

XAT Paper-2014 (All Sets)

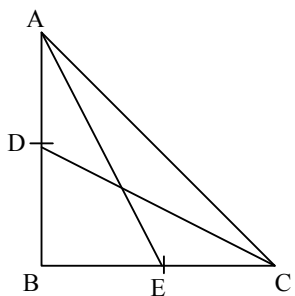
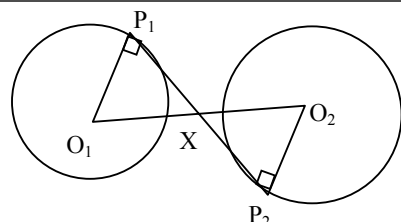
Key & Explanations

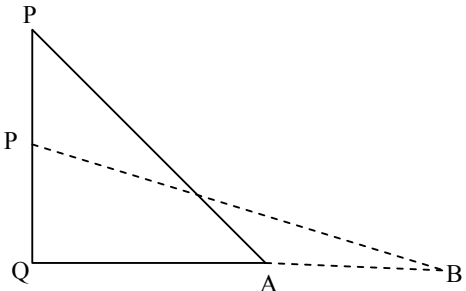
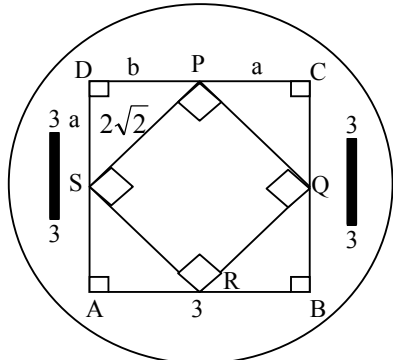
Set B	Set A	Set C	Set D	Key	Explanations
1.	9.	12.	12.	B	Line 1 will be the opening line as it mentions the mechanism of electroweak symmetry as one of the most important issues in Particle physics. Line 4 will form a logical pair as the SUSY further elaborates the term (most important issue mentioned in Line 1. Line 3 refers to the “ <i>fundamental Higgs doublet</i> ” (Higgs sector consists of 2 chiral superfields of Higgs doublets”). Line 5 refers to the minimal SUSY further describes the Higgs sector which consists of (H1 and H2 with opposite hypercharges) Line 2 will follow as it further justifies the function of SUSY (required to give masses for all quarks.....gauge anomaly). So, the correct sequence will be 14352.
2.	10.	13.	13.	E	Line 1 is the opening line as it refers to the term “no official collection of Shakespeare’s play appeared until his death. Line 4 refers to Shakespeare’s collection of sonnets that appeared before 1609 just before his death. Line 5&3 will form a logical pair as the term “quarots” is further elaborated in Line 3. Also, line 2 justifies the term “quartos” (were probably based on actors memories of the play). So the correct sequence will be 14532
3.	11.	9.	1.	B	Since the word “as” is used, so synonyms or the same tone options will be appropriate. In option 1, Blithely means <i>without thought or regard; carefree; heedless or joyous</i> ; Undesirable means <i>not likeable</i> . As both the options are contrastive in nature, so this option will be inappropriate. In option 2, Cavalierly means <i>to be arrogant or haughty, disdainful, and Apocryphal</i> means of doubtful authorship. Vehemently means <i>characterized by rancor or anger</i> ; So, the most appropriate is B
4.	12.	10.	2.	A	The use of “not just” is suggestive of the fact contrastive option will be the most appropriate. In option 1 “ retribution ” means <i>requital according to merits or deserts, especially for evil or retaliation</i> . Camaraderie means <i>comradeship</i> . Guilt means <i>the fact or state of having committed a crime, violation, or wrong, especially against moral offence</i> . However, crime and religion do not fit in the passage. In option E “ recrimination is a <i>countercharge</i> and insight is to a <i>deep understanding of a concept</i> ”. So the most appropriate option will be A
5.	13.	11.	3.	B	Separate studies for the both types of excitations and now the last line will focus on when these two theories related to their combined effect on atomic nuclei.
6.	3.	1.	4.	C	Precise instead of exact will be more appropriate with “ techniques ” “on the basis of which, the appropriate options will be C&D. Since, we use “ increase ” for <i>numbers/numerals and improvement with qualities</i> , so Improvement is the right word that goes with notions. SO the correct option is C.
