

Section I

1. Note that the price of Darjeeling tea remains constant after the 100th day ($n=100$).

If the prices of the two varieties of tea become equal before $n = 100$, then

$$100 + 0.1n = 89 + 0.15n$$

$\therefore n = 220$, which is not possible. (Since n has been assumed to be less than 100)

\therefore The prices of the two varieties will be equal after $n = 100$,

i.e., when the price of Darjeeling tea = $100 + 0.1 \times 100 = 110$

$$\therefore 89 + 0.15n = 110$$

$$\therefore n = 140$$

2007 is not a leap year. Number of days till 30th April = $31 + 28 + 31 + 30 = 120$

The prices of the two varieties will be equal on 20th May.

Hence, option 3.

2. Let $f(x) = px^2 + qx + k$, where p, q and k are integers, $p, 0$

$$\therefore f(0) = k = 1$$

$$\therefore f(x) = px^2 + qx + 1$$

$$f(x) = px^2 + qx + k$$

$$f'(x) = 2px + q$$

When $f'(x) = 0$, $x = -q/2p = 1$

$f(x)$ attains maximum at $x = 1$

$$\therefore q = -2p$$

$$f(1) = p + q + 1 = 3$$

$$\therefore 1 - p = 3$$

$$\therefore p = -2$$

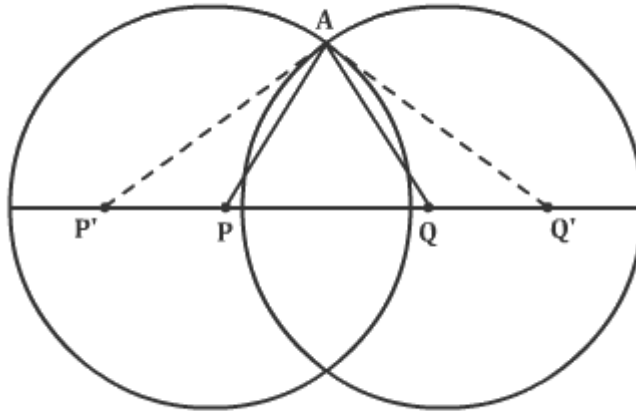
$$\therefore q = 4$$

$$\therefore f(x) = -2x^2 + 4x + 1$$

$$\therefore f(10) = -200 + 40 + 1 = -159$$

Hence, option 2.

3.



P and Q do not lie within the intersection of the two circles.

So they lie on the circumferences or outside the circumferences. If they lie on the circumferences,

$$\angle AQP = 60^\circ$$

From the diagram, if they lie outside the circumferences, $\angle AQ'P' < 60^\circ$

Also, $\angle AQP$ would be 0° if A, Q and P were collinear.

But as P and Q cut each other in two distinct points, A, Q and P cannot be collinear.

$$\therefore \angle AQP > 0^\circ$$

$$\therefore \angle AQP \text{ lies between } \angle 0^\circ \text{ and } \angle 60^\circ.$$

Hence, option 3.

4. Enemies of every pair are the pairs formed with all numbers other than the two in the member itself.

\therefore If there are n elements then each member has

$${}^{(n-2)}C_2 = \frac{n^2-5n+6}{2} \text{ enemies}$$

Hence, option 4.

5. Two members are friends if they have one element in common.

\therefore All the members having one constituent as the common element are common friends.

There are $(n - 3)$ such friends.

Also, one pair formed by the uncommon constituents of the two friends is a common friend.

\therefore There are $n - 3 + 1 = n - 2$ common friends.

Hence, option 4.

6. Let Shabnam have Rs. 100 to invest. Let Rs. x , Rs. y and Rs. z be invested in option A, B and C respectively.

$$\therefore x + y + z = 100 \dots (I)$$

If there is a rise in the stock market, returns = $0.001x + 0.05y - 0.025z$

If there is a fall in the stock market, returns = $0.001x - 0.03y + 0.02z$

Now, x , y and z are such that regardless of whether the market rises or falls, they give the same return, which is the maximum guaranteed return.

$$\therefore 0.001x + 0.05y - 0.025z = 0.001x - 0.03y + 0.02z$$

$$\therefore y/z = 9/16$$

Now, consider different possible values of x , y and z . The returns are as follows:

x	y	z	Returns = $0.001x + 0.05y - 0.025z$
75	9	16	0.125
50	18	32	0.15
25	27	48	0.175
0	36	64	0.2

We see that as the values of y and z increase, the returns increase.

\therefore The returns are maximum when $x = 0\%$, $y = 36\%$ and $z = 64\%$

The maximum returns are 0.2%.

Hence, option 3.

7. As shown by the table formulated in the first question, maximum returns are guaranteed by investing 36% in option B and 64% in option C.

Hence, option 2.

8. Let the speed of the plane be x kmph.

Then the speed from B to A is $(x - 50)$ kmph and that from A to B is $(x + 50)$ kmph.

