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ROLL No.

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TEST BOOKLET No.

0781

APTITUDE TEST FOR M.C.A.

Time: 2 Hours

Maximum Marks: 450

INSTRUCTIONS TO CANDIDATES

1. You are provided with a Test Booklet and an Optical Mark Reader (OMR) Answer Sheet to mark your responses. Do not soil the Answer Sheet. Read carefully all the instructions given on the Answer Sheet.
2. Write your Roll Number in the space provided on the top of **this page**.
3. Also write your Roll Number, Test Code, and Test Subject in the columns provided for the same on the **Answer Sheet**. Darken the appropriate bubbles with a **Ball Point Pen**.
4. The paper consists of 150 objective type questions. All questions carry equal marks.
5. Each question has four alternative responses marked **A, B, C** and **D** and you have to **darken** the bubble corresponding to the correct response fully by a **Ball Point Pen** as indicated in the example shown on the Answer Sheet.
6. Each correct answer carries **3** marks and each wrong answer carries **1** minus mark.
7. Space for rough work is provided at the end of this Test Booklet.
8. You should return the Answer Sheet to the Invigilator before you leave the examination hall. However, you can retain the Test Booklet.
9. Every precaution has been taken to avoid errors in the Test Booklet. In the event of any such unforeseen happening, the same may be brought to the notice of the Observer/Chief Superintendent in writing. Suitable remedial measures will be taken at the time of evaluation, if necessary.

SEAL

APTITUDE TEST FOR M.C.A.

1. When a parabola represented by the equation $y - 2x^2 = 8x + 5$ is translated 3 units to the left and 2 units up, the new parabola has its vertex at

(A) (-5, -1)	(B) (-5, -5)
(C) (-1, -3)	(D) (-2, -3)
2. The graphs of the two linear equations $ax + by = c$ and $bx - ay = c$, where a, b and c are all not equal to zero,

(A) are parallel	(B) intersect at one point
(C) intersect at two points	(D) perpendicular
3. The three solutions of the equation $f(x) = 0$ are -2, 0, and 3. Therefore, the three solutions of the equation $f(x - 2) = 0$ are

(A) -4, -2 and 1	(B) -2, 0 and 3
(C) 4, 2 and 5	(D) 0, 2 and 5
4. The reflection of (4, 5) in the second quadrant is

(A) (-4, -5)	(B) (-4, 5)
(C) (5, 4)	(D) (-5, 4)
5. In a triangle, angles are in the ratio 1 : 1 : 2. Then the sides are in the ratio

(A) 1 : 1 : 3	(B) 1 : 1 : 2
(C) 1 : 1 : $\sqrt{3}$	(D) 1 : 1 : $\sqrt{2}$
6. How many metres of cloth 5m wide will be required to make a conical tent, the radius of whose base is 7m and height 24m?

(A) 110	(B) 55
(C) 240	(D) 96

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7. The diameter of the circle circumscribing an equilateral triangle of side 10 cms is
- (A) $10\sqrt{3}$ cms (B) $10\sqrt{2}$ cms
 (C) 20 cms (D) $\frac{10}{\sqrt{3}}$ cms
8. The gradient of the curve $y = x^2$ at the point (3, 9) is
- (A) 6 (B) 9
 (C) 18 (D) 36
9. $\operatorname{div} \operatorname{curl} \vec{F}$ is
- (A) 1 (B) 0
 (C) 3 (D) -1
10. A unit normal to $x^2 + y^2 + z^2 = 5$ at (0, 1, 2) is
- (A) $\hat{j} + 2\hat{k}$ (B) $2\hat{i} + 2\hat{j} + 2\hat{k}$
 (C) $\hat{i} + \hat{j} + 2\hat{k}$ (D) $\frac{\hat{j} + 2\hat{k}}{\sqrt{5}}$
11. If the graph of $y = f(x)$ is transformed into the graph of $2y - 6 = -4 f(x - 3)$, the point (a, b) on the graph of $y = f(x)$ becomes point (A, B) on the graph of $2y - 6 = -4 f(x - 3)$ where A and B are given by
- (A) $A = a - 3, B = b$ (B) $A = a - 3, B = -b$
 (C) $A = a + 3, B = -2b$ (D) $A = a + 3, B = -2b + 3$



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17. $1 + (\log x) + \frac{(\log x)^2}{2!} + \dots$ is

(A) x	(B) 1
(C) e	(D) $\frac{1}{x}$

18. The series $\sum \frac{1}{2n+1}$ and $\sum \frac{1}{2n}$ are

(A) both convergent	(B) both divergent
(C) convergent and divergent	(D) divergent and convergent