7.	4.	2.	5.	A	Out of such as ” and “like ”, the former is preferred because “ <i>such as</i> ” is used for a particular characteristic and <i>like</i> “is used for the process of execution”. Since the word “disorder” has been mentioned, so “such as” will be more appropriate. So options A&E are left. Since it cannot be “the host of emotional and behavioural disorders, so the appropriate option is A.
8.	5.	3.	6.	E	Though “but” and yet are counter indicators, a small difference still exists. While “ yet ” “is used in situations where despite the likelihood, the event doesn’t occur and vice versa. On the contrary, “ but ” “is used to suggest simple counter opinions. In the question “ but ” will be preferred over “ yet ”, so options A&E are left. Since, this subsumption relation is specific, article “the” will “be used instead of “a”. SO the correct option will be E
9.	6.	4.	7.	E	
10.	7.	5.	8.	C	The media paid high attention on ‘char dham’ inspite of the fact the other areas were also badly affected. Hence the answer is option 3
11.	8.	6.	9.	A	The given statement is correct. ‘OLDER’ cannot come as no two things are compared and ‘not only ... is followed by ...’ but also’..
12.	1.	7.	10.	B	Statement 1 is an author’s own perception regarding people achieving greatness by a few in their chosen field therefore it is an assumption and it is true also as

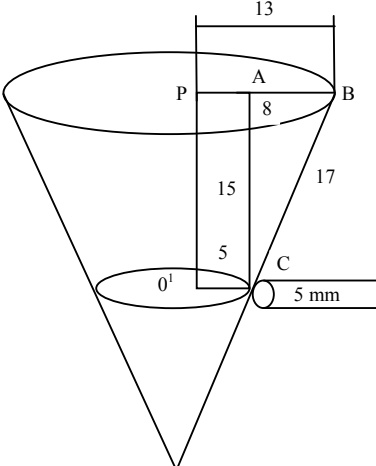
					explained further. Statement 2 is a question statement. 4 is a reason and the clue word is 'because'. 7 is a conclusion.
13.	2.	8.	11.	D	All the statements are inductive inferences as all of them are based on 'a' real incidence.
14.	20.	26.	23.	B	The author says that army like governments is inexpedient and there can be so many objections can be raised against so many them. Hence answer is option 2
15.	21.	27.	24.	D	After reading the last few lines author emphasizes that government and hence legislators can deliver justice or give fair treatment to a minority if decisions are conscientious. Hence answer is option 4
16.	22.	28.	25.	A	In the last few lines the author says 'we should be men first and subjects afterwards'.. This refers to option A as the best.
17.	26.	20.	14.	D	As per the lines from the first Para '... the fact that most beer Clearly something is wrong somewhere... points out that the answer is option 4.
18.	27.	21.	15.	B	The author has given thy example of 'Rutherford' experiment is to prove that incomparable things should not be compared.
19.	28.	22.	16.	E	None of the options fall under the category of psychophysical goods except for a concrete 'a little' as it is not 'concrete', the perception of which may or may not change after increasing or decreasing the advertising budget. Hence answer is option 5.
20.	23.	14.	17.	D	The passage says that 'probability lacks consistency'. There is a gap between 'probability and 'experience' as per the passage and given line. Therefore answer is option 4
21.	24.	15.	18.	E	The author says that 'we are confronted by two tasks and he goes on explaining these two tasks further in the passage. Hence the both the task are required to test the theory.
22.	25.	16.	19.	C	From the first few lines and last few lines from the passage it can be inferred that 'theory may have been inaccurately applied in other subjects'.
23.	14.	17.	20.	D	As per the author one should undertake the career out of love for that particular area/work and not for the money/remuneration. 'Betting in a casino' is solely for sake of making money out of greed and that is not desirable as per the author. Therefore author will not agree with the option 4.
24.	15.	18.	21.	C	In the entire passage the author is talking about the way one should pick up/choose the career/work and it should not be solely based on wages one will get or if it is a lucrative opportunity. On the contrary the choice of career/work should be as per the liking/love for that work/job. Finally he wants to prove that work is of prime importance and not the money involved. Therefore the best tile will be option 3 as when 'worship' takes the front seat then other factors such as money will take the back seat.