Note that the plane travels from B to A, halts for 1 hour and travels back to B, all in 12 hrs.

$$\therefore 3000/(x - 50) + 1 + 3000/(x + 50) = 12$$

Now consider options for this question. We can easily see that $x = 550$ satisfies the above expression.

Speed of plane = 550 kmph

Now, the plane takes $3000/500 = 6$ hrs to travel from B to A.

It reaches A when the time at B is 8:00 am + 6 hrs = 2:00 p.m.

=> The time difference between A and B is 1 hour.

Hence, option 1.

9. As calculated in the first question, the cruising speed of the plane is 550 kmph.

Hence, option 2.

10. Let $aabb$ ($a \neq 0$, a and b being single digits) be a perfect square.

$$aabb = 1100a + 11b = 11(100a + b)$$

Also, as $aabb$ is a perfect square, it is a multiple of 121.

$$\therefore aabb = 121K, \text{ where } K \text{ is also perfect square. } K \geq 9$$

$$121 \times 9 = 1089$$

$$121 \times 16 = 1936$$

$$121 \times 25 = 3025$$

$$121 \times 36 = 4356$$

$$121 \times 49 = 5929$$

$$121 \times 64 = 7744$$

$$121 \times 81 = 9801$$

\therefore There is only one number 7744 of the form $aabb$, which is a perfect square.

Hence, option 5.

11. Each team has $(k - 2)$ players to itself and shares 2 players with other two teams.

n pairs of teams have 1 player in common and there are n teams.

$$\text{Total number of players} = n(k - 2) + n = nk - 2n + n = nk - n = n(k - 1)$$

Hence, option 1.

12. The cost function is $C(x) = 240 + bx + cx^2$

$$C(20) = 240 + 20b + 400c$$

$$C(40) = 240 + 40b + 1600c$$

$$C(60) = 240 + 60b + 3600c$$

By conditions,

$$2/3 \times C(20) = C(40) - C(20)$$

$$\therefore C(40) = 5/3 \times C(20)$$

$$\therefore 240 + 40b + 1600c = 400 + 100b/3 + 2000c/3$$

$$\therefore 20b/3 + 2800c/3 = 160$$

$$\therefore 20b + 2800c = 480 \dots \text{(I)}$$

Also,

$$1/2 \times C(40) = C(60) - C(40)$$

$$\therefore 3/2 \times C(40) = C(60)$$

$$\therefore 360 + 60b + 2400c = 240 + 60b + 3600c$$

$$\therefore c = 1/10$$

$$\therefore b = 10 \dots \text{(from I)}$$

Profit for x units is $30x - C(x)$

$$P(x) = 30x - 240 - 10x - x^2/10 = -240 + 20x - x^2/10$$

The derivative of $P(x) = P'(x) = 20 - x/5$

For maximization of profit $P'(x) = 0$ and $P''(x) < 0$

When $P'(x)$ is zero,

$$20 - x/5 = 0$$

$$\therefore x = 100$$

$$P''(x) = -0.2$$

Hence, option 2.

13. Following from the first question, at $x = 100$ the profit is maximum.

At that level of production

$$P(x) = -240 + 20(100) - (100)^2/10 = -240 + 2000 - 1000 = 760$$

$$P''(x) = -0.2$$

When $P'(x) = 0$, $x = 100$, which gives the maximum value of $P(x)$

$$P(100) = 3000 - 240 - 1000 - 1000 = 760$$

Hence, option 4.

14. We have the following for different values of n

n	a_n	b_n
1	p	q
2	pq	q^2
3	p^2q	pq^2
4	p^2q^2	pq^3
5	p^3q^2	p^2q^3
6	p^3q^3	p^2q^4
7	p^4q^3	p^3q^4

\therefore For even n (say, $n = 4$),

$$a_n + b_n = p^2q^2 + pq^3 = pq^2(p + q)$$

Now consider options for $n = 4$

(1) gives $pq^2(p + q)^2$

(2) gives $pq^2(p + q)$

(3) gives $pq(p + q)$

(4) gives $q^2(p + q)$

(5) gives $q^2(p + q)^2$

Hence, option 2.

15. For odd n , $a_n + b_n = p^{(n+1)/2}q^{(n-1)/2} + q^{(n+1)/2}p^{(n-1)/2} = p^{(n-1)/2}q^{(n-1)/2}(p + q)$

Here, $p = 1/2$, $q = 2/3$

$\therefore p + q = 1$

$\therefore a_n + b_n = p^{(n-1)/2}q^{(n-1)/2} = (2/9)^{(n-1)/2}$

Now considering options starting from the lowest,

For $n = 7$, $a_n + b_n = 8/729 = 1/91 > 1/100$

For $n = 9$, $a_n + b_n = 16/6561 = 1/410 < 1/100$

Hence, option 4.