19. The function $f(x) = |x|$ is

(A) continuous for $x > 0$	(B) discontinuous for all x
(C) continuous for $x < 0$	(D) continuous for all x

20. The graphs of the two equations $y = ax^2 + bx + c$ and $y = Ax^2 + Bx + C$, such that a and A have different signs and that the quantities $b^2 - 4ac$ and $B^2 - 4AC$ are both negative,

(A) intersect at two points	(B) intersect at one point
(C) do not intersect	(D) None of the above

21. The roots of the equations $x/(x+2) + 3/(x-4) = (4x+2)/(x^2 - 2x - 8)$ are

(A) $x = 4$ and $x = 1$	(B) $x = 4$ only
(C) $x = 1$ only	(D) $x = -4$ only



22. The quadratic equation whose roots are at $x = 3$ and $x = 5$ is given by

$$(\Delta) \quad (x+3)(x-5) = 1$$

$$(B) \quad (x+3)(x+5) = 9 \Rightarrow (x+3)(x+5) = 25$$

$$(C) \quad (x+3)(x+5)=0$$

(D) $x^2 - 8x + 15$

23. One root of the equation $x^3 - 3x + 2 = 0$ is 1. The other roots are

(A) 1, 2

(C) -1, -2

(B) 1-2

(D) -1, 2

24. If $2^{3x-1} = 16$, then $x =$

(A) 3/5

(C) 1

(B) 5/3

(D) 4

25. Which point is on the graph of the inverse of the function $f(x) = 10^{x+2}$?

(A) (100, 0)

(C) (10, 0)

(B) (0, 100)

(D) (0, 10)

26. If the hypotenuse of a right triangle is 10 inches long and one of its legs is 5 inches long, how long is the other leg?

(A) 5

(B) $5\sqrt{3}$

(C) $5\sqrt{5}$

(D) 75

27. For all $x > 2$, $(2x^2 + 2x - 12)/(x - 2)$ simplifies to

$$(\Lambda) \quad 2(x-2)$$

(B) $x + 3$

$$(C) \quad 2(x+3)(x-2)$$

(D) $2(x + 3)$

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28. If x and y are any real numbers such that $0 < x < 2 < y$, which of these must be true?
- (A) $x < (xy)/2 < y$ (B) $0 < xy < 2x$
 (C) $x < xy < 2$ (D) $0 < xy < 2$
29. The period of the function $f(x) = \sin\left(x\frac{\pi}{6} + \frac{\pi}{4}\right)$ is equal to
- (A) 2π (B) 12
 (C) $\frac{\pi}{6}$ (D) 6π
30. Which of the following is not an identity?
- (A) $\cot(x+y) = [1 + \cot(x)\cot(y)] / [\cot(x) + \cot(y)]$
 (B) $\tan(x+y) = [\tan(x) + \tan(y)] / [1 - \tan(x)\tan(y)]$
 (C) $\sin(x-y) = \sin(x)\cos(y) - \cos(x)\sin(y)$
 (D) $\cos(2x) = 2\cos^2(x) - 1$
31. In a shipment of televisions, $1/50$ of the televisions are defective. What is the ratio of defective to non-defective televisions?
- (A) $1/200$ (B) $1/50$
 (C) $1/49$ (D) $49/1$
32. The population of a country increased by an average of 2% per year from 2000 to 2003. If the population of this country was 2 000 000 on 31st December 2003, then the population of this country on 1st January 2000, to the nearest thousand would have been
- (A) 1 846 000 (B) 1 852 000
 (C) 1 000 000 (D) 1 500 000



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33. There are 12 boys and 8 girls in a class, including a brother and sister. If two pupils are chosen at random from the class, then the probability that neither the brother nor sister are chosen is
- (A) $\frac{14}{19}$ (B) $\frac{153}{190}$
(C) $\frac{189}{190}$ (D) $\frac{379}{380}$
34. 10 percent of a large batch of light bulbs was defective. If a man bought three of the bulbs, then the probability that at least one was defective is
- (A) $\frac{1}{1000}$ (B) $\frac{271}{1000}$
(C) $\frac{729}{1000}$ (D) $\frac{999}{1000}$
35. A school committee consists of 2 teachers and 4 students. The number of different committees that can be formed from 5 teachers and 10 students is
- (A) 10 (B) 15
(C) 2100 (D) 8
36. The mean of a data set is equal to 10 and its standard deviation is equal to 1. If we add 5 to each data value, then the mean and standard deviation become
- (A) mean = 15, standard deviation = 6
(B) mean = 10, standard deviation = 6
(C) mean = 15, standard deviation = 1
(D) mean = 10, standard deviation = 1

