

MAHARAJA RANJIT SINGH AFPI**10 JANUARY 2016**

Marks: 400

Time: 120 minutes

ROLL NO.: _____	NAME: _____
SIGNATURE: _____	DATE / TIME: _____

1.	Before attempting the paper carefully read out all the Instructions & Examples given on Side 1 of Answer Sheet (OMR Sheet) supplied separately.
2.	At the start of the examination, please ensure that all pages of your Test booklet are properly printed; your Test booklet is not damaged in any manner and contains 100 questions. In case of any discrepancy the candidate should immediately report the matter to the invigilator for replacement of Test Booklet. No claim in this regard will be entertained at the later stage.
3.	An OMR Answer Sheet is being provided separately along with this Test booklet. Please fill up all relevant entries like Roll Number, Test Booklet Code etc. in the spaces provided on the OMR Answer Sheet and put your signature in the box provided for this purpose.
4.	Make sure to fill the correct Test booklet code on Side 2 of the OMR Answer Sheet. If the space for the Booklet Code is left blank or more than one booklet code is indicated therein, it will be deemed to be an incorrect booklet code & Answer Sheet will not be evaluated. The candidate himself will be solely responsible for all the consequences arising out of any error or omission in writing the test booklet code.
5.	This Test Booklet consists of 9 pages containing 100 questions. Against each question four alternative choices (1), (2), (3), (4) are given, out of which one is correct. Indicate your choice of answer by darkening the suitable circle with BLACK/BLUE ball pen in the OMR Answer Sheet supplied to you separately. Use of Pencil is strictly prohibited. More than one answer indicated against a question will be deemed as incorrect response.
6.	The maximum marks are 400. Each question carries four marks. The duration of the paper will be TWO HOURS. There will be NEGATIVE MARKING. Each right answer will carry four marks and one mark will be deducted for each wrong answer.
7.	Do not fold or make any stray marks on the OMR Answer Sheet. Any stray mark or smudge on the OMR Answer Sheet may be taken as wrong answer. Any damage to OMR Answer Sheet may result in disqualification of the candidate.
8.	On completion of the test, candidate must hand over the Test Booklet and OMR Answer Sheet to the invigilator on duty in the room/hall. You may retain the question booklet.
9.	Use of Mobile phones , calculators and wrist watch etc. are not allowed.
10.	Keep all your belongings outside the Examination hall. Do not retain any paper except the ADMIT CARD.

Directions (questions 1 to 4). In these questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

- | | |
|---|--|
| 1 | scintillating
(1) moving (2) interesting (3) burning (4) glittering |
| 2 | garrulous
(1) unreasonable (2) talkative (3) quarrelsome (4) proud |
| 3 | Fortitude
(1) resignation (2) defiance (3) indifference (4) forbearance |
| 4 | exhilarated
(1) satisfied (2) surprised (3) disappointed (4) overjoyed |

Directions (questions 5 to 7). Choose the word opposite in meaning to the given word

- | | |
|---|---|
| 5 | Virtue
(1) fault (2) vice (3) anger (4) ill-temper |
| 6 | obscure
(1) clear (2) gloomy (3) unpleasant (4) dark |
| 7 | flexible
(1) blunt (2) rigid (3) gentle (4) rough |

Directions (questions 8 – 12). In these questions, a part of sentence is underlined. Below are given alternatives to the underlined part. Choose the correct alternative.

- | | |
|----|--|
| 8 | Loose tea leaves are kept in a <u>tea box</u> .
(1) tin (2) cosy (3) caddy (4) no improvement |
| 9 | Sincere workers do not rest till <u>they have reached</u> perfection in their work.
(1) they had achieved (2) they have achieved
(3) they having reached (4) no improvement |
| 10 | I saw the woman <u>whom you said lived next door</u> .
(1) that you said live next door (2) who you said lived next door
(3) which you said lived next door (4) no improvement |
| 11 | One of her friends had just <u>got down from</u> the bus.
(1) alighted from (2) arrived in (3) landed from (4) no improvement |
| 12 | I have never been <u>hearing from</u> him since he left for America.
(1) have never heard (2) have never been hearing
(3) was never heard (4) no improvement |

Directions (Questions 13 – 16): In these questions, out of the four alternatives, choose the one which can be substituted for the given words/sentences.

