

AIMS ATMA Test

February 11, 2007

We are pleased to present a comprehensive analysis of this year's ATMA test. It has been recreated with the help of PT faculty and students from across the nation. The pattern of the test and the level of questions were similar to the last year's pattern of ATMA. Questions were of mixed type - tough, moderate and easy. Most of the questions in analytical reasoning were inference based which put the paper on slightly tougher side. The best strategy in this paper would be to attempt 'inference' based questions towards the later part of the test.

A bird's eye view :

Total Number of Questions	: 200 Objective type
Total Time	: 180 minutes
Number of sections	: Three
Sectional Time allowed	: 60 minutes for each section

Section	Topic	Number of Questions
I	Verbal Ability + Analytical Reasoning	30 + 35
II	Analytical Reasoning + Mathematical Aptitude	35 + 35
III	Mathematical Aptitude + Verbal Ability	35 + 30

Number of options	: Four
Marking Scheme	: The answers had to be marked with an HB Pencil only. 1 mark for correct answers. - 0.33 mark for incorrect answers.

In section I there were two parts, Part A and Part B
In section II there were two parts Part C and Part D
In section III there were two parts Part E and Part F

Questions were basically from three areas namely:

1. Verbal Ability,
2. Analytical Reasoning and
3. Quantitative Aptitude

Detailed Analysis

Verbal Ability

Topic	Theme	Number of Questions
Reading Comprehension		
Passage I	Astronomy	Total 30 There were 4 RC passages totalling 30 questions
Passage II	Corruption	
Passage III	Economic	
Passage IV	Biological (about Brain)	
English Usage		
Para Jumbles	--	5
Sentence Completion	--	9
Sentence Correction	--	5
Fill up the blanks	--	5
Analogy	--	6

Analytical Ability

The questions in reasoning part were of mixed type - tough, moderate and easy. Especially the questions on syllogisms were tough. Questions on Data Arrangement, Critical Reasoning and Other types were of moderate and easy level.

Topic	Number of Questions
Syllogism	6
Data Arrangement	17
Conclusions type	7
Critical Reasoning	30
Argument, Assumption, Conclusion, Premise type	10

Quantitative Ability

In this section the questions were from Basic Maths. There were 18 questions on Data Sufficiency and 52 questions on Maths. Most of the questions were easy and a few moderate type.

Topic	Number of Questions
Data Sufficiency	18
Maths	52
(Questions were from topics like - Arithmetic, Algebra, Geometry, Higher Maths, Number system.	

Some of actual questions that we could recall:

Analytical Reasoning

1. If the farmers plant four fields, the maximum number of the fields that can be planted to grains in both years, is
2. If the farmers plants four fields, with maize in two of the fields the first year, how many crops must there be that are NOT planted the first year in any field but have to be planted the next year in same field?
3. If the farmer plants three fields, each of the following is a possible selection of crops for the first year EXCEPT

DIRECTIONS: For each question, two or four statements are given. These statements marked (A), (B), (C) and (D) as the case may be followed by two conclusions marked (I) and (II) that can logically be drawn from two/four statements. Even if the statements vary from well known facts assume them to be true. Choose the best conclusion (s) from the answer choices as given below and darken the corresponding oval in the answer sheet.

4. **Statements:**

- (A) No experienced person is incompetent
- (B) Dr. Watson is always blundering
- (C) No competent person is always blundering

Conclusion(s):

- (I) Dr. Watson is, therefore, incompetent
- (II) Dr. Watson is, therefore, inexperienced

Which of the conclusion(s) above is/are true?

5. **Statements:**

- (A) None but writers are poets.
- (B) Only military officers are astronauts
- (C) Whoever contributes to the new magazine is a poet
- (D) Nobody is both a military officer and a writer

Conclusion(s):

- (I) Therefore not one astronaut is a contributor to the new magazine
- (II) Therefore no military officer is a poet

Which of the conclusion(s) above is/are true?

6. **Statements:**

- (A) All valid syllogisms that distribute their middle terms in at least one premise
- (B) This syllogism is a syllogism that distribute in at least one premise

Conclusion(s):

- (I) This syllogism is a valid syllogism
- (II) This syllogism is a syllogism with the middle term distributed

Which of the conclusion(s) above is/are true?

7. Recent surveys show that many people who seek medical help are under a great deal of stress. Medical research also shows that stress can adversely affect an individual's immune system, which is responsible for combating many infections. Thus when a person is under stress, she or he is more likely to become ill.

Which of the following, if true, would most strengthen the conclusion above?

DIRECTIONS: Read the following information carefully and answer the questions that follow.