16. Let the weights of Deepak and Poonam be d and p respectively.

$$(50W_{II} + 50W_I)/100 = 45$$

$$\therefore W_{II} + W_I = 90 \text{ _____ (1)}$$

$$50W_I + d - p = 50W_{II}$$

$$50W_{II} - d + p = 50W_I$$

$$\therefore 50(W_{II} - W_I) = d - p \text{ _____ (2)}$$

$$\text{From Statement A, } W_{II} - W_I = 1 \text{ _____ (3)}$$

From (1), (2) and (3),

$$W_I \text{ and } W_{II} \text{ can be found. Also, } d - p = 50 \text{ _____ (4)}$$

However this information does not give us the value of p . Statement A is insufficient to answer the question.

From Statement B,

$$49(W_I + d) = 51(W_{II} - d)$$

$$\therefore 51W_{II} - 49W_I = 100d \text{ _____ (5)}$$

This alone cannot help us find the value of p . Statement B is insufficient to answer the question.

Considering both statements together, we have values of W_1 and W_{II} , which can be substituted in (5) to find d , which can be used to find p using (4).

Hence, option 3.

17. Statement A:

$$x + y + z = 89$$

$x^2 + y^2 + z^2$ will be minimum when $x = y = z = 89/3$

But $89/3$ is a non-integer. \therefore We consider integer values of x, y, z which are as close as possible to $89/3$.

We get two cases:

1. $x, y, z = 30, 30, 29$

$$x^2 + y^2 + z^2 = 2641$$

2. $x, y, z = 31, 29, 29$

$$x^2 + y^2 + z^2 = 2643$$

Minimum possible value of $x^2 + y^2 + z^2$ is 2641. Thus statement A is sufficient to get the answer. Though statement B states a fact related to the minimum value, it is not necessary to arrive at the minimum value.

Hence, option 1.

18. Let p be the side of square JKLM.

From Statement A,

$$OM = 2 \times OL$$

OM is maximum when it is the diagonal of the square and has length p

When OM is maximum, $OM = OL$

$\therefore OM \neq 2 \times OL$ if O lies on JK.

\therefore Rahim is unable to draw the square.

Hence, option 1.

19. Let the inner radius be r meter. Capacity of tank = ($1 \text{ m}^3 = 1 \text{ kilolitre}$)

From statement A, since $r = 4\text{m}$

Capacity of tank

∴ Capacity of tank > 256 m³

Since the capacity needed is more than 256 m³ statement A is insufficient.

From statement B,

Volume of the material of tank = mass/density = 30000kg/(3 gm/cc) = 10,000,000 cm³ = 10 m³

Hence the inner volume of tank = Outer volume – Volume of material of tank

Therefore, we can say that the tank capacity is adequate.

Hence, option 2.

20. The bill can be paid in 18 ways as shown in the given table. Hence, option 3.

50 Misos	10 Misos	1 Miso	Total
0	0	107	107
0	1	97	107
0	2	87	107
0	3	77	107
0	4	67	107
0	5	57	107
0	6	47	107
0	7	37	107
0	8	27	107
0	9	17	107
0	10	7	107
1	0	57	107
1	1	47	107
1	2	37	107
1	3	27	107
1	4	17	107
1	5	7	107
2	0	7	107

21. $1/m + 4/n = 1/12$

$$\therefore 1/m = 1/12 - 4/n$$

$$\therefore m = 12n / (n - 48)$$

As, m is a positive integer, n should be greater than 48 and moreover since n is a positive odd integer lesser than 60, n can take values 49, 51, 53, 55, 57 and 59.

If $n = 49, 51, 57$ then m is a positive integer.

If $n = 53, 55, 59$ then m is not an integer.

\therefore 3 pairs of values of m and n satisfy the given equation.

Hence, option 5.

22. Let the amount on Shailaja's cheque be Rs. x and paise $y = (100x + y)$ paise (x and y are positive integers)

The teller gives her $(100y + x)$ paise.

$$\text{Now, } 100y + x - 50 = 3(100x + y)$$

$$\therefore 97y - 299x = 50$$

$$\therefore y = (50 + 299x)/97 = (50 + 8x)/97 + 3$$

Now as y is an integer, $(50 + 8x)$ has to be a multiple of 97 with $x, y \leq 99$

$$50 + 8x = 97k \text{ (} k \text{ is an integer)}$$

$$\therefore x = 12k - 6 + (k - 2)/8$$

$$\therefore k = 2, 10, 18, \dots$$

$$\therefore x = 18, 115, 212, \dots$$

$\therefore x = 18$ is the only possible value.

This implies that $y = 5$

\therefore The amount on Shailaja's cheque is over Rs. 18 but less than Rs. 19.

Hence, option 4.

23. $Y = (2 + 4 + 6 + 8 + \dots + 2n)/n$

$$X = (3 + 5 + 7 + 9 + \dots + (2n + 1))/n$$

$$= ((2 + 1) + (3 + 1) + (4 + 1) + (5 + 1) + \dots + (2n + 1))/n$$

$$= (2 + 4 + 6 + 8 + \dots + 2n)/n + (1 + 1 + 1 + 1 + \dots n \text{ times})/n$$

$$= Y + 1$$

$$\therefore X - Y = 1$$

Hence, option 2.