- | | |
|----|---|
| 13 | A word or practice that has gone out of use.
(1) obsolete (2) absolute (3) outdated (4) old-fashioned |
| 14 | To talk without respect for something sacred or holy.
(1) rudeness (2) blasphemy (3) vulgarity (4) obscenity |
| 15 | Through which light cannot pass.
(1) dark (2) obscure (3) opaque (4) dull |
| 16 | One who knows everything.
(1) literate (2) scholar (3) omnipotent (4) omniscient |

Directions (Questions 17 – 18): Find the incorrectly spelt word out of the four words given.

- | | |
|----|--|
| 17 | (1) believe (2) grieve (3) decieve (4) relieve |
| 18 | (1) defination (2) determination (3) culmination (4) termination |

Directions (questions 19 – 23). Four alternatives are given for the idiom/phrase in italics in the sentence. Choose the one which best expresses the meaning of the idiom/phrase

- | | |
|----|--|
| 19 | Discipline is <i>on the wane</i> in schools and colleges these days.
(1) declining (2) increasing (3) spreading (4) spiraling |
| 20 | If you give John all your money, you are likely to <i>burn your fingers</i> .
(1) be unhappy (2) be happy (3) suffer (4) be ill |
| 21 | He has <i>made his mark</i> in politics.
(1) ruined his wealth (2) distinguished himself (3) acquired wealth (4) attained notoriety |

22	I <i>ran out</i> of money on my European tour. (1) exhausted my stock of (2) did not have enough (3) lost (4) carried a lot of
23	The robber <i>took to his heels</i> when the police arrived. (1) opened fire (2) hid himself (3) ran off (4) surrendered

Directions (questions 24 - 27). Sentences are given with blanks to be filled in with an appropriate word(s). Choose the correct alternative out of the four

24	The police..... on duty. (1) are (2) is (3) was (4) have
25	I've been awake..... four O ^o clock. (1) for (2) since (3) till (4) until
26	They..... at their parents with respect. (1) stare (2) look (3) peep (4) view
27	There was no..... in railway compartment for additional passengers. (1) place (2) room (3) blank (4) space

Directions (questions 28 - 29). Some of the sentences have errors and some have none. Find out which part (1), (2) or (3) of a sentence has an error. If there is no error, mark your answer as (4)

28	This watch (1) / is superior and (2) / more expensive than that (3) / no error (4) .
29	Neither the famine (1) / or the subsequent fire (2) / was able to destroy the spirit of the people (3) / No error (4) .

Directions (questions 30 - 32). The first and the last parts of the sentence are numbered 1 and 6. The rest of the sentence is split into four parts and named P, Q, R and S. These four parts are not given in their proper order. Read the sentence and find out which of the four combinations is correct.

30	1.If the sovereignty P. of the people and their elected representatives, Q. and the unity R. in the hands S. of a country is not safe. 6. it cannot be safe in any other hands. (1) SRPQ (2) PQRS (3) QSRP (4) RPQS
32	1.At the end of the lecture P. for sparing their valuable time Q. the speaker thanked the audience R. and listening to him S. in coming to the meeting 6. patiently (1) RSPQ (2) QPSR (3) PSRQ (4) SRQP
32	1.No part of this publication may be P. without the written permission Q. reproduced, stored in or transmitted R. of the copyright owner and S. in any form or by any means 6. the publisher of this book (1) QSPR (2) PQRS (3) RPSQ (4) SRQP

Directions (questions 33 - 40). In these questions, you have two brief passages with 4 questions following each passage. Read the passages carefully and choose the best answer out of the four alternatives.

PASSAGE - 1

Cave men who roamed the earth centuries ago must have thought it strange that the moon had many different shapes. Sometimes it appeared as a thin white curve, sometimes as a half circle, and at other times as a huge orange disc. How must they have explained the moon's curious behaviour? Today, of course, we know why our satellite appears to have many shapes.

