

Answers & Explanations

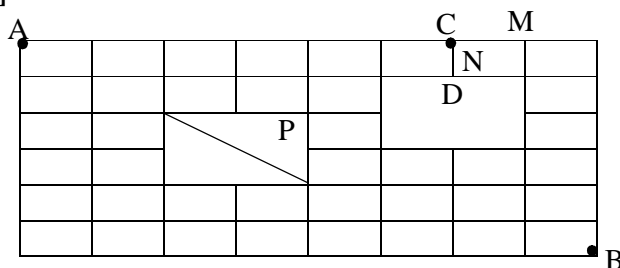
1. [1]

The explanation of $(a + b + c)^{20}$ will consist of terms in the form : $a^x b^y c^z$ while $x + y + z = 20$ and x, y, z are whole numbers.

$$\therefore \text{Numbers of solutions for } x + y + z = 20 \text{ is } {}^{20+3-1}C_{3-1} = {}^{22}C_2 = \frac{22 \times 21}{2}$$

$$\therefore \text{Total number of distinct terms in } (a + b + c)^{20} = 231.$$

2. [4]



For Neelam to reach from A to B via the shortest path, she will have to travel through the diagonal road.

Let the two ends of the diagonal road in the park be named as X and Y as shown.

$$\text{Now, number of paths from A to X} = {}^{2+2}C_2 = {}^4C_2 = 6$$

$$\text{Number of paths from Y to B} = {}^{4+2}C_2 = {}^6C_2 = 15.$$

$$\therefore \text{Total number of paths from A to B via the shortest route} = 6 \times 15 = 90.$$

3. [1]

To reach from A to C via B., Neelam will have to first travel from A to B.

There are 90 paths to go from A to B as shown in 92. To reach from B to C she will have to either go from path M or path N as shown in diagram.

$$\therefore \text{paths from B to C via M} = 7 \text{ \& paths from B to C via N} = 6.$$

$$\therefore \text{Total paths between B \& C} = 7 + 6 = 13.$$

$$\therefore \text{Total paths from A to C via B} = 90 \times 13 = 1170.$$

4. [5]

From the definition if 'seed' we can make of that the function is the sum of digits of 'n'.

\therefore We need to find the count of the numbers below 500 which are divisible by 9. All the numbers divisible by 9.

Satisfy the given condition of seed $(n) = 9$.

495 is the last multiple of 9 below 500.

$$\therefore \text{seed } (n) = 9 \Rightarrow \frac{495}{9} = 55 \text{ values for n below 500.}$$

5. [3]

$$\text{Let } S = 1 + 2 + 3 + \dots + 40 = \sum_{n=1}^{40} n = \frac{40 \times 41}{2} = 820$$

After first iteration any 2 numbers on the board a, b are replaced by $(a + b - 1)$

\therefore After every iteration S reduces by 1.

$$\Rightarrow \text{After 39 iterations } S = 820 - 39 = 781.$$

6. [4]
Consider statement A :
83 players play in round 1
∴ The number of players in subsequent rounds are :

Round	Players
1	83
2	42
3	21
4	11
5	6
6	3
7	2 → Final Round.

⇒ Champion would have played either 6 or 7 rounds depending on whether he got any bye or not.
∴ It is not possible to answer using A alone.

Consider Statement B:
The champion has received a bye, however, the total number of players are not mentioned.
∴ It is not possible to answer using B alone.

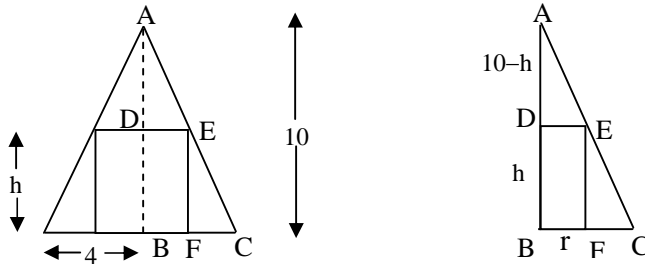
Consider both statements A & B :
We have the number of players and we also know that the champion had received a bye.
∴ we can answer using both A & B statements together.

7. [4]
Consider Statement A :
For $65 < n < 128$ there will be exactly one bye for $n = 96, 112, 120, 124, 126, 127$
∴ It is not possible to answer using A alone.
Consider Statement B :
A third round is possible for $n = 123$ & 124 .
∴ It is not possible to answer using B alone.

Consider both Statements A & B :
Taking both the Statements together only $n = 124$ satisfies all the conditions.
∴ We can answer using both Statements together.

8. [2]
Initial quantity = x kg.
After first customer's purchase = $x - \left[\frac{x}{2} + \frac{1}{2} \right] = \frac{x}{2} - \frac{1}{2}$
After second customer's purchase = $\left[\frac{x}{2} - \frac{1}{2} \right] - \left[\frac{x}{4} - \frac{1}{4} + \frac{1}{2} \right] = \frac{x}{4} - \frac{3}{4}$
After third customer's purchase = $\left[\frac{x}{4} - \frac{3}{4} \right] - \left[\frac{x}{8} - \frac{3}{8} + \frac{1}{2} \right] = \frac{x}{8} - \frac{7}{8}$
No rice was left after third customer purchase ∴ $\frac{x}{8} - \frac{7}{8} = 0 \Rightarrow x = 7$.