25.	16.	19.	22.	B	The author in the lines say that 'we are narrow when it comes to searching for truth instead we keep on moving around the perceptions, which we consider truth where there is none. We consider only the means and do not worry or think about the results. Therefore it should be realization of truth above all rather than running after perishables. Hence the answer is option 2.
26.	17.	23.	26.	E	The passage highlights that it is a mistake to think that consumers' preferences can be changed as most of the business/ choice models think instead it is independent of models and more related to desires of the consumers and they will try to find the desires in the products that they buy. Out of all the options this is possible in the option 5.
27.	18.	24.	27.	D	The given lines points out option 4 as the passage says that consumer want to associated with the desire attached to a product while buying that product and this is explicitly shown in the option 4.
28.	19.	25.	28.	E	As the passage also suggests that consumers go by their own desires and hope for an altered state of being involving an altered set of social relationships and the lines in the given question are also converging to the same ideas as the key words are 'personalized narratives', 'metamorphic and metonymic references' etc to go against the 'dominant' fashion norms in their social environment or consumer culture at large. The one of prime reason for doing this is to put across the want for recognition etc.
29.	36.	33.	36.	B	If the company launches the product

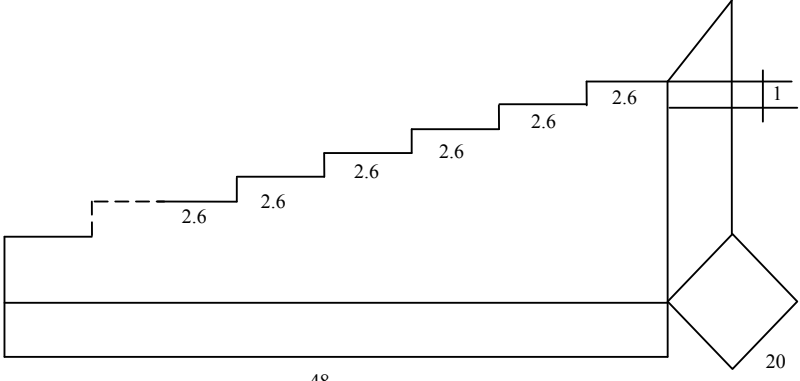
					<p>the cost of launching the product = 50 crores</p> <p>there are 50% chance of success hence 50 % of 100 crore = 50 crore and 50% of chance of unsuccessful sales = 50% of 20 crore = 10</p> <p>hence profit = - 60 – 50 = 10 crores</p>
30.	37.	34.	37.	*	<p>The product whose results are favorable has success rate = 80%</p> <p>Cost of product = launching+ marketing = Total cost = 50 + 10 crores</p> <p>Sales = successful + unsuccessful = 80% * 100 + 20 % *20 = 84 crore</p> <p>Profit = 84 – 60 = 24 crores</p>
31.	38.	35.	38.	B	<p>Probability of product failure = failure probability when product is favorable result but fails + probability when unfavorable and fails</p> <p>= 0.70*0.20 + 0.30*0.70 = 0.14 + 0.21 = 0.35</p>
32.	39.	36.	39.	D	<p>Despite unfavorable :the profit earned by company can be =</p> <p>Cost of product = launching+ marketing = 60 crores</p> <p>Now the product fails in the test 30% chance of success is still there</p> <p>sales = 30% of 100 crore (successful) + 70 % of 20 crore (unsuccessful) = 30 + 14 = 44 crores</p> <p>hence the profit = 44 -60 = -16 crores</p>
33.	29.	37.	33.	B	<p>The prime motive is to maximize the prize money .Since maximum prize money is fixed for International level. So Ms. Banerjee, keeping in mind the probability of winning the competition, will pick up those students who have hit the cent percent score maximum number of times hence rising up the probability of winning. Now, we can observe that Students 2 , 6 , 8 and 14 are the top four students hitting maximum cent percent score 15 , 10 , 12 and 20 times respectively . So looking at the options the team of top 3 is formed, i.e 2,8 and 14.</p>
34.	30.	38.	34.	B	<p>Now for district level , Since winning probability is on higher side . Ms. Banerjee will choose those students who have maintained a good average while the tests. Observing the average we can see that students 1,4,11 and 14 , All have hit the average of 70. So a team of three should be formed from the above four mentioned. So looking up from the options students 1, 4 and 11 are selected.</p>
35.	31.	39.	35.	D	<p>- Now national team has to be selected after the selection of International team i.e 2, 8 and 14 are already selected, Now the students who have hit the cent percent score maximum number of times after the international team will be selected,. Students 1 ,3,6 and 12 have hit the cent percent 7,8,10 and 6 times respectively. So the team of top 3 is formed from the above mentioned, I.e 3,6 and 1 are selected.</p>
36.	32.	29.	29.	A	<p>As the issue is of interpretation of work of the anthropologists and same uncertainty is there in predicting the position of the electrons. Hence the answer is option 1.</p>
37.	33.	30.	30.	A	<p>The author assumes that money is a great motivator and to weaken we have to hit this assumption. This is clearly given in the option 1.</p>
38.	34.	31.	31.	E	<p>The curve will be of L shape as after certain number of cups of coffee, as given</p>

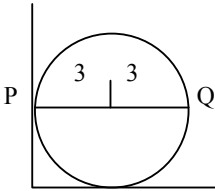
					in the passage, there will not be any effect on the rate of risk of suicide.