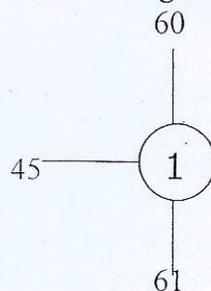
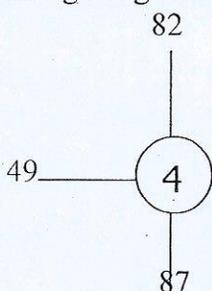
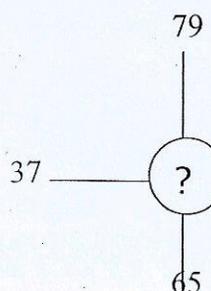
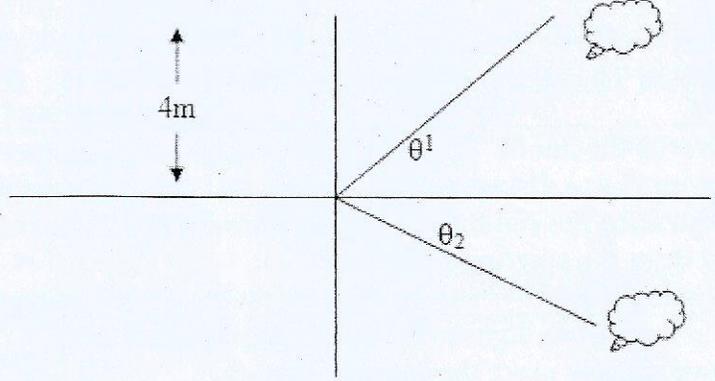
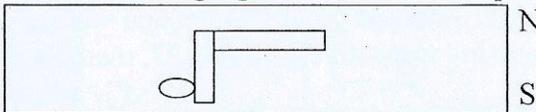
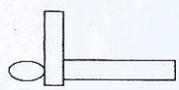
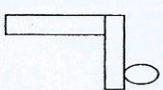
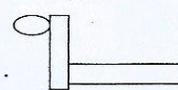
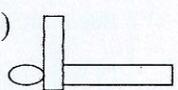
Once a month the moon travels in a complete circle around the earth. And as it moves in its circle it seems to change shape. This is because we on earth see only that section of the moon that catch the sun's light.

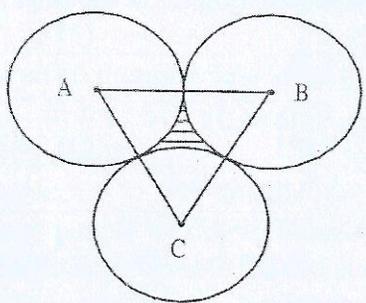
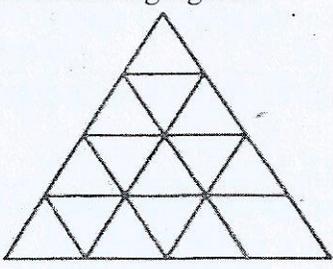
33	“Our satellite” means (1) the earth (2) the sun (3) the moon (4) the cave man
34	“The moon’s curious behaviour” implies (1) roaming the earth (2) catching the sun’s light (3) travelling in a circle around the earth (4) seeming to have many different shapes
35	To the eyes of people on earth (1) only the moon’s shape changes (2) only the moon’s colour changes (3) both the moon’s colour and shape changes (4) neither the moon’s shape nor its colour changes
36	“A thin white curve” means (1) the half moon (2) the new moon (3) the full moon (4) the earth
PASSAGE – 2	
<p>India is chiefly an agricultural land. The cultivation of crops depends on a proper supply of water throughout the year. Since olden times, large parts of our country have suffered from occasional periods of too much rain and those of drought. People have known that if surplus flood water could be stored away for use during the dry season, these problems will be solved.</p> <p>Unfortunately, they had neither the knowledge nor the means to do much in this direction. Whatever little they knew, they tried to put into practice. They dug canals to drain water from perennial rivers. This was heavy and expensive work and practicable over only a small area. Large tanks were excavated and small dams built to hold back floods. But it was not possible to do anything on a countrywide scale.</p>	
37	India’s economy is chiefly (1) socialistic (2) industrial (3) mixed (4) agricultural
38	The term “perennial” means (1) rivers flowing into canals (2) flowing once a year (3) flowing throughout the year (4) flowing during the monsoon
39	Why were the people unable to solve the problem? (1) absence of will power (2) they were indifferent to the problem (3) they lacked knowledge and the means to solve the problem (4) inadequate finance
40	“Excavated” means (1) to fill (2) to make caves (3) to dig (4) to flood

