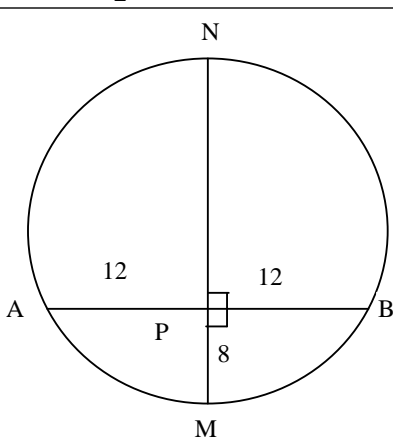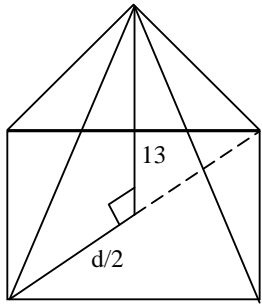## XAT 2017 – Answer keys & Explanations (All Sets)
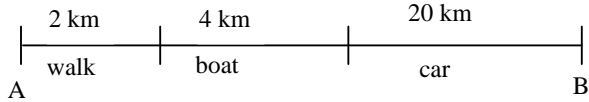
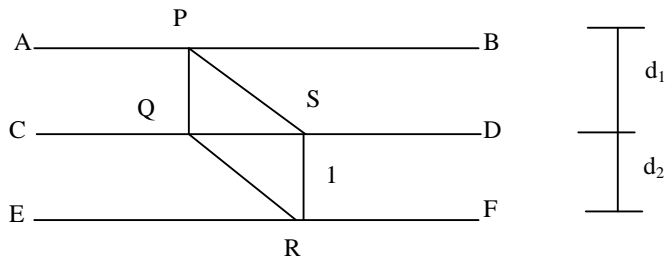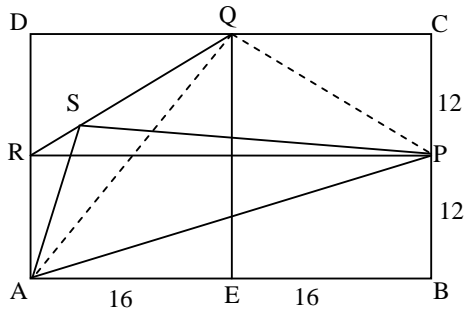| Set A	Set B	Set C	Set D	Key	Explanations
1.	3.	2.	3.	D	The situation of Europe is explained in sentence 3; hence, it should be the opening line. In continuation to this, "North" takes the idea forward in sentence 1. Sentence 2 talks about the specific range where Russians were held and in contrast to this, 4-5 explain how Russians dealt with the situation. The correct order is 31245.
2.	4.	1.	4.	B	1 Introduces the idea and 4-3 take it forward by citing an example. 2 explain the reason for the same. Hence, the correct order is 1432.
3.	2.	4.	1.	E	The author feels nostalgic about the days spent in and memories of the beloved house (of her parents) which is clearly expressed in option E.
4.	1.	3.	2.	D	The first paragraph talks about inflation and the second is demanding explanation from RBI which is best expressed by option D
5.	5.	6.	6.	C	The previous thought about dominant view has been rendered obsolete. The first hint is 'yet' so the new view is 'overstated'. Another hint is 'although' the critics are compelled to rationalize their 'liking for' or 'penchant for' action movies etc. The last blank should have 'investment in'.
6.	7.	5.	5.	E	As per the lines 'love binding them together' and the context of the passage the answer option that reflects this essence is option E.
7.	6.	7.	7.	A	As per the rule of grammar: with "not only", "but also" is used. Also, the subject should remain either before or after this mandatory pair. Hence, option A satisfies the above rule.
8.	9.	10.	8.	D	As they are hiring a commissioner to have second take on entire matter so option D seems to be appropriate. Also there is no mention of 'court', so option E is not implied.
9.	10.	11.	9.	C	As per the last few lines there is loss of cultivation area so per hectare production has decreased worldwide.
10.	8.	12.	10.	E	All the three given sentences are correct.
11.	11.	8.	11.	D	The 2 words in the question are synonyms and a similar relation is found in option D.
12.	12.	9.	12.	C	"Affect" is a verb and "effect" is a noun. The correct usage here in all of the blanks is for affect. Hence, option C is the correct answer
13.	15.	13.	15.	C	The central idea of the passage is that one has to keep improving in order to survive. Hence, option C is the answer.
14.	16.	14.	16.	B	As per the context of the passage and essence shown throughout the 'change 'seems to be inevitable. This is reflected in option B.
15.	17.	15.	17.	D	Only options 3rd and 4th highlight constant improvement, hence, option D is the correct answer.
16.	13.	16.	13.	D	The passage describes a pencil. Words like, graphite, lead etc. highlight it. So, answer is D.
17.	14.	17.	14.	B	The word, supercilious denotes an attitude which is demeaning.
18.	22.	22.	18.	C	It has been mentioned that in the longer run, the psychopaths fail to hide their lack of compassion as they are driven by instinct. So, option C is the correct answer.
19.	23.	23.	19.	A	Refer to the first two lines of the 2nd paragraph which explains that compassion exists for a reason.
20.	24.	24.	20.	E	The behavior of the faculty is not empathy; however, he did show his concern.
21.	18.	18.	21.	E	A director who is existential in approach will negate conditioning and will focus on the current performance which makes E as the best choice.
22.	19.	19.	22.	C	Libertarianism is subsumed in existentialism and the latter cannot be extended to the former.
23.	20.	20.	23.	A	The author will most sympathetic to PETA activist as per the last paragraph.