Note: The information that ' n is a positive integer larger than 2007' does not affect the answer in any way.

24. The sum of the ages of the members of the family ten years ago = 231

$$\therefore \text{The sum of the ages of the members of the family seven years ago} = 231 + (3 \times 8) - 60 = 195$$

$$\therefore \text{The sum of the ages of the members of the family four years ago} = 195 + (3 \times 8) - 60 = 159$$

$$\therefore \text{The sum of the ages of the members of the family now} = 159 + (4 \times 8) = 191$$

$$\therefore \text{Required average} = 191/8 = 23.875 \approx 24$$

Hence, option 5.

25. $f(1) + f(2) + f(3) + \dots + f(n-1) + f(n) = n^2 f(n) \dots$ (I)

Similarly, $f(1) + f(2) + f(3) + \dots + f(n-1) = (n-1)^2 f(n-1) \dots$ (II)

$$\therefore f(n) = n^2 f(n) - (n-1)^2 f(n-1) \dots \text{(I) - (II)}$$

$$\therefore (n^2 - 1)f(n) = (n-1)^2 f(n-1)$$

$$\therefore f(n) = (n-1)^2 / (n^2 - 1) f(n-1)$$

$$\therefore f(n) = (n-1) / (n+1) f(n-1)$$

$$\therefore f(9) = 8/10 \times 7/9 \times 6/8 \times 5/7 \times 4/6 \times 3/5 \times 2/4 \times 1/3 \times 3600$$

$$= (2 \times 3600) / (10 \times 9) = 80$$

Hence, option 1.

Section II

26. From Statement I, the MM club scored 4 goals in the second half. The number of goals scored by the opponent is not known. So the winner cannot be determined. Statement I is insufficient.

From Statement II, the opponent scored 4 goals in the match, but we do not know the number of goals that the MM club scored. Statement II is insufficient.

Considering both the statements we have following.

First Half		Second Half		Final Score	
MM Club	Opponent	MM Club	Opponent	MM Club	Opponent
0	3	4	1	4	4
1	4	4	0	5	4

Thus, MM club could have won the match or could have tied. The question cannot be answered.

Hence, option 5.

27. From Statement I, 40% of the top academic performers were athletes.

∴ If there are x top academic performers, $10 = 0.4x$

∴ $x = 25$

Statement I is sufficient.

Statement II does not give any useful information.

Hence, option 1.

28. Chetan's rank = 4 or 5

Now, Bala < Chetan and Dev < Ernesto.

From Statement I,

	Case 1	Case 2	Case 3
1	Bala	Dev	Dev
2	Dev	Ernesto	Bala
3	Ernesto	Bala	Ernesto
4	Chetan	Chetan	Chetan
5	Atul	Atul	Atul

The highest rank holder cannot be determined. Statement I is insufficient.

Statement II is also insufficient.

Considering both statements together (refer to the table), Case 2 holds. Dev got the highest rank.

Hence, option 4.

29. Let there be $100x$ employees. $30x$ are male. $70x$ are female.

$\therefore 7x$ female employees have an engineering background.

From statement I, $25x$ employees have an engineering background.

$\therefore 18x$ male employees have an engineering background.

Required percentage = $18x \times 100 / 30x$

Statement I is sufficient.

From Statement II, Number of male employees having an engineering background =

$1.2 \times 7x$

Required percentage = $1.2 \times 7x \times 100 / 30x$

Hence, option 3.

30. This percentage can be determined using the derivation of the first question.

The percentage of vegetarians in class 12 = $32 \times 100 / 80 = 40\%$

Hence, option 1.

31. Vegetarian Males in Class 12 = $0.25 \times 48 = 12$

\therefore Non-vegetarian Males in class 12 = 36

\therefore Vegetarian females in class 12 = $(80 - 48) - 12 = 20$

\therefore Required difference = 16

Hence, option 5.

32. From the table given in the question,

Total students = 800

Students in Secondary = $0.8 \times 800 = 640$

$$\text{Students in Class 11} = (800 - 640)/2 = 80$$

$$\text{Students in Class 12} = 80$$

$$\text{Males in Class 11} = 0.55 \times 80 = 44$$

$$\text{Males in Class 12} = 0.6 \times 80 = 48$$

$$\therefore \text{Males in Secondary} = 0.475 \times 640 - 44 - 48 = 288$$

$$\text{Vegetarians in Class 11} = 0.5 \times 80 = 40$$

$$\text{Vegetarians in Secondary} = 0.55 \times 640 = 352$$

$$\text{Vegetarians in Class 12} = 800 \times 0.53 - 40 - 352 = 32$$

Now, the percentage of male students in secondary section = $288 \times 100/640 = 45\%$

Hence, option 2.

33. (This question was not considered for evaluation as there was an error in the question)

“50% of the students are vegetarian males” contradicts the data given initially.