Mathematics

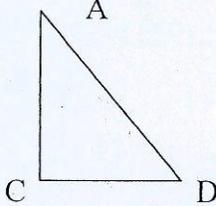
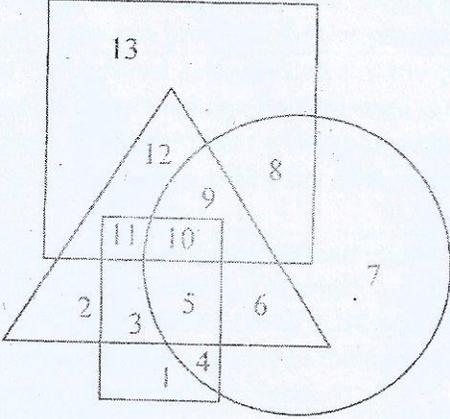
41	<p>If the figure, PQRS is a square, O is centre of the circle. If $RS = 10\sqrt{2}$, then area of shaded region is :</p> <div style="text-align: center;"> </div>
	(1) $90\pi - 90$ (2) $80\pi - 80$ (3) $50\pi - 100$ (4) $100\pi - 100$
42	<p>$\sin\theta(45^\circ + \theta) - \cos(45^\circ - \theta)$ is equal to :</p>
	(1) $2 \cos\theta$ (2) 0 (3) $2 \sin\theta$ (4) 1

43	A sphere and a cube have equal surface areas. The ratio of the volume of the sphere to that of cube is : (1) $\sqrt{\lambda} : \sqrt{6}$ (2) $\sqrt{6} : \sqrt{\lambda}$ (3) $\sqrt{\lambda} : \sqrt{3}$ (4) $\sqrt{3} : \sqrt{\lambda}$
44	Length of the shadow of a person is x when the angle of elevation of the sun is 45° . If the length of the shadow increases by $(\sqrt{3} - 1)x$, then the angle of elevation of the sun should become : (1) 60° (2) 45° (3) 30° (4) 20°
45	If $y = (2^3)(3^2)(5^4)$ and $z = (2^2)(3^2)(5)$ the H.C.F. of y and z is : (1) 360 (2) 180 (3) 90 (4) 35
46	If $x = \sqrt{4 + \sqrt{4 + \sqrt{4 + \dots to \infty}}}$ and x is a natural number, then find the quadratic equation (1) $x^2 + x + 4 = 0$ (2) $x^2 - x - 4 = 0$ (3) $-x^2 - x - 4 = 0$ (4) $-x^2 + 4 - x = 0$
47	If $p(x)$ and $g(x)$ are any two polynomials with $g(x) \neq 0$, then we can find polynomials $q(x)$ and $r(x)$ such that $p(x) = g(x) \cdot q(x) + r(x)$ where $r(x) = 0$ or degree of $r(x) <$ degree of $g(x)$. This result is known as : (1) Euclid's algorithm for division. (2) Division algorithm for polynomials. (3) Multiplication algorithm for polynomials (4) None of these
48	The point (5,0) lies in the direction of : (1) negative y- axis (2) negative x-axis (3) positive y-axis (4) positive x- axis
49	Five persons A, B, C, D and E each having different weights. I. A weighs twice as much as B. II. B weighs four and a half times as much as C. III. C weighs half as much as D. IV. D weighs half as much as E. V. E weighs less than A but more than C. E is lighter in weight than which of the other two : (1) A, B (2) D, C (3) A, C (4) D, B
50	Find the perimeter of a quadrant of a circle of radius 'z'. (1) $\frac{z}{2}(\pi + 4)$ (2) $\frac{z}{2}(\pi - 4)$ (3) $\frac{z}{4}(2\pi - 2)$ (4) $\frac{z}{4}(2\pi + 2)$
51	A student is given three sticks of length 12cm, 6cm and 4cm respectively. He is asked to make a triangle and find the area of the triangle formed, area of the triangle is : (1) 36cm (2) 12cm (3) 24cm (4) Not possible
52	Jackson walks 10 metres towards the South. Turning to the left, he walks 20 metres and then moves to his right. After moving a distance of 20 metres, he turns to the right and walks 20 metres. Finally, he turns to the right and moves a distance of 10 metres. How far and in which direction he from the starting point? (1) 10 metres North (2) 20 metres South (3) 20 metres North (4) 10 metres South
53	In the following question given below, two signs in the equation given have been interchanged. Find out these two signs to make the equation correct. $15 \times 8 \div 60 - 6 + 25 = 135$ (1) $-$ and $+$ (2) $-$ and \div (3) \times and \div (4) \times and $+$
54	The mean age of combined group of men and women is 30 years. If the mean of the age of men and women are respectively 32 and 27, then the percentage of women in the group is : (1) 30 (2) 20 (3) 50 (4) 40
55	An angle is 20° more than three times the given angle. If the two angles are supplementary, then the angles are : (1) $\frac{70^\circ}{4}$, $\frac{290^\circ}{4}$ (2) 40° , 140° (3) 60° , 120° (4) 50° , 100°