39.	35.	32.	32.	C	As we know that by statements $F > A > G$; $D > B / E$; $I > C$ The best position for girish is when all others than Faneesh and Ashok finish after girish Hence the answer is option 3
40.	46.	43.	50.	D	As he has been his mentor in his childhood days and Balwant is generous by nature. Balwant is not so active in is business and his son is not so interested in a family business. When he got admission in MBA, Balwant was very happy. So it is highly likely that he should talk to Balwant regarding the issue.
41.	47.	44.	51.	C	This seems to be the middle path as this is going to be win-win situation for all the parties concerned.
42.	48.	45.	52.	C	The first person to benefit from the Bigmart is Consumer because ethically it is correct. The consumer should be benefitted from the firm. The second are the farmers because they are dealing with them The Third will be the retailers because they are competitors of Bigmart and they will be in least focus. Ascending order becomes...the least profiting first retailer farmers consumers
43.	49.	46.	47.	A	The steps which should not be taken by Ram is to produce quick –quick because: 1. Although the demand for quick-quick is increasing; but we don't know the percentage composition of sales 2. There are already quality issues in the product , it should be solved first before producing it
44.	40.	47.	48.	E	Rocket Singh being head of sales should look for improving brand image which cannot be solved by 1. Launch one more product 2. Stop production 3. Media awareness is good but finding the reason for customers miffed with products by creating a research study for their dissatisfaction is more important hence the answer should be option 5
45.	41.	48.	49.	C	Best course of action for affected managers are to discuss the issues they face and resolve them ; which is mentioned in option 3 only
46.	42.	49.	40.	C	After the analyses of 3 reports; As the data is not published for other countries and the reports are selective on publishing reports . hence the answer is option C
47.	50.	50.	41.	C	The only reason for seemingly divergent ranks because while google may be an important player in the adroid market in the other countries apart from US
48.	51.	51.	42.	E	Option A is wrong because the Motorola could have paid at other countries also . Option B & C are wrong because there is no mention of samsung in the report option D is wrong as sales have not been talked about anywhere . that's why answer should be E
49.	52.	52.	43.	E	
50.	43.	40.	44.	B	As per given in the question the recruitment of consultant is not fixable , hence it should be the last decision taken by Ajay ; Hence the appropriate step of sequence of decision = 4 3 2 1 5
51.	44.	41.	45.	E	The best way to discuss the solutions in open house so that the right solution should emerge and emerge democratically. hence the answer is option E
52.	45.	42.	46.	B	Doing nothing should not be taken whereas infuse fresh thinking by hiring outsiders should be the least concerned ; hence the best possible sequence should be B
53.	53.	59.	61.	A	$S = \frac{\alpha + \omega}{\tau + \rho \times \omega}$ As all parameters are positive. As the value function is multiple function in numerator and addition function in numerator hence the value of S will increase with the increase of value Moreover it can be further re checked by assuming values .