					The author should be sympathetic to people who stand by the processes which advocate the ethical treatment of animals. Option 2 is too narrow to be considered the correct answer.
24.	21.	21.	24.	D	The mentioned sentence highlights the fact that "human nature and instinct" have been correlated unnecessarily.
25.	27.	25.	27.	E	Only the 3rd and the 5th options weaken the notion of Vimla's having stolen the money.
26.	28.	26.	28.	E	The most appropriate action is only confirming or questioning. Hence, our answer option should start with 5th option.
27.	29.	32.	29.	D	Referring may not be considered as unethical. Further, Rahman should be paid his fee. Therefore, option 4 is the best choice.
28.	30.	29.	30.	D	It is understandable that the supervision by the family would ensure the best quality. Hence, option D is the best answer.
29.	31.	30.	31.	B	If the local contractor enjoys a good reputation, only then Mrs. Biswas will trust a local contractor to construct the house.
30.	32.	31.	32.	C	We need to with the least appropriate option. In that situation, blindly trusting a local contractor will be the worst possible option. Thus, the answer option has to start with option 3.
31.	25.	27.	25.	D	The passage highlights the unfair punishment as the cause of all the turmoil. Therefore, option D is the best answer.
32.	26.	28.	26.	B	Both parties have breached the code. Therefore, apologies by both should settle the dispute. Further, the reinstatement of the waitress would ensure that the public is also pacified.
33.	36.	39.	39.	B	This will take care of problems stated in the passage as pollution will be less, parking space can be managed and any emergency can also be taken care of.
34.	37.	40.	40.	A	Considerable collection from vehicles will certainly increase the revenue and decrease pollution inside the campus. Hence, A should be the best choice.
35.	38.	33.	36.	A	A lot of people from Karnataka and Andhra visit the place. Thus, option 1 should support the business as he does not have the resources to expand so best is option A as this can be managed within existing resources.
36.	39.	34.	37.	E	Because of the strength of Karnataka customers, this experiment is worthwhile being made.
37.	40.	35.	38.	A	An increase in sales percentage and overall sales would increase Girirajan's confidence in the business.
38.	33.	36.	33.	E	Since winning or losing in Snakes & Ladder game is matter of luck, thus the coach can ignore the data in the table and randomly pick any 11 players.
39.	34.	37.	34.	A	Since results of shooting are completely dependent on skills of a shooter, thus the results must be fair and the coach should select all students in 80-99 ranges.
40.	35.	38.	35.	E	In cricket, a batsman may or may not face all 100 balls (being out before completion of 100 balls). Thus a batsman, who is otherwise playing good, may be out before completion of 100 balls and his exact performance may not be evident from the table. Thus, nothing definite can be said regarding the selection of cricket players.
41.	44.	44.	44.	A	The first option denotes a step taken by the organization to ensure humility among employees. Hence, A is the correct option.
42.	45.	45.	45.	C	All the problems such as up gradation of syllabus, faculty development and also keeping the option of anonymous feedback open
43.	41.	41.	41.	C	We assume that 1st handi of subzi is sourced from home. Now this can cater to 12 customers but subject to how many puris can be made within the first hour. Now, after 30 min we need to reheat the subzi for 10 min. So in that time no puris can be made, hence decreasing the number of puris by 2 giving the maximum plates to be 12-2=10