56	<p>Find the missing character from among the given alternatives.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>60</p>  </div> <div style="text-align: center;"> <p>82</p>  </div> <div style="text-align: center;"> <p>79</p>  </div> </div> <p>(1) 2 (2) 3 (3) 5 (4) 6</p>
57	<p>The number of integral values of x so that $2^{2x^2-7x+5} = 1$, is :</p> <p>(1) 0 (2) 1 (3) 2 (4) 4</p>
58	<p>Which of the following letter/number is in the 6th position to the right of the 12th letter/number from the right end? 2HB1MI3D70L5G9QR8NA6PJF4EKC</p> <p>(1) L (2) 0 (3) J (4) F</p>
59	<p>If $\sin\theta$ and $\cos\theta$ are the roots of the equation $ax^2 - bx + c$, then a, b, c satisfy the relation :</p> <p>(1) $b^2 - a^2 = 2ac$ (2) $a^2 - b^2 = 2ac$ (3) $a^2 + b^2 = c^2$ (4) $a^2 + b^2 = 2ac$</p>
60	<p>Find the next term in the series. 2, 3, 10, 15, 26,</p> <p>(1) 37 (2) 33 (3) 35 (4) 34</p>
61	<p>The parallel sides of a trapezoid are 3cm and 9cm. The non parallel sides are 4cm and 6cm. A line parallel to the base divides the trapezoid into two trapezoids of equal perimeters. The ratio in which each of the non parallel sides is divided is :</p> <p>(1) 4:5 (2) 3:2 (3) 4:1 (4) 3:1</p>
62	<p>p, q are zeroes of $dx^2 - 5x + e$. Find the value of d and e if $p+q = p \cdot q = 10$</p> <p>(1) $d = 2; e = 1$ (2) $d = \frac{1}{2}; e = 5$ (3) $d = \frac{1}{2}; e = -5$ (4) $d = 1; e = 2$</p>
63	<p>If a man standing on a platform, 4 meters above the surface of a lake observes a cloud and its reflection in the lake then the angle of elevation of the cloud is equal to the angle of depression of its reflection.</p> <p>(1) False, $\theta_1 \neq \theta_2$ (2) False, $\theta = 0^\circ; \theta = 45^\circ$ (3) True, $\theta_1 = \theta_2$ (4) True, $\theta_1 \neq \theta_2$</p> 
64	<p>What will be the mirror image of the following figure if the mirror is placed as NS?</p>  <p>(a)  (2)  (3)  (4) </p>