Interpreting it as “50% of the males are vegetarian”, we have the following:

In secondary,

$$\text{Vegetarian males} = 144$$

$$\text{Non-vegetarian males} = 144$$

$$\text{Vegetarian females} = 352 - 144 = 208$$

$$\text{Non-vegetarian females} = 352 - 208 = 144$$

\therefore Except vegetarian females, all other groups have same number of students.

Hence, option 3.

34. Observing the values through the years, we can say that Material, Labour and Operating costs directly vary with the change in volume of production.

The other costs are almost constant.

If the production is x units, the variable cost for material, labour and operation is $50x$, $20x$ and $30x$ respectively.

$$\therefore \text{Total variable cost} = 100x$$

Total fixed cost (using information for 2006) = $1400 + 1200 + 400 + 800 + 5800 = 9600$

\therefore Total cost of producing x units = $100x + 9600$

Now, $x = 1400$

Cost per unit = $(1400 \times 100 + 9600)/1400 = 106.85$

Hence, option 2.

35. From the explanation given in the first question, to avoid any loss, $100x + 9600 \leq 125x$

$\therefore x \geq 384$

Hence, option 3.

36. Profit for 1400 units = $1400 \times 125 - (1400 \times 100 + 9600) = 25400$

Profit for $(1400 + m)$ units = $(1400 + m) \times 120 - ((1400 + m) \times 100 + 9600) = 18400 + 20m$

Maximum value of $m = 300$

Maximum profit for $1400 + 300$ units = 24400

\therefore Maximum profit that the company can earn is 25400 .

Hence, option 1.

37. The new reduced price = $0.95 \times 125 = 118.75$

Profit = $118.75x - 100x - 9600 = 18.75x - 9600$

Profit will be maximum when $18.75x$ is maximum. As the maximum production capacity is 2000 units, profit is maximum when 2000 units are produced.

Hence, option 5.

38. Cost of spinal fusion in India = Rs. 5500×40.928

Cost with the increased value of Rupee = $5500 \times 40.928/35 = 6431$ USD

Cost of Spinal Fusion in Singapore = 9000 USD

Required difference = $9000 - 6431 = 2569$ USD

Hence, option 2.

39. Cost of Hysterectomy in Thailand = $4500 + 6000 = 10500$ USD

Cost of Hysterectomy in India = $3000 + 5000 = 8000$ USD

Travelling cost = 15000 Bahts = $15000/32.89$ USD = 456 USD

Required difference = $10500 - 8456 = 2044$ USD = $2044 \times 32.89 = 67227$ Bahts

Hence, option 4.

40. As shown in the table, Malaysia will have the cheapest package.

Hence, option 3.

	India	Thailand	Singapore	Malaysia	USA
Angioplasty	16000	18000	17000	18000	57000
Hip Replacement	16000	17000	17000	18000	43000
Knee Replacement	17500	16000	17000	12000	40000
Total	49500	51000	51000	48000	140000

41. Referring to the table formulated in the first question, India will be the most expensive for knee replacement.

Hence, option 1.

42. Possible routes from A to J are as shown in the table below.

The shortest distance is by the route A-C-F-J.

The price is $1350 + 430 + 1150 =$ Rs. 2930

Hence, option 4.

43. The current market price paid by the customers is Rs. 2275 (A-H-J).

Therefore, the company should charge $(2275 \times 0.95) =$ Rs. 2161.25

Hence, option 2.

44. If C, D and H are closed, the cheapest route will be A-F-J and it will cost Rs. 2850.
Hence, option 3.

45. The minimum cost per km that the company incurs would correspond to the minimum price per km route.

By observation from the table, minimum price per kilometre is for the route AHJ and

$$= 275/2350 = 0.97$$

$$\text{Minimum cost per kilometre} = 0.97/1.1 = 0.88$$

Hence, option 2.

46. Even if the margin for the prices changes the minimum cost per km would correspond to the same route namely A-H-J.

$$\therefore \text{From the table, the distance for the travel} = 2350 \text{ km}$$

Hence, option 4.

47. A mixture of O and S in equal proportion satisfies the given constraints as can be seen from the table.

Hence, option 5.

	Carbohydrate	Protein	Fat	Minerals
O & P	65	25	5	5
R & S	25	50	20	5
P & S	62.5	35	0	2.5
Q & R	7.5	40	45	7.5
O & S	47.5	40	5	7.5

48. The diet should contain 10% minerals. P contains no minerals.

\therefore P cannot be a part of any mixture.

R and S both contain 5% minerals.

\therefore Mix of R and S in any proportion cannot give 10% minerals.

Consider O and R in the proportion $x:y$

$$\therefore 10x + 5y = 10(x + y)$$

$\therefore 5y = 10y$, which is not possible.

Similarly, Q and S, O and S, and Q and R are not possible.

Similarly a mix of three ingredients is not possible.

\therefore The only possible mix is that of O and Q in equal proportion.

Hence, option 1.

49. Consider the options.

Option 1: P and Q have to be mixed in the proportion 4:1 to achieve 10% fat content.

But this does not give 30% protein.

Option 2: P and S do not contain fat.