37. Five different books (A, B, C, D and E) are to be arranged on a shelf. Books C and D are to be arranged first and second starting from the right of the shelf. The number of different orders in which books A, B and E may be arranged is

38. $\left[\frac{d}{dx}(\sin^2 x) \right]_{x=\frac{\pi}{2}}$ is

39. Determine $\lim_{x \rightarrow \infty} \left(\frac{-2x^3 + x}{-4x^5 + 2x^2 + 2} \right)$

- (A) ∞ (B) 0
 (C) $\frac{1}{2}$ (D) $\frac{3}{10}$

40. The inverse of $\begin{bmatrix} 1 & 1 \\ 2 & 3 \end{bmatrix}$ is

- $$(A) \begin{vmatrix} 3 & 2 \\ 1 & 1 \end{vmatrix}$$

$$(C) \begin{vmatrix} 1 & -2 \\ -1 & 3 \end{vmatrix}$$



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47. The set $A - (B \cup C)$ is equal to

- (A) $(A - B) \cup C$ (B) $A \cap (B \cup C)$
(C) $(A - B) \cap (A - C)$ (D) $(A \cap B) - (A \cap C)$

48. If $f(x)$ is any function and $f^{-1}(x)$ is the inverse of $f(x)$, then

$f^{-1}(x)$ for $f(x) = \frac{1}{x} + 1$ is

- (A) $\frac{1}{x+1}$ (B) $\frac{1}{x-1}$
(C) $\frac{1}{x}-1$ (D) $\frac{1}{1-x}$

49. Let $f(x) = x^3$

A region is bounded between the graphs of $y = 1$ and $y = f(x)$ for x between -1 and 0 , and between the graphs of $y = 1$ and $y = f(x)$ for x between 0 and 1 . Give an integral that corresponds to the area of this region.

- (A) $\int_{-1}^1 (1 - x^3) dx$ (B) $\int_{-1}^1 2(1 - x^3) dx$
(C) $\int_{-1}^1 2(1 + x^3) dx$ (D) $\int_{-1}^1 (1 + x^3) dx$

50. Given that $5x^3 - 4xy - 2y^2 = 1$

Determine the change in y with respect to x .

- (A) $-\frac{15x^2 - 4}{4 - 4y}$ (B) $-\frac{15x^2 - 4y}{-4 - 4y}$
(C) $-\frac{15x^2 - 4}{4x - 4y}$ (D) $-\frac{15x^2 - 4y}{-4x - 4y}$



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51. For all real numbers x , the minimum value of $1+2\cos(4x)$ is

(A) 0
(C) -1

(B) 1
(D) -2

52. If $x+4y=5$ and $5x+6y=7$, then $3x+5y$ is equal to

(A) 12
(C) 4

(B) 6
(D) 2

53. $\int_0^1 \int_0^1 xy \, dx \, dy$ is

(A) $\frac{1}{2}$
(C) $\frac{1}{4}$

(B) 1
(D) 2

54. $\int_0^\infty xe^{-x^2} \, dx$ is

(A) $\frac{1}{2}$

(B) 2

(C) 1

(D) 0

55. $L\{e^{-at} \cos bt\}$ is

(A) $\frac{s-a}{(s-a)^2+b^2}$

(B) $\frac{s+a}{(s+a)^2+b^2}$

(C) $\frac{s+b}{(s+b)^2+a^2}$

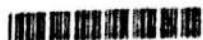
(D) $\frac{s-b}{(s-b)^2+a^2}$

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56. $L^{-1} \left\{ \frac{s+2}{s^2 + 4s + 13} \right\}$ is
- (A) $e^{2t} \sin 3t$ (B) $e^{2t} \sin 3t$
 (C) $e^{3t} \cos 2t$ (D) $e^{-2t} \cos 2t$
57. $D^n(e^{ax})$ is
- (A) $\frac{e^{ax}}{a^n}$ (B) $a^n e^{ax}$
 (C) $n e^{ax}$ (D) e^{ax}
58. The mode of the data set $\{8, 9, 0, 9, 1, 4, 3, 7\}$ is
- (A) 0 (B) 9
 (C) 7 (D) 4
59. If $10^{x/y} = A/B$, then
- (A) $x/y = \log A / \log B$ (B) $y = x / (\log A - \log B)$
 (C) $x = y / (\log A + \log B)$ (D) $y = x \log(A/B)$
60. The set of all multiples of 5 is closed under
- (A) addition, multiplication but not subtraction
 (B) addition, subtraction but not multiplication
 (C) multiplication and division but not addition
 (D) addition, subtraction and multiplication
61. The real solutions to the equation $\cos^2(x) - 1.5 \cos(x) = 1$ are given by the solutions to the equation
- (A) $\cos(x) = 1$ (B) $\cos(x) = 2$
 (C) $\cos(x) = 1/2$ (D) $\cos(x) = -1/2$