44.	42.	42.	42.	B	Oven	Puri/Sabzi	Time Slot	No. of plates
					1	Puri	7:00 to 7: 15	2
					2	Puri	7: 00 to 7: 15	2
					1	Puri	7:15 to 7: 30	2
					2	Puri	7:15 to 7: 30	2
					1	Subzi (Reheat)	7:30 to 7: 45	-
					2	Puri	7:30 to 7: 45	2
					1	Subzi (Cook)	7:45 to 8: 30	-
					2	Puri	7:45 to 8: 00	2
					First handi finished			12
					2	Puri	8:15 to 8:30	2
					1	Puri	8:30 to 8:45	2
					2	Puri	8:30 to 8:45	2
					1	Puri	8:45 to 9:00	2
					2	Puri	8:45 to 9:00	2
								10

Hence , grand total of plates =12+10=22
Now, profit = 15 × 22 = 330 – 50 (Transport cost) = 280

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45. 43. 43. 43. D

Since Aman is more efficient, thus he should make sabji while Shyam should make puri. Thus, for first 20 minutes, Aman will make sabji and Shyam will make puri in last 10 min, (of first 20 min. slot) so that reheating of puri is not required. Now, after this, both should simultaneously make puri in 2ovens at their own rate for next 10 min. (because sabji is still available, no need to make more sabji). Thus, it can be safely concluded that to maximize profits, Aman should be doing both the jobs and hence the best choice will be option (D).

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46. 46. 46. 46. D

$(-100) + (-95) + (-90)+ _____ 110+115+120$
Let the no. of terms be n
So $-100+ (n-1)5=120 \Rightarrow n=45$
Hence sum $=\dfrac{45}{2}(-100+120)=450$

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47. 49. 47. 48. B

Using the formula AP × PB = PM ×PN
We get 12×12 = 8 ×PN $\Rightarrow$ PN = 18 cm

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48. 50. 48. 49. B

$4(x - 2)^2 + 4 (y - 3)^2 - 2 (x - 3)^2$
$\Rightarrow 4 (x^2 + 4 - 4x) + 4 (y - 3)^2 - 2 (x^2 - 6x + 9)$
$\Rightarrow 4x^2 +16 - 16x + 4 (y - 3)^2 - 2x^2 + 12x - 18$
$\Rightarrow 2x^2 - 4x - 2 + 4 (y - 3)^2$
$\Rightarrow 2 (x^2 -2x) + 4 (y - 3)^2 - 2$
$\Rightarrow 2 (x^2 - 2x +1) +4 (y - 3)^2 - 4$
$\Rightarrow 2 (x - 1)^2 + 4(y - 3)^2 - 4$
This is minimum when x= 1 & y =3. Hence min value is -4

