solving a problem, and then to choose the correct formula among the five proposed.

11. Analytical Reasoning: Part C

How many groups can be formed that include Patricia, Pauline, and Susan, and that will meet on Wednesday, January 8?

a) 3
b) 6
c) 9
d) 12
e) 15

12. Vocabulary: DEFUNCT

a) failing to do what is required by duty or law
b) no longer existing
c) unable to pay debts
d) excessively self-indulgent
e) insufficient in quantity

13. Vocabulary: TANTAMOUNT

a) equivalent in value, effect
b) extremely or infinitely small
c) accomplished with dispatch
d) highest in rank, superior
e) sad, calamitous, distressing

14. Number/Letter Series: 1, 2, 6, 24, 120,

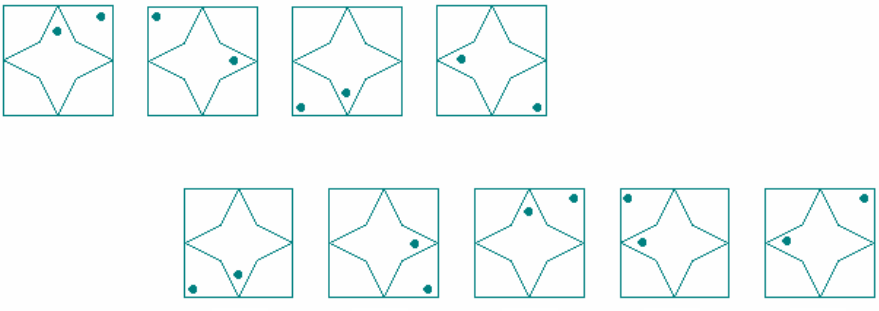
a) 320
b) 480
c) 220
d) 720
e) 144

15. Arithmetic Question

One person can devote 24 hours a week to a project and two others can each devote 30 hours a week to the same project. If the total project requires 420 hours to complete, how many weeks will it take?

a) 4.5
b) 5
c) 5.5
d) 6
e) 8

16. Figural Relations



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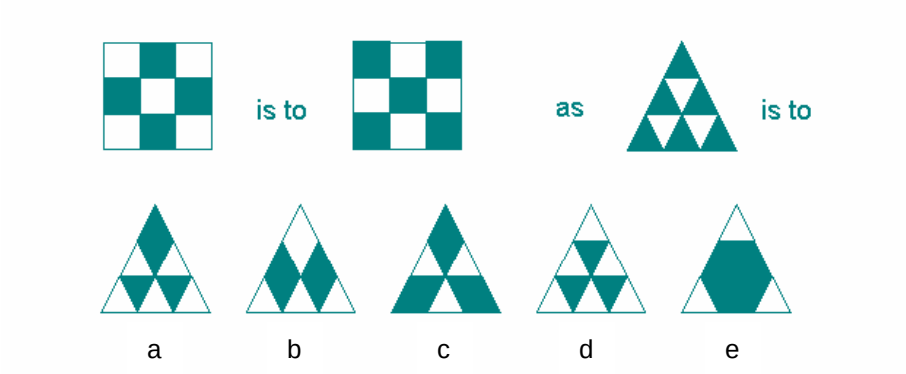

18. Number/Letter Series: 12, 12, 9, 9, 6, 6,

a) 5
b) 1
c) 2
d) 3
e) 4

19. Number/Letter Series: 64, 16, 32, 8, 16, 4,

a) 2
b) 8
c) 1
d) 10
e) 6

20. Vocabulary: ANOMALY

a) deviation from the common rule
b) opposition or contrast of ideas
c) short, pithy sentence
d) word contrary in meaning to another
e) lack of feeling or passion

21. Vocabulary: SUBSTANTIATE

a) remove
b) elaborate
c) re-phrase
d) repeat
e) confirm

22. Arithmetic Question

Department A has 40 wooden desks and 120 metal desks. Department B has 90 wooden desks and 60 metal desks. What is the difference between the percentages of wooden desks in each department?