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68. Which statement is not true?
- (A) $\cos(-x) = \cos(x)$
(B) $\tan(-x) = \tan(x)$
(C) the range of $y = 2\cos x$ is $[-2, 2]$
(D) the range of $y = -5\sin(t)$ is given by $[-5, 5]$
69. The circumference of $(x+3)^2 + (y+5)^2 = 16$ is
- (A) 4π
(B) 5π
(C) 3π
(D) 8π
70. If you drove at an average speed of 66 miles per hour, what distance, in miles, did you drive in 99 minutes?
- (A) 1.5
(B) 0.7
(C) 65.34
(D) 108.9
71. A group of 7 friends are having lunch together. Each person eats at least $3/4$ of a pizza. What is the smallest number of whole pizzas needed for lunch?
- (A) 7
(B) 5
(C) 6
(D) 28
72. The angle subtended by a diameter of a circle at a point on the circumference is
- (A) acute
(B) a right angle
(C) obtuse
(D) reflex
73. Give $f(g(1))$, given that $f(x) = 2x + 2$, $g(x) = \frac{x}{2+x^2}$
- (A) $\frac{8}{9}$
(B) $\frac{7}{3}$
(C) 2
(D) $\frac{4}{3}$



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Direction (Qn. Nos. 76 – 79): In each of the following questions, there is some relationship between the figures (a) and (b). The same relationship exists between the figure (c) and one of the four alternatives (A), (B), (C) and (D). Choose that figure alternative.

76.

			?
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(a) (b) (c)

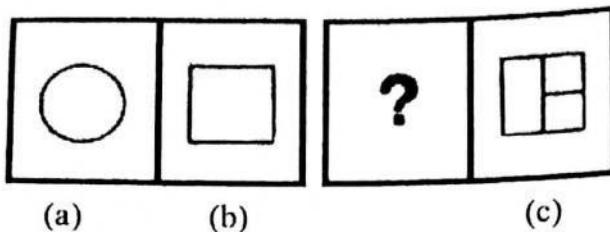
(A)

(B)

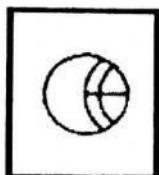
(C)

(D)

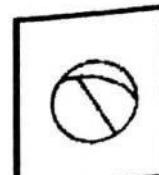
77.



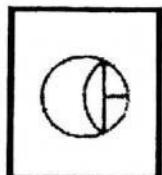
(A)



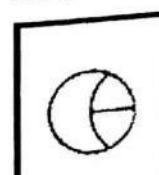
(B)



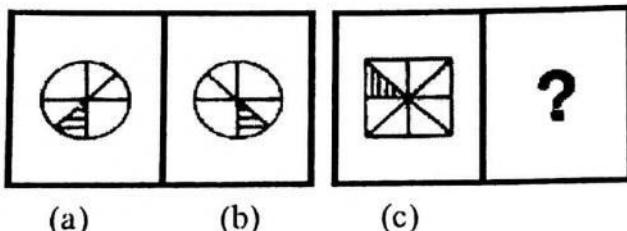
(C)



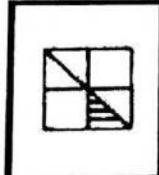
(D)



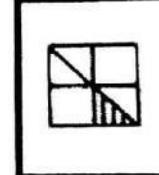
78.



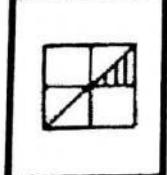
(A)



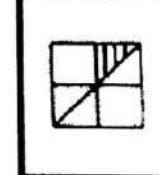
(B)



(C)



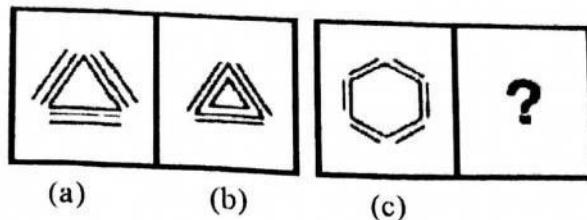
(D)





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79.

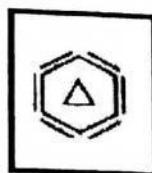


(a)

(b)

(c)

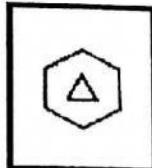
(A)



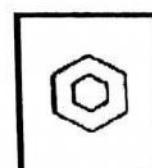
(B)



(C)

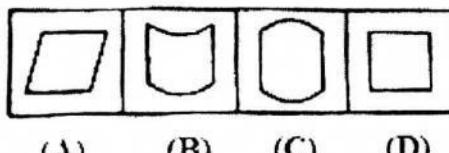


(D)



Direction (Qn. Nos. 80 – 83): Out of the four figures (A), (B), (C) and (D), given in each problem, three are similar in a certain way. However, one figure is not like the other three. Choose the figure which is different from the rest.