Option 3: P and R should be mixed in the proportion 3:1 to achieve 10% fat content.

But 30% protein content is not achieved.

Option 4: Q and S should be mixed in the proportion 1:4 to achieve 10% fat content and 46% protein content. The cost of this mix per unit would be $6/5$.

Option 5: R and S should be mixed in the proportion 1:3 to achieve 10% fat content and 50% protein content. The cost per unit of this mix would be 2.

Therefore, lowest cost is for Q and S.

Hence, option 4.

50. P, Q and S contain 80%, 10% and 45% carbohydrates.

To achieve 60% carbohydrates, proportion of P should be maximum. Hence, options 1 and 3 are eliminated.

$$\text{Option 2: Carbohydrate content} = (320 + 10 + 90)/700 = 420/700 = 60\%$$

$$\text{Cost per unit} = (200 + 200 + 200)/700 = 6/7 = 0.857$$

$$\text{Option 4: Carbohydrate content} = (240 + 10 + 90)/600 < 60\%$$

$$\text{Option 5: Carbohydrate content} = (320 + 10 + 45)/600 = 62.5\%$$

$$\text{Cost per unit} = (200 + 200 + 100)/600 = 5/6 = 0.833$$

P, Q and S in the proportion 4 : 1 : 1 has the lowest cost per unit.
Hence, option 5.

Section III

51. The first sentence is the easiest to decide. Since the 'cricket council' is singular, singular verbs (was and is) are required. Hence the answer choice should begin with A. This eliminates option 1, 3, and 5.

Comparing option 2 and 4, the difference is in the third choice – credulous vs. credible. Credulous means ready to believe easily and credible means: offering reasonable grounds for being believed. Hence Amit's explanation is credible – B. Sequence AAB is option 4.

Other confusable options: censor(v): to examine in order to delete anything that is objectionable. Censure(v): criticize. Discrete: distinct; discreet: modest, unnoticeable.

Hence, the correct answer is option 4.

52. Further is temporal and farther is spatial. The choice of A in the first sentence eliminates option 1, 3 and 5.

Comparing 2 and 5 (ABBBA vs. ABABA), one can see that the third sentence is decisive. Distrust: misgiving, lack or absence of trust Mistrust: a lack of confidence or uncertainty; to regard as untrustworthy. The tinge of 'suspicion' that colours mistrust eliminates mistrust. Hence distrust is the correct use in the context.

Hence, the correct answer is option 5.

53. In this set, the last two sentences are the easiest to decide: stationary truck and to rise above are correct uses. The answer choice has to end with AB. Options 1 and 3 are eliminated.

Beside oneself with rage is the correct idiom. Hence third sentence is A.

Sensuous implies gratification of the senses for the sake of aesthetic pleasure- the sensuous delights of great music. Sensual tends to imply the gratification of the senses or the indulgence of the physical appetites as ends in themselves - a life

devoted to sensual pleasures. Poetry is sensuous rather than sensual. Hence the second sentence is B.

When we decline something we do it regretfully, when someone else has declined we find it regrettable. Hence the first sentence is B.

Hence, the correct answer is option 2.

54. Option 1 is factually correct and answers the question how rather than what.

Options 2, 3 and 5 are partial in answering the question what the author is trying to illustrate.

Option 4 is supported by the following: "To discover the relation between rules, paradigms, and normal science, consider first how the historian isolates the particular loci of commitment that have been described as accepted rules." (at the beginning of the passage) and "Normal science can be determined in part by the direct inspection of paradigms, ... formulation of rules and assumption." (Towards the end of the passage). This, then is the purpose of the passage.

Hence, the correct answer is option 4.

55. The meaning given in option 3 to 'loci of commitment' is explicitly stated in the passage. The passage says: the historian tries to isolate the 'particular loci of commitment' at a given time and then explains what he is trying to find out and concludes by saying 'these are the community's paradigms'. Thus, loci of commitment are the same as the paradigms.

None of the other options are worth evaluating because they are further in the passage and not related to the question.

Hence, the correct answer is option 3.

56. Option 5 is a mere definition of the term 'paradigm' as used in the passage.

Paradigm in the context means a set of broad guidelines accepted by a group of researchers. They are not as rigid as rules. They are not very concrete and differ from community to community.

Option 1 is easily eliminated because of “entirely define’ which is too drastic.

Option 2 is eliminated because of ‘would benefit’ – nothing in the passage even implicitly supports this.

Option 3 is contrary to the passage in the part referring to Newton, Lavoisier, Maxwell, and Einstein.

Option 4 – ‘the choice of isolation mechanism’ is not discussed in the passage, nor is it even indirectly referred to.

Hence, the correct answer is option 5.

57. The paragraph briefly is about why stories are structured around focal characters.

And why in stories of organizations, organizations have to be personified and focal characters as organizations cannot narrate their experiences. Option 5 concludes this chain of thoughts by saying that this kind of personification is a textual device resorted to bring coherence.

Option 1 is incorrect as it continues the first part of the paragraph and is unrelated the second part.