a) 25%
b) 33%
c) 35%
d) 40%
e) 117%

Question Types

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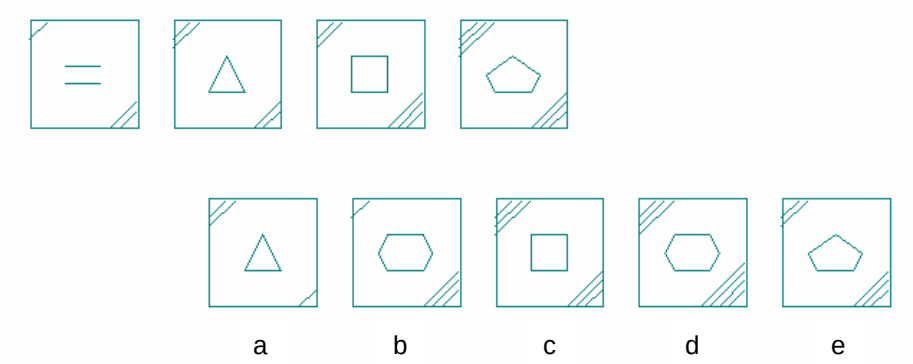
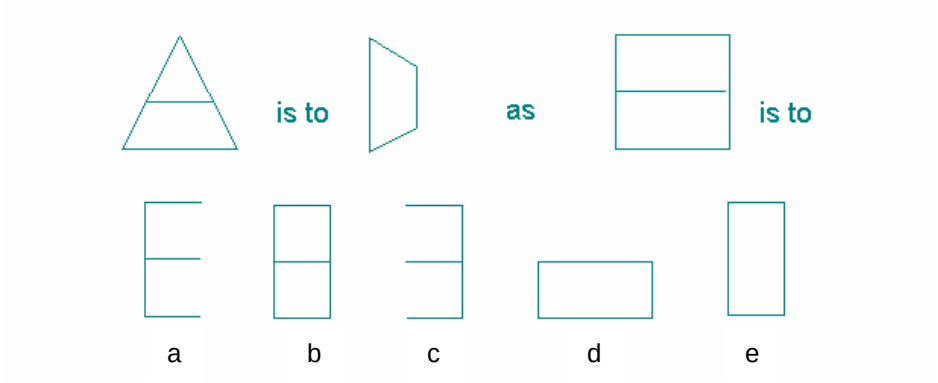
23. Figural Relations



24. Figural Relations



Analytical Reasoning Question Set: 25 to 29 (Parts A – E)

Question 25 to 29 are based on the following:

Six international delegates need to communicate with one another in "one on one" discussions.

Delegate A is fluent in Hindi and French.

Delegate B is fluent in English and Hindi.

Delegate C is fluent in Russian and Greek.

Delegate D is fluent in Russian and English.

Delegate E is fluent in French and Russian.

Delegate F is fluent in English.

Because the material to be discussed is sensitive, no outsiders (i.e., non-delegates) can be present. Therefore, pairs of delegates who cannot communicate directly require translation by another delegate.

25. Analytical Reasoning: Part A

To communicate, A & C need an interpreter. How many other pairs of delegates need a third delegate to act as an interpreter?

a) 2
b) 3
c) 6
d) 7
e) 9

26. Analytical Reasoning: Part B

Which delegate can communicate with the most other delegates without an interpreter?

a) A
b) D
c) B
d) C
e) F

27. **Analytical Reasoning: Part C**

Which delegates can act as interpreters when delegates A and D want to communicate?

a) B and E
b) B and F
c) E and C
d) C and D
e) E and F

28. Analytical Reasoning: Part D

Which delegate can act as an interpreter when delegates B and C wish to communicate?

a) D
b) A
c) E
d) F
e) none

29. Analytical Reasoning: Part E

If delegate F could learn another language prior to the next meeting of the same individuals 5 years from now, what language should be learned to communicate directly with the greatest number of delegates?

a) English
b) Spanish
c) Greek
d) Hindi
e) Russian

30. Vocabulary: MANDATE

a) security
b) encouragement
c) funding
d) authorization
e) clarification

31. Vocabulary: PROTRACT

a) prolong, lengthen
b) cut short, deprive of
c) express dissatisfaction with
d) drive back, repulse
e) refuse dealings with

32. Number/Letter Series: 30, 26, 28, 23, 26, 20,

a) 22
b) 24
c) 15
d) 25
e) 16

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Arithmetic Problem: Determine the formula for solving a problem, and then to choose the correct formula among the five proposed.