80.



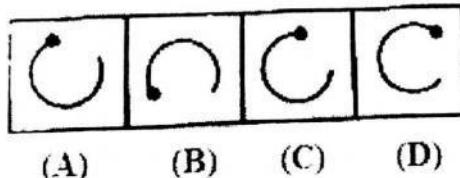
(A)

(B)

(C)

(D)

81.



(A)

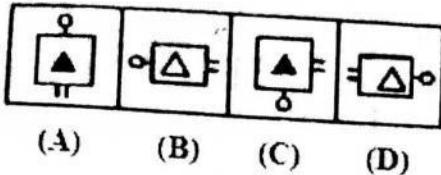
(B)

(C)

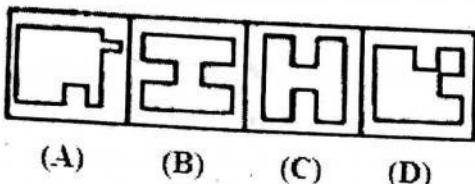
(D)



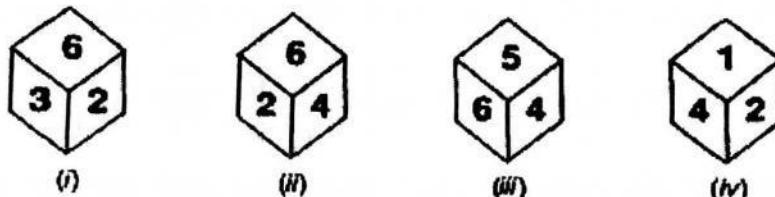
82.



83.



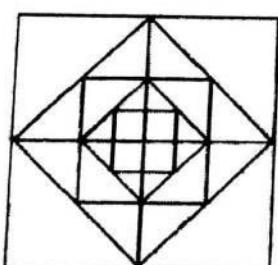
84.



Which number is on the face opposite to 6?

- | | |
|-------|-------|
| (A) 1 | (B) 2 |
| (C) 3 | (D) 4 |

Direction (Qn. Nos. 85 – 87): Questions are based on the following figure.



85. How many triangles are there in the figure?

- | | |
|--------|--------|
| (A) 32 | (B) 40 |
| (C) 48 | (D) 60 |



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90. Sally has never received a violation from the Federal Aviation Administration during her 16-year flying career. Sally must be a great pilot.
Which of the following can be said about the reasoning above?
- (A) The definitions of the terms create ambiguity
(B) The argument uses circular reasoning
(C) The argument works by analogy
(D) The argument is built upon hidden assumptions
91. Cars are safer than planes. Fifty percent of plane accidents result in death, while only one percent of car accidents result in death.
Which of the following, if true, would most seriously weaken the argument above?
- (A) Planes are inspected more often than cars
(B) The number of car accidents is several hundred thousand times higher than the number of plane accidents
(C) Pilots never fly under the influence of alcohol, while car drivers often do
(D) Plane accidents are usually the fault of air traffic controllers, not pilots
92. Dear Editor: I feel obliged to comment on the unfair review you published last week written by Mr. Robert Duxbury. Your readers should know that Mr. Duxbury recently published his own book that covered the same topic as my book, which you asked him to review. It is regrettable that Mr. Duxbury should feel the need to belittle a competing work in the hope of elevating his own book.
The author of the letter above makes her point by employing which method of argument?
- (A) Attacking the motives of the author of the unfavorable review
(B) Attacking the book on the same topic written by the author of the review
(C) Contrasting her own book with that written by the author of the review
(D) Questioning the judgment of the author of the unfavorable review