65	Two parallel lines touch the circle at points A and B respectively. If area of the circle is 25π cm^2 , then AB is equal to : (1) 5cm (2) 8cm (3) 10cm (4) 25cm												
66	If β and $\frac{1}{\beta}$ are zeroes of polynomial $4x^2 - 2x + (k-4)$. Find the value of K. (1) $k=2$ (2) $k=4$ (3) $k=6$ (4) $k=8$												
67	If B_1, B_2 and B_3 denotes the area of three adjacent faces of a cuboid, then its volume is: (1) $B_1 B_2 B_3$ (2) $2B_1 B_2 B_3$ (3) $\sqrt{B_1 B_2 B_3}$ (4) $\sqrt[3]{B_1 B_2 B_3}$												
68	'Anand's' daughter Karishma said to Lalita "Your mother Veena is the younger sister of my father, who is the second child of Bharat." How is Bharat related to Lalita? (1) Father (2) Grandfather (3) Uncle (4) Brother												
69	ABC is an equilateral triangle. Find the area of the shaded region if the radius of each of the circle is 2cm :  (1) $2(2\sqrt{3} - \pi)\text{cm}^2$ (2) $2(3\sqrt{3} - \pi)\text{cm}^2$ (3) $2(4\sqrt{3} - \pi)\text{cm}^2$ (4) $2(5\sqrt{3} - \pi)\text{cm}^2$												
70	The remainder obtained when the polynomial $p(x)$ is divided by $(m - nx)$ is : (1) $p\left(\frac{-m}{n}\right)$ (2) $p\left(\frac{n}{m}\right)$ (3) $p\left(\frac{m}{n}\right)$ (4) $p\left(\frac{-n}{m}\right)$												
71	The point $(k + 1; 1)$, $(2k + 1; 3)$ and $(2k + 2; 2k)$ are collinear if : (1) $k = -1, 2$ (2) $k = \frac{1}{2}, 2$ (3) $k = 2, 1$ (4) $k = -\frac{1}{2}, 2$												
72	The year next to 1981 will have the same calendar as that of year 1981 (1) 1983 (2) 1987 (3) 1988 (4) 1986												
73	Mean of n numbers x_1, x_2, \dots, x_n is m . If x_n is replaced by x , then new mean is : (1) $m - x_n + x$ (2) $\frac{nm - x_n + x}{n}$ (3) $\frac{(n-1)m + x}{n}$ (4) $\frac{m - x_n + x}{n}$												
74	Select the missing number (?) out of the following options given. (1) 25 (2) 26 (3) 27 (4) 28 <table border="1" data-bbox="1015 1388 1364 1545"> <tbody> <tr> <td>3</td> <td>6</td> <td>5</td> </tr> <tr> <td>7</td> <td>4</td> <td>8</td> </tr> <tr> <td>6</td> <td>7</td> <td>13</td> </tr> <tr> <td>15</td> <td>17</td> <td>?</td> </tr> </tbody> </table>	3	6	5	7	4	8	6	7	13	15	17	?
3	6	5											
7	4	8											
6	7	13											
15	17	?											
75	The radii of two cylinder are in the ratio 2 : 3 and their heights are in the ratio 5 : 3. The ratio of their volumes is : (1) 3 : 4 (2) 5 : 3 (3) 27 : 20 (4) 20 : 27												
76	How many triangles are there in the following figure?  (1) 27 (2) 16 (3) 17 (4) 25												

77	Express $\sqrt[3]{\frac{64}{a^5b^6c^4}}$ in the simplest form: (1) $\frac{4}{ab^2c} \sqrt[3]{\frac{1}{a^2c}}$ (2) $\frac{16}{ab^2c} \sqrt[3]{\frac{4}{a^2c}}$ (3) $\frac{4}{abc} \sqrt[3]{\frac{27}{ab^2bc}}$ (4) $4 \sqrt[3]{\frac{6}{a^5b^6c^4}}$
78	Side AC of right triangle ABC is divided into 10 equal parts. Nine line segments parallel to BC are drawn from the points of divisions. If BC=20 cm, then the sum of lengths of the nine line segments is (1) 25 cm (2) 35 cm (3) 45 cm (4) 90 cm
79	Find the product $(a - \frac{1}{a})(a + \frac{1}{a})(a^2 + \frac{1}{a^2})(a^4 + \frac{1}{a^4})$: (1) $a^4 - \frac{1}{a^4}$ (2) $a^4 + \frac{1}{a^4}$ (3) $a^8 + \frac{1}{a^8}$ (4) $a^8 - \frac{1}{a^8}$
80	4 bells toll together at 9.00am. They toll after 7, 8, 11 and 12 seconds respectively. How many times will they toll together again in the next 3 hours. (1) 3 (2) 4 (3) 5 (4) 6
81	The first term of an AP is unity and common difference is 5. Which of the following will be a term of this AP. (1) 7880 (2) 7881 (3) 7890 (4) 7891
82	Equation of line $L_1 : a_1x + b_1y + c_1 = 0$ Equation of line $L_2 : a_2x + b_2y + c_2 = 0$ Equation of line $L_3 : (a_1x + b_1y + c_1) + (a_2x + b_2y + c_2) = 0$ If $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$, then line L_3 is : (1) Parallel to line L_1 (2) Parallel to line L_2 (3) is coincident with L_2 or L_1 (4) None of these
83	If in a code language HRITHIK is coded as 8992892, then in the same language ABHISHEK will be coded as. (1) 12892852 (2) 12892752 (3) 12891752 (4) 12891852
84	If the points (a, 0), (0, b) and (1, 1) are collinear then which of the following is true? (1) $\frac{1}{a} + \frac{1}{b} = 2$ (2) $\frac{1}{a} - \frac{1}{b} = 1$ (3) $\frac{1}{a} + \frac{1}{b} = 1$ (4) $\frac{1}{a} - \frac{1}{b} = 2$
85	A quadratic polynomial whose one zero is 6 and sum of zeroes is 0 is : (1) $x^2 - 6x + 2$ (2) $x^2 - 36$ (3) $x^2 - 6$ (4) None of these
86	Simplify $\sqrt[5]{\sqrt[4]{(2^4)^3}} - 5\sqrt[5]{8} + 2\sqrt[5]{\sqrt[4]{(2^3)^4}}$ (1) 1 (2) $-2\sqrt[5]{8}$ (3) -2 (4) $2\sqrt[5]{16}$
87	How many pairs of letters are there in the word 'JOURNALISM' which have as many letters between them (from both sides) as there are in the alphabets? (1) 2 (2) 3 (3) 1 (4) 4
88	A two digit number is J times the sum of its digits. The number formed by interchanging the digit is the sum of digits multiplied by : (1) $9 - j$ (2) $11 - j$ (3) $j - 1$ (4) $j + 1$
89	If the numbers from 5 to 85 which are exactly divisible by 5 are arranged in descending order, which would come at the eleventh place? (1) 35 (2) 45 (3) 50 (4) 30
90	A pendulum swings through an angle of 60° and describes an arc 8.8 cm length. Find the length of the pendulum. (1) 8.0 cm (2) 8.2 cm (3) 8.4 cm (4) 8.6 cm
91	A number $10a + b$ is multiplied by another number $10x + y$ and the result as $100p + 10q + r$, where $r = 2b$, $q = 2(a + b)$ and $p = 2a$; $a, b < 5$, $q \neq 0$. The value of $10x + y$ may be : (1) 11 (2) 13 (3) 31 (4) 22
92	The second term of an AP is $(g - h)$ and 5^{th} terms is $(g + h)$ then its first term is : (1) $g - \frac{1}{3}h$ (2) $g - \frac{2}{3}h$ (3) $g - \frac{4}{3}h$ (4) $g - \frac{5}{3}h$