49.	47.	49.	50.	A	$A \rightarrow 4$ min, $B \rightarrow 10$ min, $C \rightarrow 12$ min, $D \rightarrow 20$ min Going by options, we see that 1st option satisfies the given condition as $\frac{1}{4} - \frac{1}{10} - \frac{1}{12} - \frac{1}{20} = \frac{15-6-5-3}{60} = \frac{1}{60}$. So tank is filled in 60 min. Hence it would be half-filled in 30 min
50.	48.	50.	47.	B	Let MP of shirt $=x$ So as per question, $(3x +100) 5 = 20000$ $\Rightarrow 3x+100 = 4000 \Rightarrow 3x=3900 \Rightarrow x= 1300$
51.	57.	55.	53.	C	 Volume of Pyramid $= \frac{1}{3} \times \text{area of base} \times \text{height}$ $\Rightarrow \frac{1}{3} \times a^2 \times h = 200 \Rightarrow a^2 = \frac{200 \times 3}{13} = \frac{600}{13}$ Also, Area of square (base) $=a^2 = \frac{1}{2} d^2$ $\Rightarrow d^2 = 2 \times a^2 = \frac{1200}{13}$ $\Rightarrow d = \sqrt{\frac{1200}{13}} \Rightarrow \frac{d}{2} = \sqrt{\frac{1}{4} \times \frac{1200}{13}} = \sqrt{\frac{300}{13}}$ Thus, required length of slant edge $= \sqrt{13^2 + \frac{d^2}{4}} = \sqrt{169 + \frac{300}{13}} = \sqrt{\frac{2497}{13}} \cong \sqrt{192} \cong 14cm$
52.	58.	56.	54.	C	No. in the 2nd roll higher than 1st. To satisfy this condition, we take any 2 nos. out of total 6 numbers on the dice. Hence favourable cases $=^6C_2 =15$. Total 36 cases possible in this case. So reqd. probability $= \frac{15}{36}$.
53.	51.	57.	51.	C	If $f(x) =ax+b$ Then, $f(f(x))=a(ax+b) +b$ Thus, $a^2x+ab+b=9x+8$ Comparing coefficients of x and constant term, we get $a^2 = 9 \Rightarrow a = \pm 3$ and $ab+b = 8 \Rightarrow b=2$ or -4. Thus , a+b can be $3+2 = 5$ or $-3+ (-4)=-7$. Hence , option (c) is the correct answer
54.	52.	58.	52.	D	 Walking speed of A = 4 kmph Walking speed of S = 5 kmph Time taken by A to walk 2 km = 30 min Time taken by A to ride by car =24 min Let's consider person S

					Time taken by S to walk 2 km = 24 min Time taken by S to ride by car =30 min So Total journey time for both = 30 +24+30 =84 min Hence they would be together at B at 9 : 24 AM
55.	53.	51.	55.	E	When Hari was born, let's assume age of father was F and mother was M. When Chari was born (after x years of Hari), the age of Hari =x years $\Rightarrow$ x + (F + x) + (M + x) =70.-----(1) When Gouri was born (further after 4 years), then Ages of 4 family members =2 × (Ages of father & mother at Hari's birth) (x + 4) + 4 + (F + x + 4) + (M + x + 4) = 2 (F+ M) $\Rightarrow$ 3x + 16 = F+ M ------(2) Putting value of (F + M) from eqn. (2) to eqn (1), we get $\Rightarrow$ 3x + 3x + 16 =70 $\Rightarrow$ 6x = 54 $\Rightarrow$ x = 9 years Thus difference in age between Hari and Chari is 9 years.
56.	54.	52.	56.	A	A & B both score 35 marks Let's say both got x correct and y wrong. So 4x - y =35 & x + y =10 $\Rightarrow$ x =9, y=1 So both A & B got 9 questions correct and 1 question wrong. So we can see that C got 4 questions correct (Q1, 2, 3, 9) Hence score of C = 4 × 4 - 6 = 10.
57.	55.	53.	57.	D	Total strength =60 Average marks in Math's =45 Average marks in Biology =60 (Combined Average marks =50) Let the no. of students in Maths & Biology are in the ratio x :y So x : y = 60-50 : 50-45 = 10 : 5 $\Rightarrow$ 2 :1 So let's make venn diagram : M P 6 24 0 15 0 0 B Since Math has twice the number of students as Biology. So Math's has 30 & Biology has 15 people. Hence Physics only can have maximum 60 – (30 + 15) = 15 people.
58.	56.	54.	58.	E	Let take x as 5^0 So cos 5^0 would be very close to 1 and sin5^0 would be very close to 0. So difference is a higher value (<1) but close to it. When sin 30^0 = $\frac{1}{2}$ is added to this, the value crosse s 1. Hence none of the options match
59.	60.	61.	62.	E	N = $(11^{P + 7})$ $(7^{q - 2})$ $(5^{r + 1})$ (3^s) If N is a perfect cube, then min. positive values of p, q, r, s would be p=2,q=2,r=2 and s=3. So smallest value of p + q + r + s = 2 + 2 + 2 + 3 = 9
60.	59.	59.	59.	C	For representation of minimum 5 students from atleast one department, assume that first 5 students are selected, one from each department. Similarly, next 3 sets of 5 students will be selected (3 from each