93. Russia's aggressive fishing in the prime fishing grounds of the Northern Pacific has led to a sharp decline in the populations of many fish and a general increase in the retail price of fish. This same pattern has occurred with far too many of our scarce vital natural resources, resulting in high prices for many products. It is likely then, that fish prices will continue to rise in the near future.
In making the argument above, the author relies on all of the following assumptions except
- (A) The scarcity of fish is a determining factor in its price
 - (B) Fishing practices can substantially influence the demand for fish
 - (C) There will not be any substantial decrease in other costs involved in the fishing process that could keep the price of fish from increasing
 - (D) Fish populations will not recover in the near future
94. There has been a sharp increase in the subscription prices of many professional and scholarly journals in the past seven years. Many publishers ascribe the necessity for these increases to the easy availability of photocopying facilities, which enable people simply to copy the articles they want rather than buying the journal.
Which of the following, if it is true, would make this explanation more plausible?
- (A) The great majority of professional and scholarly journals have a massive backlog of papers awaiting publication
 - (B) Over the past five years there has been a substantial decline in the number of individual subscriptions to professional and scholarly journals, while library subscriptions have remained fairly stable
 - (C) In the five years immediately preceding the price surge, there was a substantial decline in the number of individual subscriptions to professional and scholarly journals, while library subscriptions remained fairly stable
 - (D) Many libraries have recently begun cutting back on subscriptions to professional and scholarly journals



Direction (Qn. Nos. 95 – 97): The following questions consist of two words each that have a certain relationship to each other, followed by four pairs of words. Select the pair that has the same relationship as the original pair of words.

95. Read : Legible

- | | |
|---|--|
| (A) Hear : Audible
(C) See : Illegible | (B) Qualify : Eligible
(D) Require : Admissible |
|---|--|

96. Preamble : Constitution

- | | |
|---|---|
| (A) Word : Dictionary
(C) Explanation : Poetry | (B) Contents : Magazine
(D) Preface : Book |
|---|---|

97. Sailor : Pirate

- | | |
|--|--------------------------------------|
| (A) Police : Robbers
(C) Plant : Fungus | (B) Lion : Lamb
(D) Major : Sepoy |
|--|--------------------------------------|

Direction (Qn. Nos. 98 – 103): Each of the analogy questions below consists of two words that have a certain relationship to each other, followed by four pairs of related words. Select the pair of words which has the same relationship.

98. ANGLE : DEGREE

- | | |
|---|---|
| (A) Area : Square inch
(C) Society : Classes | (B) Milk : Quart
(D) Letter : Alphabet |
|---|---|

99. ZOOLOGY : ANIMALS

- | | |
|--|---|
| (A) Ecology : Pollution
(C) Chemistry : Atoms | (B) Botany : Plants
(D) History : People |
|--|---|

100. SAW : CARPENTER

- | | |
|--|---|
| (A) Scissors : Tailor
(C) Brush : Painter | (B) Wagon : Farmer
(D) Typewriter : Author |
|--|---|

101. **LURK : WAIT**

- (A) Boost : Elevate
(C) Abscond : Depart
- (B) Deplete : Drain
(D) Bilk : Cheat

102. **ALCHEMY : SCIENCE**

- (A) Nostrum : Remedy
(C) Ploy : Tactic
- (B) Sideshow : Carnival
(D) Forgery : Imitation

103. **NEEDLE : KNIT**

- (A) Bait : Fish
(C) Loom : Weave
- (B) Match : Fire
(D) Soap : Wash

Direction (Qn. Nos. 104 – 106): Find the odd one out in the following:

104.

- (A) Chennai
(C) Kolkata
- (B) Thiruvananathapuram
(D) Pune

105.

- (A) 121
(C) 64
- (B) 100
(D) 48

106.

- (A) Pitch
(C) Golf
- (B) Umpire
(D) Run

Direction (Qn. Nos. 107 – 110): Answer the questions based on the following information.

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 – 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

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Miss Roberts needs to use the telephone quite often throughout the day. Mr. Mike and Mr. Brown need adjacent offices as they need to consult each other often while working. Miss Hardy is a senior employee and has to be allotted the office number 5, having the biggest window.

Mr. Donald requires silence in the offices next to his. Mr. Tim, Mr. Mike and Mr. Donald are all smokers. Miss Hardy finds tobacco smoke allergic and consecutively the offices next to hers to be occupied by non-smokers.

Unless specifically stated all the employees maintain an atmosphere of silence during office hours.

107. The ideal candidate to occupy the office furthest from Mr. Brown would be

- | | |
|----------------|----------------|
| (A) Miss Hardy | (B) Mr. Mike |
| (C) Mr. Tim | (D) Mr. Donald |

108. The three employees who are smokers should be seated in the offices

- | | |
|----------------|----------------|
| (A) 1, 2 and 4 | (B) 2, 3 and 6 |
| (C) 1, 3 and 4 | (D) 1, 2 and 3 |

109. The ideal office for Mr. Mike would be

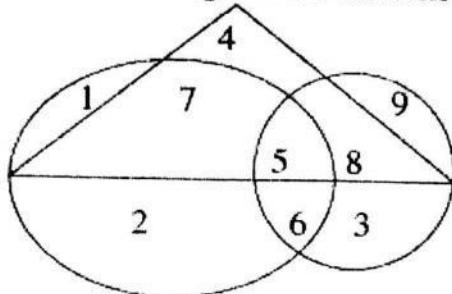
- | | |
|-------|-------|
| (A) 2 | (B) 6 |
| (C) 1 | (D) 3 |

110. In the event of what occurrence, within a period of one month since the assignment of the offices, would a request for a change in office be put forth by one or more employees?