33. Number/Letter Series: 3B, 6Y, 9E, 12V, 15H, 18

a) P
b) R
c) T
d) Q
e) S

34. Arithmetic Question

A merchant bought chairs for a price of $180 a dozen. When she sold them she received as much for 3 chairs as she had paid for 4 chairs. What was the selling price per dozen?

a) $120
b) $200
c) $240
d) $270
e) $360

35. Arithmetic Question

In a class of 40 students, 80% are business majors. Of the 24 students who passed the mid-term exam, 75% are business majors. What percentage of students who are not business majors passed the exam?

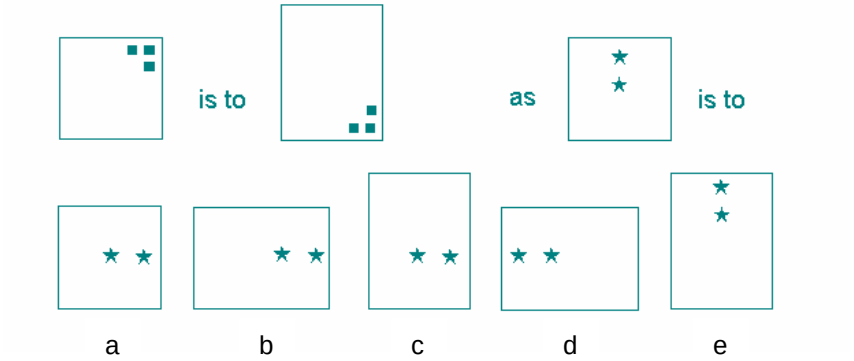
a) 60%
b) 65%
c) 70%
d) 75%
e) 80%

36. Arithmetic Question

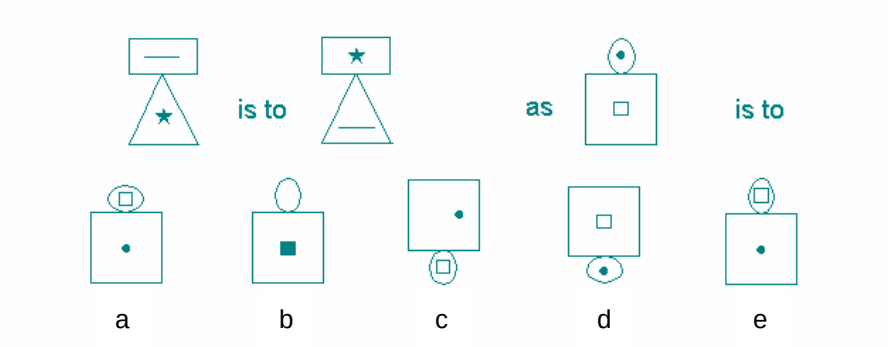
If 9 employees require 15 days to complete a task, how long would it take to do the same work if there were 3 additional employees? Assume that all employees are equally efficient.

a) 10
b) 11.25
c) 12
d) 16
e) 20

37. Figural Relations



38. Figural Relations



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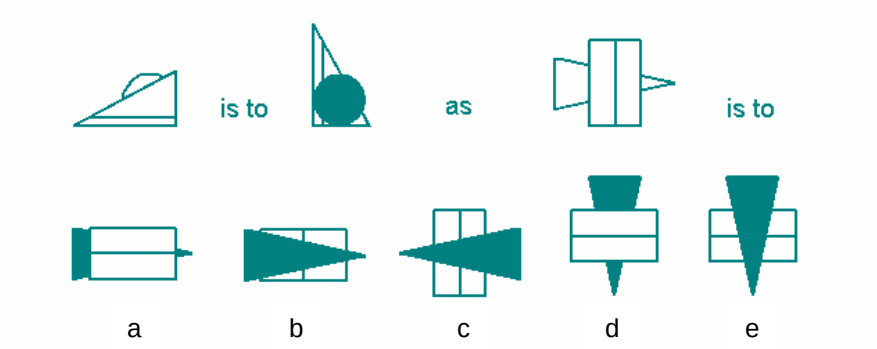