					department). Now, 4 students are selected from each department. As soon as one more student is selected from any department, the representation of that department will be of 5 students. Hence, minimum 21 students should be in the committee.
61.	61.	60.	61.	E	 $d_1 : d_2$ QR =? SR is least If SR is least, it means SR =1. Let's take QS =x. Also PQ =2. Hence $\frac{1}{2} \times x \times 2 + \frac{1}{2} \times x \times 1 = 30 \Rightarrow$ x=20. So QR= $\sqrt{20^2 + 1^2} = \sqrt{401}$ This value is slightly greater than 20 units.
62.	62.	62.	60.	A	 Area of ∆APS = Area of rectangle ABCD-Area ∆ APB –Area ∆QPC –Area ∆DQR –Area ∆ARS-Area ∆PQS Let's assume the dimensions of rectangle ABCD as length, AB =32 and width BC =24 Thus , Area ∆APS =32 ×24- $\frac{1}{2} \times 32 \times 12$ - $\frac{1}{2} \times 16 \times 12 - \frac{1}{2} \times 16 \times 12$ - $\frac{1}{4}$ Area ∆ARQ $- \frac{3}{4}$ Area ∆PRQ ----(1) Now, Area ∆ARQ =Area of rectangle ADQE –Area of ∆DRQ-Area∆AQS =16 × 24- $\frac{1}{2} \times 16 \times 12 - \frac{1}{2} \times 24 \times 16$ $= 384 - 96 - 192 = 96$ And Area ∆PRQ=Area of rectangle CDRP-Area ∆DRQ-Area ∆PQC =12×32- =12 × 32- $\frac{1}{2} \times 12 \times 16 - \frac{1}{2} \times 12 \times 16$ =384-96-96=192 Thus, from equation (i) , we have Area ∆APS =768 − 192 − 96 − 96 - $\frac{3}{4} \times 192 - \frac{1}{4} \times 96 = 384 - 144 - 24 = 216$ Thus required ratio = $\frac{\text{Area} \, \Delta APS}{\text{Area} \, \Delta ABCD} = \frac{216}{32 \times 24} = \frac{216}{768} = \frac{36}{128}$. Hence option(A)
63.	63.	63.	63.	E	Overs bowled by specialist bowlers =12. Overs bowled by non specialist bowlers = 8.