Exactly seven persons - J, K, L, M, N, O, and P – participate in and finish all of a series of 1 km races. There are no ties for any position at the finish of any of the races

P always finishes somewhere ahead of J

J always finishes somewhere ahead of K

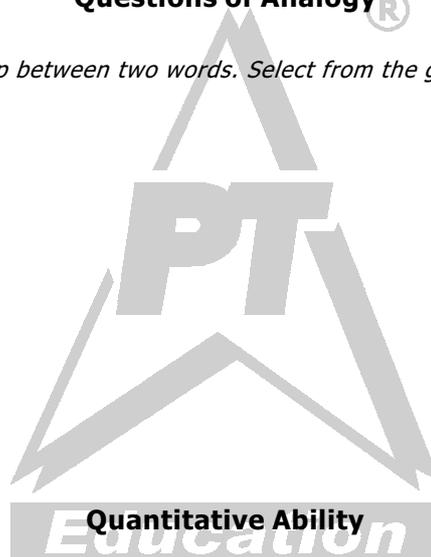
Either L finishes first and N finishes last, or M finishes first and O or K finishes last

8. If in a race M finishes second, which of the following CAN be true?
9. If in a race P finishes fifth, which of the following MUST be TRUE?
10. If in a race M finishes sixth and K finishes fifth, which of the following CAN be true?
11. If in a race L finishes second and K finishes fifth, which of the following MUST be TRUE?
12. If in a race L finishes first, P can finish no lower than

Verbal Ability
Questions of Analogy®

DIRECTIONS: There is certain relationship between two words. Select from the given options the one which follows the same analogy.

13. Mercenary : Money
14. Trouble : Distraught
15. Die : Shaping
16. Strut : Wing
17. Authoritativeness : Pundit



18. Is $x = y$?
(A) $(x + y)\left(\frac{1}{x} + \frac{1}{y}\right) = 4$
(B) $(x - 50)^2 = (y - 50)^2$
19. A certain company currently has how many employees?
(A) If 3 additional employees are hired by the company and all of the present employees remain, there will be at least 20 employees in the company.
(B) If no additional employees are hired by the company and 3 of the present employees resign, there will be fewer than 15 employees in the company
20. In $\triangle PQR$, if $PQ = x$, $QR = x + 2$, and $PR = y$, which of the three angles of $\triangle PQR$ has the greatest degree measure?
(A) $y = x + 3$
(B) $x = 2$

21. Members in a club either speak English or Tamil or both. What is the number of members in the club who speak only Tamil?
 (A) There are 300 members in the club and the number of members who speak both English and Tamil is 196
 (B) The number of members who speak only English is 58

22. What is the value of integer n ?

- (A) $n(n + 1) = 6$
 (B) $2^{2n} = 16$

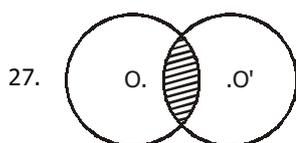
DIRECTIONS: Each of the questions 28 - 38 has four answer choices. For each of these questions select the best of the answer choices given, then darken the corresponding oval in the answer sheet.

23. For what value of n , $\frac{a^{n+1} + b^{n+1}}{a^n + b^n}$, $a \neq b$ is the arithmetic mean of a and b ?

24. Three cubes with 8 cm edge are joined end to end. The ratio of the total surface area of resultant new cuboid to that of the sum of the surface areas of three cubes will be

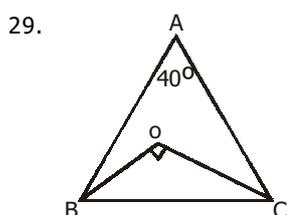
25. If $n > 0$, then $2^{12n} - 6^{4n}$ is always divisible by

26. A number consists of three digits whose sum is 10, The middle digit is equal to sum of the other two and the number will be increased by 99 if the final digit and the third digits are interchanged. The digit in the hundred's place is



In the figure above there are two different circles having centres O and O' and each having the equal radius of 1 cm. The area of the shaded portion would be

28. The condition for one root of the equation $ax^2 + bx + c = 0$ to be twice of the other root must be



In the above figure above, $\angle A = 40^\circ$ and if the bisector of $\angle C$ meet at O , then the $\angle BOC$ would be

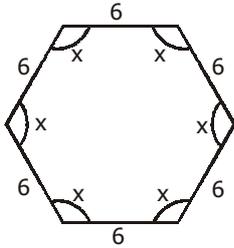
30. A fraction is doubled when 2 is added to both its numerator and denominator and trebled when 8 is added to both its numerator and denominator. (Numerator and denominator are both positive integers). The denominator (d) of the fraction then must be

31. In a glass of milk, the proportion of pure milk and water is 3 : 1, how much of the mixture must be withdrawn and substituted water so that the resulting mixture may become half pure milk and half water?

32. The co-efficient of x in the equation $x^2 + px + q = 0$ was wrongly written as 17 in place of 13 and the roots thus found were -2 and -15 . The roots of the correct equation would be

33. A man can row 6 km/hr in still water. If it takes him twice as long to row up, as to row down the river then the rate of current in the stream would be

34. Find the equation of a perpendicular bisector to the line joining the coordinate points (1, 1) and (2, 3).
35. Find the value of x for the given in equality $2.5x \leq (6x - 5)/-3$.
36. Find the value of x if $3^{2x+1} + 3^2 = 3^{x+3} + 3^x$.
37. Find the greatest positive integer n such that 2^n is the factor of 12^{10} .
38. Find the area of hexagon.



39. Find the maximum value of the function $y = 4.5 - x^2 + 2x$.
40. If x, y is the prime number which of the given values cannot be the sum of $x + y$.

The scores of the test will be accepted by a lot of institutes. Students must therefore try and apply to as many institutes.