54.	54.	60.	62.	D	Grade $A \geq 90$; Whereas Grade B = 87 to 89 ; If ramesh is scoring 70 instead of 97 = hence the change of 27 marks in one subject , creating a change of Grade from A to B which mean a overall change in average by 3 i.e (minimum of grade A – grade B 90- 87) Hence the number of Subjects should be = $27 / 3 = 9$. Hence the answer is option D

55.	55.	53.	63.	A	<p>$ax^3 + bx^2 + cx + d$, intersects at $x = 1, x = -1$ Hence at $x = 1, -1, ax^3 + bx^2 + cx + d = 0$</p> <p>Put $x = 1, a + b + c + d = 0$ -----(1)</p> <p>Put $x = -1, -a + b - c + d = 0$ -----(2)</p> <p>Put $y = 2$ that means at $x = 0, y = 2$ but that is not the third root.</p> <p>at $x = 0; a(0)^3 + b(0)^2 + c(0) + d = 2$</p> <p style="text-align: right;">$d = 2$ -----(3)</p> <p>Hence using (1), (2), (3)</p> <p>$2b + 4 = 0$</p> <p>$b = -2$, hence the answer is option A.</p>
56.	61.	54.	58.	A	<p>As per the question the natural numbers are $x, y, x+y, x-y$</p> <p>Using statement 1 alone; As all the numbers are prime hence either x or y has to be 2 because otherwise $x+y$ cannot be prime</p> <p>now if x is 2 then $x-y$ is not possible as prime; hence $y = 2$ and numbers $x-2, x, x+2$ (substituting value of y) will be in prime as well as in series, hence the only possibility will be 2 3 5 7.</p> <p>Whereas using statement 2 answer cannot be found out.</p> <p>Hence the answer is option A</p>
57.	62.	55.	59.	E	<p>ABC is a right angle triangle. D and E are mid points of AB and BC.</p>  <p>As it is not given that which angle is 90°. So without it we cannot find the value of AC. Hence the statement III is compulsory.</p> <p>Whereas using statement I and statement II alone we cannot find the value of AC. But using all the three statements. We can find value of $AB^2 + BC^2$; Hence the value of $AC^2 = AB^2 + BC^2$ can be found. (By Pythagoras theorem)</p>
58.	63.	61.	60.	C	 <p>Given that $O_1P_1 = 3, O_2P_2 = 8, O_1X = 5$ units.</p> <p>In $\triangle O_1XP_1 \Rightarrow P_1X = \sqrt{(O_1X)^2 - (O_1P_1)^2} = \sqrt{25 - 9} = \sqrt{16} = 4$</p> <p>As $\triangle O_1P_1X \sim \triangle O_2P_2X$</p> $\frac{O_1P_1}{P_1X} = \frac{O_2P_2}{XP_2} \Rightarrow \frac{3}{4} = \frac{8}{XP_2} \Rightarrow XP_2 = \frac{8 \times 4}{3} = \frac{32}{3} \approx 10.66$ <p>Total distance $P_1P_2 \Rightarrow XP_2 + P_1X \Rightarrow 10.66 + 4 \Rightarrow 14.66$ units. Hence Answer is option C.</p>
59.	56.	62.	53.	A	<p>The numbers $x, 17, 3x-y^2-2, 3x+y^2-30$ are in A.P; and one of the term is odd i.e 17 and increasing sequence,</p> <p>Hence either the common difference is odd or even</p> <p>If common difference is odd, hence two terms are odd and two terms will be even; hence sum has to be even and should be divisible by 2</p> <p>If common difference is even, hence all the terms are odd; hence sum has to be even and should be divisible by 2</p>
60.	57.	63.	54.	B	<p>By Simple property of triangle sum of two sides should be $>$ third side and the difference of two sides is $<$ third side</p> <p>In triangle PQR; QS should be $17 - 5 > 12$</p> <p>In triangle QRS QS should be $< 9+4 = 14$</p>

					Hence answer is option B
61.	58.	56.	55.	B	$ x+7 + x-8 = 16$ Taking +ve and -ve of values of mode = 16 $2x - 1 = 16$; $x = +8.5$ Taking -ve values = $-2x + 1 = 16$; $x = -7.5$ Sum of possible values of $x = 8.5 - 7.5 = 1$