Option 2 is incorrect as it talks about abstracting away from the particular whereas the paragraph is talking about particularizing.

Options 3 and 4 talk about different points of view, which is irrelevant to the paragraph.

Hence, the correct answer is option 5.

58. ‘Nevertheless ‘at the beginning of the paragraph, and “yet’ at the beginning of option 1 make the paragraph logically complete.

Option 1 is the reason why the paragraph is written - to communicate that ‘photographs are still powerful.

The traveler in option 2, the beloved and the dead in option 3, falsehood and trickery in option 4, and the invention and means of living in option 5 do not help conclude the paragraph.

Hence, the correct answer is option 1.

- 59.** The paragraph mentions the tangible parts of the inventory that Mma Ramotswa had at the agency, and 'human intuition and intelligence' Option 2 concludes the paragraph by stating that 'no inventory would ever be able to include those. Options 3, 4 and 5 are eliminated in comparison to options 1 and 2 which continue the idea of the inventory.
- Option 1, though continuing the idea of inventory is far inferior to option 2. The 'those' in option 2 scores over option 1.
- Hence, the correct answer is option 2.
- 60.** The answer is supported by the paragraph beginning "The student of human history can draw on many more natural experiments than just comparisons among the five inhabited continents. Comparisons can also utilize large islands that have developed complex societies in a considerable degree of isolation as well as societies on hundreds of smaller islands and regional societies within each of the continents."
- Option 1 and 3 say the same thing. Option 1 is eliminated because the 'difference' mentioned in option 1 is explained in 3. Hence option 3 scores over option 1.
- Option 4 is eliminated because 'the good comparison to large islands' is inconsequential to the student of history. The student is more interested in knowing how endowments and size affect societies – as a natural experiment.
- Option 5 is eliminated because the paragraph does say nothing about arousing 'curiosity about how humans evolved' as stated in the option.
- Hence, the correct answer is option 3.
- 61.** The answer is directly supported by "The student of human history can draw on many more natural experiments than the five inhabited continents. Comparisons can also utilize large islands as well as societies on hundred of smaller islands and regional societies within each of the continents". The implication is expressed in option 3.
- Option 1 is false in "not conducting..." – this is not true.

Option 2 is false – the passage nowhere says that large islands provide great opportunities for natural experiments” – they are one of the opportunities among many.

The problem faced by historians is not ‘unique’ as stated in option 4. The passage explicitly states that it is faced by several other studies mentioned in the first sentence itself.

There is no data in the passage (even by implication) about cultural anthropologists. Hence option 5 too is wrong.

Hence, the correct answer is option 3.

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63. Statement A is incorrect because of the phrase, ‘returned to home’. The correct usage is ‘returned home’.

Statement B is incorrect because the idiom is get one’s hands on and not hand on.

Statement C is correct.

Statement D is incorrect because there should be a hyphen or a comma after a Shaliach. (a Shaliach – a sort of recruiter to Minneapolis.) “a sort of” though rather informal, is correct usage.

Statement E is correct.

Hence, the correct answer is option 1.

- 64.** Statement A is incorrect – The use of the word, ‘so’ is redundant and inappropriate. (So and once, in the context are adverbs – one of them is enough).

Statement B is correct.

Statement C is incorrect because the use of ‘assuming hypothetically’ makes it redundant. One can either assume or hypothesize, but ‘assuming hypothetically’ is meaningless.

Statement D is incorrect in the plural use of stimuli instead of stimulus.

Hence, the correct answer is option 5.

- 65.** Statement A is incorrect because the verb ‘told’ is incorrectly used. The verb ‘said’ should be used instead.

There is no error in statement B.

Statement C contains the incorrect idiom ‘handed to us’ instead of ‘handed down to us’.

Statement D is correct.

Statement E is incorrect because the word, ‘hence’ is used as a conjunction, whereas it is an adverb. The use of a proper conjunction (e.g. and / but) will improve the sentence.

Hence the correct answer is option 3.

- 66.** The theme of the passage is that biological linkages (for example mother – child; father – child) do not structure human society. We expect a biological mother to display certain characteristics in her ‘role’ as a mother as an ideal. The passage is

then an explanation of how human society is structured on the basis of such definitions of roles considered as ideals. Only option 5 captures this briefly. Option 1 talks about 'absence of strong biological linkages' which is not dealt with in the passage.

Option 2 is contrary to the theme of the passage.

Option 3 which states "... behavior is independent of ... reciprocal roles" is contrary to the passage.

Option 4 may be evaluated as the answer, but passage does not state that human behavior is dependent on biological linkages, and the example of the step mother disproves this option.

Only option 5 captures the theme of the passage.

Hence, the correct answer is option 5.

67. There is distinction between the roles we play and some underlying self. Here we might note that some roles are more absorbing than others.