93	<p>In a right triangle shown below, $AB + AD = BC + CD$, if $AB = Y$, $BC = a$ and $CD = d$, then y equal :</p> <p>(1) $\frac{ad}{2a+d}$ (2) $d - a$ (3) $a + d$ (4) $\frac{1a}{2}$</p>	
94	<p>Which term comes next in the series? YEB, WFD, UHG, SKI, ?</p> <p>(1) QOL (2) QGL (3) TOL (4) SKI</p>	
95	<p>If mean of 1, 2, 3 ----- n is $\frac{6n}{11}$, then n is :</p> <p>(1) 10 (2) 12 (3) 11 (4) 13</p>	
96	<p>If $S_n = nP + \frac{n(n-1)}{2} Q$, where S_n denotes the sum of the first n terms of an AP, then common difference of the AP is :</p> <p>(1) $P + Q$ (2) $2P + 3Q$ (3) $2Q$ (4) Q</p>	
97	<p>On plotting the points $O(0,0)$; $A(3,0)$ $B(3,4)$; $C(0,4)$ and joining OA, OB, AB, BC and CO which of the following figure is obtained?</p> <p>(1) Square (2) Rectangle (3) Trapezium (4) Rhombus</p>	
98	<p>Figure below depicts an area where people belong to four different categories. The triangle depicts Rich people, the Square depicts Educated, the circle stands for Social Activists and the rectangle for Players. Each part is numbered. Your task is to study the figure and answer the question that follows:</p>  <p>Which number depicts Rich educated player but not social activists?</p> <p>(1) 10 (2) 9 (3) 5 (4) 11</p>	
99	<p>If $A = (b^2, 2b)$ and $B = (\frac{1}{b^2}, -\frac{2}{b})$ and $P = (1, 0)$ then $\frac{1}{PA} + \frac{1}{PB} =$</p> <p>(1) 2 (2) 1 (3) 0 (4) $\frac{1}{3}$</p>	
100	<p>If $\sin\theta_1 + \sin\theta_2 + \sin\theta_3 = 3$, $0^\circ < \theta_1, \theta_2, \theta_3 \leq 90^\circ$ then $\cos\theta_1 + \cos\theta_2 + \cos\theta_3 =$</p> <p>(1) 3 (2) 1 (3) 0 (4) 2</p>	