62.	59.	57.	56.	E	 <p>Let length of Ladder is $PA = 30\text{m}$. $PQ \Rightarrow 26\text{m}$. Hence the Length of $QA \rightarrow$ Distance of ladder boot from wall \Rightarrow In ΔPQA Right Angled at Q.</p> $QA = \sqrt{30^2 - 26^2} = \sqrt{900 - 676} = \sqrt{224}$ is 15m . <p>Hence Angle $PAQ \Rightarrow \cos^{-1} \left(\frac{QA}{PA} \right) = \cos^{-1} \left(\frac{15}{30} \right) \Rightarrow 60^\circ$</p> $\angle PBQ = \frac{1}{2} \angle PAQ = 30^\circ$ <p>As Length of $PB = PA = 30\text{m}$.</p> $\text{Length of } QB = PB \cos 30^\circ = 30 \times \frac{\sqrt{3}}{2} \Rightarrow 25.98$ <p>Hence Length of $AB = 25.98 - 15 \Rightarrow 10.98 \approx 11$.</p>
63.	60.	58.	57.	C	<p>Let the smallest initial Number = x.</p> <p>Let sequence of operation Represented by AM (Amitabh) and (Sashi)</p> <p><u>Step operation</u></p> $AM = 2x$ $SA = 2x + 50$ $AM = 4x + 100$ $SA = 4x + 150$ $AM = 8x + 300$ $SA = 8x + 350$ $AM = 16x + 700$ $SA = 16x + 750 \leftarrow$ Hence SA should lose that means. $16x + 750 > 999$ $16x + 750 > 999$ (for lowest possible) $16x + 750 > 249$ $x > \frac{249}{16} \Rightarrow$ taking minimum possible. $x > 15$. Hence $x = 16$ And sum of digit should be 7
64.	64.	70.	72.	D	

					<p>The figure of the question will be as shown above S_1 is the outer square of area 9 units. Hence its side will be 3 units S_2 is the inner square of area 8 units. Hence its side is $2\sqrt{2}$ units. \therefore In ΔPDS $b^2 + a^2 = 8$ $b^2 + (3 - b)^2 = 8$ $b^2 + 9 + b^2 - 6b = 8$ $2b^2 - 6b + 1 = 0$ $b = \frac{6 \pm \sqrt{36 - 8}}{4}$ $= \frac{6 \pm \sqrt{28}}{4} = \frac{3 \pm \sqrt{7}}{2}$ $\therefore a = 3 - b = 3 - \frac{3 + \sqrt{7}}{2} = \frac{6 - 3 - \sqrt{7}}{2} = \frac{3 - \sqrt{7}}{2}$ $\therefore \frac{b}{a} = \frac{\frac{3 + \sqrt{7}}{2}}{\frac{3 - \sqrt{7}}{2}} = \frac{3 + \sqrt{7}}{3 - \sqrt{7}} \approx 15.9$ Hence option D is the answer.</p>
65.	65.	71.	73.	D	 <p>The total volume discharged by the pipe = volume of Frustum Formed As it is given that point of contact is 17cm alongside and 15cm from the base. Hence AB $\Rightarrow \sqrt{17^2 - 15^2} = \sqrt{64} = 8\text{cm}$ If AB = 8 then OA = O'C = 13 - 8 = 5cm Volume of Frustum = volume discharged $\frac{1}{3} \times M \times (13^2 + 5^2 + 13 \times 5) = M \times \left(\frac{5}{100}\right)^2 \times \text{Minute for discharge (T)}$ $T \text{ mins.} = \frac{259}{50} = 5.1 \text{ minutes.}$</p>
66.	66.	64.	74.	C	<p>Probability of being both red = $5/16$ That means both Bags give red balls. Probability of being both red = Probability of red from 1st \times Probability of red from 2nd $\frac{5}{16} = \frac{5}{8} \times \frac{1}{2} \rightarrow$ only possible as probability cannot be 1 or > 1 (as given in the question that each bag has marbles of both colors) $\frac{5}{8} \leftarrow$ probability of red ball from 1st bag</p>

					<p>Probability of Blue Ball from 1st bag = $1 - \frac{3}{8} = \frac{5}{8}$</p> <p>Similarly probability of red ball from 2nd bag = $\frac{1}{2}$</p> <p>probability of blue ball from 2nd bag = $1 - \frac{1}{2} = \frac{1}{2}$</p> <p>Hence probability of both blue $\Rightarrow \frac{5}{8} \times \frac{1}{2} = \frac{5}{16}$</p>