- (A) Mr. Tim taking over the duties formerly taken care of by Miss Roberts
- (B) The installation of a noisy teletype machine by Miss Hardy in her office
- (C) Miss Roberts needing silence in the office(s) next to her own
- (D) Mr. Brown suffering from laryngitis



Direction (Qn. Nos. 111 – 115): The following five questions are based on the following diagram in which the triangle represents female graduates, small circle represents self-employed females and the big circle represents self-employed females with bank loan facility. Numbers are shown in the different sections of the diagram. On the basis of these numbers, answer the following.





Direction (Qn. Nos. 116 and 117): Answer the following based on the paragraphs given.

116. Successfully adjusting to one's environment leads to happiness. War at a universal level war destroys the weaker people, who are the most unable to adjust to their environment. Thus, war at the universal level puts weaklings out of their misery and allows more space for their predators to enjoy life in a better manner. As those actions have to be performed, which maximize the level of happiness of the greatest number, war at a universal level should take place.

What response would the author of the above discussion come up with, in the case of the objection that the weaklings far exceed strong people?

- I. He would respond with the statement that the person making the objection is a weakling.

II. He would respond by saying that weaklings will be miserable no matter what happens.

III. He would respond with the statement that the strong would be frustrated if the weaklings are destroyed.

117. Come back with us to the real America leaving behind the turmoil of civilisation. The real America is still inhabited by the eagle, the buffalo, the mountain lion and elk; it is still spacious, sprawling and majestic. Experience the freedom and serenity still to be found in

Choose the best option to complete the above statement.

- (A) the natural beauty of our land
 - (B) the fascinating urban centers
 - (C) the wild terrain of Africa
 - (D) one's own subconscious



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118. Look at this series: 65, 50, 37, 26, ___, 10. What number should fill the blank?

- | | |
|--------|--------|
| (A) 15 | (B) 17 |
| (C) 19 | (D) 11 |

Direction (Qn. Nos. 119 – 123): Which number can replace the question mark?

119. 5, 6, 10, 12, 20, ?

- | | |
|--------|--------|
| (A) 22 | (B) 24 |
| (C) 26 | (D) 28 |

120. 1, 2, 9, 28, 65, ?

- | | |
|---------|---------|
| (A) 108 | (B) 124 |
| (C) 116 | (D) 126 |

121. 2, 3, 10, 15, 26, 35, ?

- | | |
|--------|--------|
| (A) 50 | (B) 49 |
| (C) 48 | (D) 45 |

122. 3, 5, 7, 9, 11, 13, 15, 17, ?

- | | |
|--------|--------|
| (A) 14 | (B) 19 |
| (C) 15 | (D) 21 |

123. 14, 316, 536, 764, ?

- | | |
|----------|----------|
| (A) 9100 | (B) 98 |
| (C) 8100 | (D) 1048 |

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Direction (Qn. Nos. 124 – 129): Complete the last two terms.

124. 64, 32, 16, 8, ?, ?

125. A, B, D, ?, ?

126. 2, 5, 4, 9, 8, 15, ?, ?

127. 15, 9, 22, 18, 29, 27, ?, ?

- $$128. \quad \frac{2}{3}, 1\frac{1}{3}, 2, 2\frac{2}{3}, 3\frac{1}{3}, ?, ?$$

- (A) $3, 3\frac{2}{3}$ (B) $4, 4\frac{2}{3}$
 (C) $3, 4\frac{2}{3}$ (D) $4, 3\frac{2}{3}$

129. 2, 1/2, 5, 1/5, 8, ?, ?

- (A) $\frac{1}{8}, 8$ (B) $\frac{1}{9}, 12$
 (C) $\frac{1}{8}, 11$ (D) $\frac{1}{2}, 12$



130. If BANK is coded as DCPM, then BOOK is coded as

(A) MPGK	(B) DQQM
(C) DQQN	(D) CQQL

131. If PUNJ is coded as NSLH, then SINDH is coded as

(A) BLGOF	(B) QGLBF
(C) FBLGO	(D) GQFLB

132. If ZXGLI and YLLP stand for ACTOR and BOOK respectively, then PENCIL will be written as

(A) KUMXRO	(B) IGTWXZ ↓
(C) KUMRXO	(D) KUMXOR

133. If BAD is coded as EDG, how is the word WHITE coded?

(A) NPLKJ	(B) GRSUV
(C) KEMPP	(D) ZKLWH

134. If A = 1, BAN = 17, then INDIA = ?

(A) 37	(B) 39
(C) 36	(D) 35

135. If ROME = 7248, then MORE = ?

(A) 2748	(B) 4278
(C) 4178	(D) 4872

136. Everything that a person does, which is dictated by reason of ignorance is not voluntary. Involuntary actions are those which produce pain and repentance. In case a man has done something in his ignorance and he does not feel vexed due to his action, he has not acted voluntarily as he was not aware of what he was doing, nor yet involuntarily since he is not pained.