We would not be surprised by the waitress who plays the part in such a way as to signal to us that she is much more than her occupation. We would be surprised and offended by the father who played his part 'tongue in cheek' (insincerely). The father's self is denied by his identification with his biological relationship. If this does not happen, if a father behaves in a tongue in cheek manner, we are offended. If biological relations structured human society it is enough to be a biological father to be accepted by society to be so. His behavior is unimportant.

All the other options support the fact that 'reciprocal relationship' structure human society.

Hence, the correct answer is option 2.

68. The answer comes from the last paragraph where three examples are given, the father, the waitress, and the priest.

The example of the priest makes statement A correct. (There is so much expectation from the society that the priest's true self is not revealed at all).

The father's example makes statement B correct. (the father's self gets aligned with his biological relationship and the self is denied).

Statement C is incorrect in that the passage does not discuss the development of skill as a reason for the denial of the self.

Hence, the correct answer is option 4.

69. When the four statements are studied well, it is very easy to establish that EC and BD are mandatory pairs.

Only statements E and C both contain the idea of 'crime'. Hence one cannot place any other statement along with statement E, but statement C.

In the same way, statements B and D both have reference to written 'piece of work' and no other sentence, making BD in that order mandatory. Once this is noticed, placing EC and BD in that order with the help of A (fixed) is easy.

Hence, the correct answer is option 4.

70. The "two discernible" or "official discourses" makes it compulsory to place statement E after statement A, because statement E talks about "a third unofficial discourse". (In other words if not placed next to statement A, statement E cannot be placed anywhere else). AE is the first mandatory pair.

'These frameworks' in statement D is explained in statement E so that statement D unless placed next to statement E, will not make sense. (In other words ED too is mandatory.) The idea of motherhood from statement D (biological tie) is continued in statement B. Thus the links in EDB are most obvious.

Statements C and B too are clearly linked because statement B ends with reference to 'dominant discourse' and statement C begins with 'historical work' making EDBC most logical sequence.

Hence, the correct answer is option 1.

71. As per the options comparing statements B, C and D as the sentences to follow statement A, statement C gets eliminated.

Statements B and D are far better sentences to follow statement A than statement C. The next decisive point is the 'such developments' in statement D. As statements A, B, and C are talking about several developments statement D is best placed at the end of all, and will mar the structure of the paragraph if placed anywhere in between.

The choice then becomes very clear. Also, the link between statement D and statement E with their "some analysts' (statement D) and 'different analysts'" (statement E) is also obvious.

Hence, the correct answer is option 5.

72. Either by looking at the options or by reading the sentences in the given order, one can easily see that statement A has to be followed either by statement B or by statement C because they talk about the 'squatters' introduced in statement A. (This eliminates options 4 and 5).

A more careful reading of statement B and statement C establishes that since statement C explains the identity of the squatters and statement B talks about their farming statement B has to follow statement C rather than precede it.

At this stage one has to evaluate/compare only options 1 and 3. Considering statement E and statement D to follow statement B, the link between statement B and statement E because of the "maize" conclusively makes option 3 the answer.

Hence, the correct answer is option 3.

73. The lines, "... the art wield their creative power not so much in width as in depth.

They do not create new experience, but deepen and purify the old. Their works do not differ from one another like a new horizon from a new horizon..." tell us that the works of art do not differ in their 'width' and 'depth' (as mentioned in option 4) 'life' and its 'interpretation' (as mentioned in option 3), but are merely different interpretations of the 'old' experience as one painting of Madonna (Virgin Mary, the mother of Jesus) differs from another version. This eliminates options 3 and 4.

The consequence of artistic license is not discussed in the passage so this eliminates option 1.

Option 5 is ridiculous because the Madonna here does not refer to the modern day singer.

Hence, the correct answer is option 2.

74. Rilke's conclusion is almost verbatim repeated in option 1. "I don't know why and how," is Rilke's conclusion, 'but suddenly I understood the situation of the poet, his place and function in this age.'" These are the concluding words of Rilke from the passage after the example of the 'sea' and 'the other creation' mentioned in the question.

Option 2 is mundane and quotes the example itself and not its purpose.

Option 3 is abstract, and an 'aimlessness' cannot be attributed either to the oarsmen or the singer.

Option 4 'understanding the elements' is not the purpose of either the oarsmen or the singer.

Option 5 is vague; the passage does not explain either natural experience or real waves.

Hence, the correct answer is option 1.

75. Adventurers of experience set out as though in lifeboats to *rescue and bring back to the shore treasures of knowing and feeling which the old order had left floating on the high seas*. The work of the early Renaissance and the poetry of Shakespeare vibrate with the compassion for live experience in danger of dying from exposure and neglect. In this compassion was the creative genius of the age." Renaissance artists are cited as examples of 'adventurers of experience'. These italicized words make option 4 right.

As a result, option 3 is eliminated as being merely an example.

Driven by courage (option 1) create their own genre (option 2) are partial and not the intended meaning of the writer. This eliminates options 1 and 2.

Option 5 is also related to the example in a literal way, whereas the writer is being symbolic in calling the artists adventurers. This eliminates option 5.

Hence, the correct answer is option 4.