67.	72.	65.	69.	D	<p>$\sum_{n=1}^{13} \frac{1}{n} \Rightarrow \frac{x}{13!}$</p> <p>Expanding $\frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{13} = \frac{x}{13!}$</p> <p>$13! + \frac{13!}{2} + \frac{13!}{3} + \dots + \frac{13!}{13} = \frac{x}{13!}$</p> <p>When x is divided by 11</p> <p>That means $\frac{13! + \frac{13!}{2} + \frac{13!}{3} + \dots + \frac{13!}{13}}{11}$</p> <p>All quantity have multiple of 11 except $\frac{13!}{11}$</p> <p>So $\frac{13!}{11} + \frac{13!}{2 \times 11} + \dots + \frac{13!}{13 \times 11}$</p> <p>All will give remainder 0 except the term = $\frac{13!}{11 \times 11!}$</p> <p>Remainder of x divided by 11 $\Rightarrow \frac{1 \times 2 \times 3 + \dots + 8 \times 9 \times 10 \times 12 \times 13}{11}$</p> <p>$\frac{10 \times 12 \times 13}{11} = \frac{10 \times 1 \times 2}{11} \Rightarrow \frac{-2}{11} \Rightarrow 9$ is the remainder</p>
68.	73.	66.	70.	D	 <p>As the for each 2.6m walk; 1m deep step is there the number of total steps = $\frac{48}{2.6} \Rightarrow 19$ approx.</p> <p>That means steps will be in depth of 1m, 2m, 3m, ----19m.</p> <p>Volume of tank \Rightarrow (Depth) \times Length \times Width.</p> <p>Length of each step = 2.6, width = 20m, Depth = (1-----19)</p> <p>$\Rightarrow 2.6 \times 20 \times (1+2+3+4+\dots+19)$</p> <p>$\Rightarrow \frac{2.6 \times 20 \times 19 \times 20}{2} \Rightarrow$ approx 10600 = volume of water in tank</p>

69.	74.	72.	71.	C	$\sum_{i=2}^{100} \frac{1}{\log_i 100!} \Rightarrow \frac{1}{\log_2 100!} + \frac{1}{\log_3 100!} + \frac{1}{\log_4 100!} + \dots + \frac{1}{\log_{100} 100!}$ $\frac{1}{\log_b a} = \log_a b \text{ (As we know)}$ $\Rightarrow \log_{100!} 2 + \log_{100!} 3 + \log_{100!} 4 + \dots + \log_{100!} 100$ <p>Also $\log_a b + \log_a c \Rightarrow \log_a b \times c$ Hence $\Rightarrow \log_{100!} 2 \times 3 \times 4 \times 5 \times \dots \times 100$ $\Rightarrow \log_{100!} 100! = 1$.</p>
70.	67.	73.	64.	D	<p>Multiple of 10^{23} which and divisor of 10^{29} Number of factor of $10^{29} \Rightarrow 2^{29} \times 5^{29} = 30 \times 30 = 900$ Factor of 10^{29} multiple of $10^{23} \Rightarrow 10^{29} = 10^{23} \times 2^6 \times 5^6 \Rightarrow 7 \times 7 = 49$</p> <p>Hence $\frac{a^2}{b^2} = \frac{49}{900} = a/b = \frac{7}{30}$ Hence $b - a = 30 - 7 = 23$.</p>
71.	68.	74.	65.	A	 <p>Diameter PQ will be 6 units. Y coordinates will be same along PQ as line is parallel to x axis. There will be a gap of 6 units in x coordinate of P and Q. Equating the y coordinate in both the equations we get $\therefore a^x = 2a^{x+6}$ $\Rightarrow \frac{1}{2} = \frac{a^{x+6}}{a^x}$ $\Rightarrow a^6 = \frac{1}{2}$ $\Rightarrow a = \frac{1}{\sqrt[6]{2}}$</p>
72.	69.	67.	66.	D	
73.	70.	68.	67.	E	<p>$792_B \times 297_B$ belong to base B number system. If 297_B is the factor of 792_B $297_B \Rightarrow 2B^2 + 9B + 7$ $792_B \Rightarrow 7B^2 + 9B + 2$ $\frac{7B^2 + 9B + 2}{2B^2 + 9B + 7} \Rightarrow$ must be integer. $\frac{(5B^2 - 5)}{2B^2 + 9B + 7} + 1$ Hence $(5B^2 - 5) = (2B^2 + 9B + 7) K$ must be the factor. Put $K = 2$ $5B^2 - 5 = 4B^2 + 18B + 14$ $B^2 - 18B - 19$ $(B - 19)(B + 1) = 0$ $B = 19$</p>
74.	71.	69.	68.	A	<p>Let x, y, z, the number of students getting 6, 8 and 20 marks respectively According to question $6x + 8y + 20z = 504$ ---(1) and $y = x + 2z$ -----(2) (2) can be written as $x = y - 2z \Rightarrow 6x = 6y - 12z$ ---(3) Put (3) in (2) we get $6y - 12z + 8y + 20z = 504$ $14y + 8z = 504$ Further solving only $y = 32$, $z = 7$ and $x = 18$ satisfies above equation. \therefore total number of students $= x + y + z = 18 + 32 + 7 = 57$.</p>