After reading this passage we can arrive at the conclusion that

- (A) a person is not a voluntary agent, if he acts by reason of ignorance and repents
- (B) if an action is done by reason of ignorance and is not voluntary , then it was repented
- (C) a man is an involuntary agent, if he acts by reason of ignorance
- (D) if a man is not a voluntary agent, then he acted by reason of ignorance and repents

137. Oar is to rowboat as foot is to

- (A) running
- (B) sneaker
- (C) skateboard
- (D) jumping

138. Window is to pane as book is to

- (A) novel
- (B) glass
- (C) cover
- (D) page

139. Artist is to painting as senator is to

- (A) attorney
- (B) law
- (C) politician
- (D) constituents

140. Play is to actor as concert is to

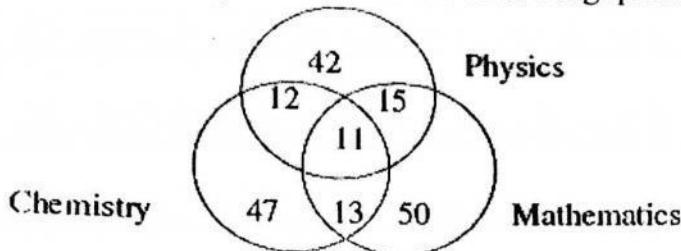
- (A) symphony
- (B) musician
- (C) piano
- (D) percussion

141. Elated is to despondent as enlightened is to

- (A) aware
- (B) ignorant
- (C) miserable
- (D) tolerant



Direction (Qn. Nos. 142 - 144): The diagram given below shows the number of students who got distinction in three subjects out of 500 students. Study the diagram carefully and answer the following questions.



142. What is the percentage of students who got distinction in two subjects?

- | | |
|---------|---------|
| (A) 8% | (B) 9% |
| (C) 10% | (D) 12% |

143. What is the percentage of students who got distinction?

- | | |
|---------|---------|
| (A) 28% | (B) 35% |
| (C) 38% | (D) 40% |

144. The percentage of students with distinction marks in Mathematics is

- | | |
|------------|------------|
| (A) 17.8 % | (B) 18.6 % |
| (C) 19.2 % | (D) 20.6 % |

Direction (Qn. Nos. 145 – 147): Two statements 1 and 2 are given. Two conclusions I and II are given. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the following conclusions and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts. Give answer (A) if only conclusion I follows (B) if only conclusion II follows (C) if either I or II follows (D) if neither I nor II follows.

145. Statements:

- 1) All apples are oranges
- 2) Some oranges are papayas



Conclusions:

- I. Some apples are papayas
- II. Some papayas are apples

- (A) Only conclusion I follows
- (B) Only conclusion II follows
- (C) Either I or II follows
- (D) Neither I nor II follows

146. Statements:

- 1) All windows are needles
- 2) Some trees are windows

Conclusions:

- I. Some trees are needles
- II. Some trees are not needles

- (A) Only conclusion I follows
- (B) Only conclusion II follows
- (C) Either I or II follows
- (D) Neither I nor II follows

147. Statements:

- 1) Some nurses are nuns
- 2) Madhu is a nun

Conclusions:

- I. Some nuns are nurses
- II. Some nurses are not nuns

- (A) Only conclusion I follows
- (B) Only conclusion II follows
- (C) Either I or II follows
- (D) Neither I nor II follows



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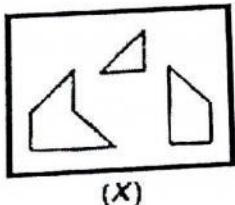
Direction (Qn. Nos. 148 and 149): Determine whether in each of the following arguments, the inference is True, False, Probably True or Probably False.

148. All saints are rogues.
 All rogues are politicians.
 So some politicians are saints.

149. If it is cloudy it will rain.
But it is not cloudy.
So it will not rain.

Direction (Qn. No. 150): In the following question, find out which of the figures (A), (B), (C) and (D) can be formed from the pieces given in (X).

150.



-

- (B) 
(D) 

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