					Since there are 8 overs, so maximum a bowler can bowl is 3 overs. So 3, 3, 2 is the only breakup of 8 overs. Hence non specialist bowler can bowl a minimum of 2 overs. Hence statement S_1 or S_2 are not required.
64.	64.	64.	64.	D	Economy rates are 6,6,7,9 which exclude worst bowler and best bowler. As per S_1, Economy rates of specialist bowlers are lower than that of non-specialist bowlers so let's take economy rates of specialist bowlers as 5, 6 and 6. Hence their cumulative runs would be $(5 \times 4) + (6 \times 4) + (6 \times 4) = 68$ As per S_2, cumulative runs for non specialist bowlers =69. And their economy rates are 7, 9. Let's take economy rate of worst bowler be x So $(7 \times 3) + (9 \times 2) + (x \times 3) = 69 \Rightarrow x =10$ If we take economy rate of best bowler as 4 or less, then economy rate of worst bowler is obtained as less than 9. This violates the given condition. Hence the case solved above is absolutely correct. So we can find the economy rate of worst bowler using both the statements. Hence answer is option D.
65.	69.	65.	69.	D	Option A is incorrect as "extraversion" has 3 modes instead of 2 and among the remaining options graph values of "performance plac" are very much clear and further its median is 1.75 and average is 2.55. Hence median of this parameter is definitely lower than its average .Hence option D is the answer
66.	70.	66.	70.	A	The scatter plot is most scattered between "extraversion" and "performance caff" among the given options. Hence it shows the weakest relationship. Hence option A is the answer
67.	71.	67.	71.	C	Among the given option the scatter plot between "true arousal plac" and "performance plac" is least scattered and as we can clearly find the relation between these two parameters at any point. Hence the value of one dimension can be used to predict the value of another, as accurately as possible. Hence option C
68.	72.	68.	72.	B	.94 on the right side is between "true arousal plac" and "arousal plac" which on the left side correspond to the second scatter plot in the fourth row. Hence option B is the answer.
69.	65.	69.	65.	A	Raw material cost for various factories are : $F_2 = 5300 - 800 - 45 - 2 (400) = 3655$ $F_3 = 5800 - 900 - 60 - 2 (550) = 3740$ $F_4 = 5500 - 800 - 68 - 2 (450) = 3732$ $F_5 = 5400 - 600 - 75 - 2 (600) = 3525$ $F_6 = 6000 - 875 - 65 - 2 (400) = 4260$ $F_7 = 4900 - 500 - 85 - 2 (350) = 3615$ $F_8 = 5300 - 600 - 70 - 2 (420) = 3790$ Hence option A is correct
70.	66.	70.	66.	E	Lowest sales margin(For each factory) $F_2 = \dfrac{800}{5300}, F_4 = \dfrac{800}{5500}, F_5 = \dfrac{600}{5400}, F_6 = \dfrac{875}{6000}, F_7 = \dfrac{500}{4900}$ Out of all these values , the lowest value is of F_7. Hence E option
71.	67.	71.	67.	D	Selling cost is not to be added. So that would also be added to the profit. So let's solve it by options. $F_1 \rightarrow$ Profit = 775+60 =835 F_2 & $F_3 \rightarrow$ Profit =800+45=845 (F_2) Profit = 900+60 =960 (F_3) F_4 & $F_6 \rightarrow$ Profit = 800+ 68=868 (F_4) Profit = 875+65 =940 (F_6) F_3, F_6 , $F_4 \rightarrow F_3$ (profit) = 960 F_6 (profit) = 940 F_4 (profit) = 868 It can't be F_1 or F_7 or F_8 As profit for F_7 = 500+85 =585 Profit for F_8 =600+70 =670 Since the profit margins are highest in F_3 & F_6 and together they can

					produce 1900 kurtas, thus the maximum profit will be from factories F_3, F_4 & F_6. Hence option D
72.	68.	72.	68.	B	As per new technology, now worker needs 1.5 hrs to produce a kurta Since labour cost for half an hour is decreased, So that value can be added to net profit. So let's find net profit for these factories: $F_2 = 800 + \dfrac{400}{2} = 1000$ $F_3 = 900 + \dfrac{550}{2} = 1175$ $F_4 = 800 + \dfrac{450}{2} = 1025$ $F_5 = 600 + \dfrac{600}{2} = 900$ $F_6 = 875 + \dfrac{400}{2} = 1075$ So highest profit per Kurta is for F_3

General Awareness Section

Set A	Set B	Set C	Set D	Key
1.	21.	16.	11.	E
2.	22.	17.	12.	B
3.	23.	18.	13.	B
4.	24.	19.	14.	E
5.	25.	20.	15.	D
6.	1.	21.	16.	B
7.	2.	22.	17.	E
8.	3.	23.	18.	B
9.	4.	24.	19.	B
10.	5.	25.	20.	B
11.	6.	1.	21.	B
12.	7.	2.	22.	B
13.	8.	3.	23.	C
14.	9.	4.	24.	A
15.	10.	5.	25.	A
16.	11.	6.	1.	D
17.	12.	7.	2.	C
18.	13.	8.	3.	D
19.	14.	9.	4.	A
20.	15.	10.	5.	C
21.	16.	11.	6.	C
22.	17.	12.	7.	A
23.	18.	13.	8.	A
24.	19.	14.	9.	E
25.	20.	15.	10.	C