75.	81.	78.	81.	C	<p>As seen from the sixth column of the first graph given, the percentage after USA in almost all the years happens to be in case of India, hence that is the answer.</p>
76.	82.	79.	82.	D	<p>In case of United states in the year 2002-03, there is a small decline. Brazil in the year 2006-07 is almost equal, so no decrease. India in the year 2009-10 is again very close to</p>

					each other, hardly any decline. In case of Malaysia in the year 2008-09 the bar graph is decreasing significantly proportionately. It seems between 20- 25%. In China in the year 2008-09 the decline is close to 10%. Hence it is Malaysia in the year 2008-09.
77.	83.	80.	83.	B	In this case, one by one all the countries are to be seen. In the question it is clearly stated that out of the following countries, he have to answer, and that becomes India. Overall it seems that China would give the highest such increase. Hence answer is option B.
78.	75.	81.	75.	D	Just have a look at all the graphs and try n find the lowest value, it happens to be in case of C & E Europe, having a look at the options, it is given in case of 4 th option. Then checking all the remaining countries given, all are in the ascending order only. Hence it is the answer.
79.	76.	82.	76.	B	Just have a look at slopes of all the graphs ALONG WITH the differences of gridlines given. In case of C and E Europe the slope is quite increasing and the difference of grid lines is also very high i.e. starting from 5 it goes to around 20. As this is the highest among all, this is the answer. Hence option B.
80.	77.	83.	77.	E	Maximum GDP of African region is 9.5 also Maximum GDP of south American region is 9.5. Hence none of these is the answer.
81.	78.	75.	78.	C	The question states to find where the first increase in percentage is higher than the second increase. The year 2005 is given in four options out of 5, that should be our starting point. Finding it actually is higher the answer 4 th option is rejected. Checking for 2004 after that, and finding it wrong, the possible options left are B and C only. Checking for 2006, which is wrong. You can mark the answer as option C.
82.	79.	76.	79.	B	Finding the values of \$ in Rs. terms for all the years given, it happens to be as follows. Year 2001 = 45.16, 2002 = 48.5, 2007 = 4.13, 2010 = 45.7, 2011 = 46.8. Now as in year 48.5 Rs. Is equivalent to 1 dollar, it is cheapest in that year.
83.	80.	77.	80.	C	R for the year 2004 is $\frac{6170}{3.46} = 1783$ and R for the year 2011 is $\frac{16564}{6.29} = 2633$. As total Pie is divided in 15 years and the average sector becomes $\frac{360}{315} = 24^0$. Also R increase linearly so angle for the middle year i.e. 2004 is 24^0 . Now equating the middle year with average sector degrees. Angle for 2011 i.e. year of maximum angle is $\frac{2633}{1783} \times 24^0 \approx 36^0$. Hence the answer.
84.	89.	99.	94.	D	
85.	90.	100.	95.	C	
86.	91.	101.	96.	B	
87.	92.	102.	97.	D	
88.	93.	103.	98.	A	
89.	94.	104.	99.	A	
90.	95.	105.	100.	D	
91.	96.	106.	101.	B	
92.	97.	107.	102.	A	
93.	98.	108.	103.	E	
94.	99.	109.	104.	B	
95.	100.	110.	105.	C	
96.	101.	111.	106.	A	
97.	102.	112.	107.	C	
98.	103.	113.	108.	E	
99.	104.	114.	109.	D	
100.	105.	115.	110.	D	
101.	106.	116.	111.	D	
102.	107.	117.	112.	C	
103.	108.	118.	113.	B	