40. Number/Letter Series: 19, 17, 14, 10,

a) 8
b) 5
c) 9
d) 7
e) 6

41. Number/Letter Series: 1, 3, 6, 10, 19, 35,

a) 68
b) 51
c) 54
d) 60
e) 64

42. Vocabulary: AMEND

a) shorten
b) praise
c) revise
d) suggest
e) confirm

43. Vocabulary: FRUGAL

a) resourceful
b) economical
c) deliberate
d) barren
e) resentful

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44. Arithmetic Question

A father and his son can do a job in 20 days. The father can do four times as much work as his son in a given amount of time. In how many days can the father do the job alone?

a) 16
b) 22
c) 24
d) 25
e) 27.25

45. Arithmetic Question

Thirty prizes were distributed among 5% of the individuals who entered a department's "good ideas" contest. If there was one prize per person, how many people entered the contest?

a) 15
b) 60
c) 150
d) 300
e) 600

46. Arithmetic Problem

A photocopier can produce 6 black and white copies per minute, and 2 coloured copies per minute. Chris has a document with 12 pages of black and white text and 2 pages containing colours other than black and white. Which formula can be used to determine how long will it take to produce one copy of the document?

a) (12 ÷ 6) + 1
b) 6 + 2(12)
c) 12 + (2 × 6)
d) (6 + 6) × (2 + 1)
e) (12 ÷ 6) + (2 ÷ 1)

47. Arithmetic Problem

Marcel can type five pages in half an hour. Paul can type three times that in 2/3 the amount of time. Which formula can be used to determine how many pages can be typed in two hours by these two people?

a) (120 / 30) × (3 × 5) + (120 / 30 × 5)
b) (2 × 5) + 2 × (3 × 5)
c) 2 ÷ (5 × 1/2) + 2 ÷ (5 × 3)
d) 2[5/(1/2) + 5 × 3/(1/3)]
e) [(5 × 3) / 2/3] × 2

48. Arithmetic Problem

Successive discounts of 35% and 10% on the purchase of a filing cabinet are equivalent to a total discount of what % ?

a) 100 (.35 × .10)
b) 100 - 100 × (.65 × .90)
c) 100 (.65 × .90)
d) 35 + 10
e) 35 + (35 × .90) + (35 × .90)

49. Arithmetic Problem

The cost of printing 12 manuals is $4.00. Which formula can be used to determine how much it will it cost to print 35 manuals if there is a 10% discount on the printing of every manual after the first 25?

a) [(4 / 12) × 26] + [(4 / 12) - (4 / 12 × 10%) × 11]

b) [(12 / 4) × 35] - [(12 / 4) × 25] × 10%

c) [(4 / 12) × 25] + [(4 / 12) - (4 / 12 ×10%)] × 10

d) [(4 / 12) - (4 / 12 × 10%) +10] + [(4 / 12) + 25]

e) [(10 × 10% × 4)] + (12 × 4 / 25)

50. Arithmetic Problem

A trip was booked for 24 people at $105 per person. A 20% deposit was due within one week of booking. One sixth of the people paid the deposit on Monday and one half on Tuesday. Which formula must be used to determine how much of the deposit money remained outstanding?

a) [(105 × 20%) × 24] - [(1/6 + 1/2) × (105 × 20%)]

b) [(24 × 105) × (105 × 20%)] / (1/6 × 1/2)

c) [1/6 × (105 × 20%) + 1/2 × (105 × 20%)] / 24

d) [(105 × 20%) × 24] - [(24 × 1/6 + 24 × 1/2) × (105 × 20%)]

e) 105 × (1/6 + 1/2) / (1/6 +1/2) × 24

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