9. [1]



From the figure it is clear that $\triangle AED$ is similar to $\triangle ABC$

$$\therefore \frac{AD}{DE} = \frac{AB}{BC} = \frac{10}{4} = \frac{5}{2}$$

$$\therefore \frac{10-h}{\pi} = \frac{5}{2}$$

$$\therefore 20 - 2h = 5r$$

$$\therefore 2h = 20 - 5r$$

$$\begin{aligned} \text{Now, surface area of cylinder} &= 2\pi r^2 + 2\pi rh \\ &= 2\pi \left[r^2 + r(20 - 5r)/2 \right] \\ &= 2\pi \left[r^2 + 10r - (5r^2)/2 \right] \\ &= \pi \left[20r - 3r^2 \right] \end{aligned}$$

To find the maximum surface area of the cylinder we need to take the first order derivative of the equation.

$$\therefore f(r) = \pi \left[20r - 3r^2 \right]$$

$$f'(r) = \pi \left[20 - 6r \right]$$

This derivative will be '0' at the maxima

$$\therefore r = \frac{10}{3} \text{ for maximum surface area of cylinder}$$

$$\therefore \text{Maximum surface area} = \pi \left[20 \left(\frac{10}{3} \right) - 3 \left(\frac{10}{3} \right)^2 \right] = \frac{100\pi}{3}$$

10. [3]

Let the three sides be $A = 8$ cm, $B = 15$ cm, $C = x$ cm.

If C is the longest side then $15 < C < 23$ ($\because 15 + 8 = 23$)

$$\text{Also, we observe that } 8^2 + 15^2 = 289 = (17)^2$$

\Rightarrow At $C = 17$ the triangle is a right angled triangle.

\therefore The triangle is an obtuse angle Δ for $C > 17$ & $C < 23$.

$C = 18, 19, 20, 21, 22$.

Now, assume that B is the longest side

$$\therefore 7 < C < 15 \dots (\because 15 - 8 = 7)$$

Now, for the triangle to be an obtuse angled Δ .

$$A^2 + C^2 < B^2$$

$$\therefore 8^2 + C^2 < 15^2$$

$$\therefore C^2 < 15^2 - 8^2$$

$$\therefore C^2 < 161$$

$$\therefore C < \sqrt{161} \Rightarrow C < 12.7...$$

$$\therefore C = 8, 9, 10, 11, 12$$

Hence, there are 10 possible integer values for C

11. [1]

The three integers are $m, m + 1, m + 2$

$$\text{Also } [m + (m + 1)^2 + (m + 2)^3] = [m + (m + 1) + (m + 2)]^2$$

$$\therefore m + (m^2 + 2m + 1) + (m^3 + 6m^2 + 12m + 8) = [3m + 3]^2$$

$$\therefore m^3 + 7m^2 + 15m + 9 = 9m^2 + 18m + 9$$

$$\therefore m^3 - 2m^2 - 3m = 0$$

$$\therefore m(m^2 - 2m - 3) = 0$$

$$\therefore m(m - 3)(m + 1) = 0$$

Now, $m \neq 0, -1$ as m is a positive integer, $\therefore m = 3$.

12. [4]

For all the numbers below 4000 the integer required is a four digit number starting with 1, 2 or 3.

\therefore Total possibilities :

First digit = 3 ... (1, 2, 3)

Second digit = 5 ... (0, 1, 2, 3, 4)

Third digit = 5 ... (0, 1, 2, 3, 4)

Fourth digit = 5 ... (0, 1, 2, 3, 4)

\therefore Total possibilities = $3 \times 5 \times 5 \times 5 = 375$

WE also need to consider 4000

\therefore Required answer = $375 + 1 = 376$.

13. [1]

Consider first term:

$$\sqrt{1 + \frac{1}{1^2} + \frac{1}{2^2}} = \sqrt{1 + 1 + \frac{1}{4}} = \sqrt{2.25} = 1.5 = 2 - \frac{1}{2}$$

Consider sum of first two terms :

$$\begin{aligned} 1.5 + \sqrt{1 + \frac{1}{2^2} + \frac{1}{3^2}} &= 1.5 + \sqrt{1 + \frac{1}{4} + \frac{1}{9}} = 1.5 + \sqrt{\frac{36 + 9 + 4}{36}} \\ &= 1.5 + \sqrt{\frac{49}{36}} = 1.5 + \frac{7}{6} = \frac{9}{6} + \frac{7}{6} = \frac{16}{6} = \frac{8}{3} = 3 - \frac{1}{3} \end{aligned}$$

$$\text{Similarly, } \sqrt{1 + \frac{1}{1^2} + \frac{1}{2^2}} + \dots + \sqrt{1 + \frac{1}{2007^2} + \frac{1}{2008^2}} = 2008 - \frac{1}{2008}$$

14. [5]

$$A(\Delta ABC) = \frac{abc}{4R}$$

Where $a = AB, b = BC, c = CA, R =$ Circumradius of ΔABC

$$\text{Also } A(\Delta ABC) = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\frac{1}{2} \times BC \times AD = \frac{1}{2} \times b \times 3$$

$$\begin{aligned} \therefore \frac{abc}{4R} &= \frac{3}{2}b \\ \therefore \frac{17.5 \times 9 \times b}{4R} &= \frac{3}{2}b \\ \therefore R &= \frac{17.5 \times 9}{4} \times \frac{2}{3} = 26.25 \end{aligned}$$

15. [2]

$$f(xy) = f(x)f(y) \text{ for } x, y \in R.$$

$$\text{Now } f(2) = f(2 \times 1) = f(2) \times f(1)$$

$$\Rightarrow f(1) = 1 \left[\because f(2) \neq 0 \right] \text{ Also } f(1) = f\left(2 \times \frac{1}{2}\right) = f(2) \times f\left(\frac{1}{2}\right)$$

$$\therefore f\left(\frac{1}{2}\right) \times f(2) = f(1)$$

$$\therefore 4f\left(\frac{1}{2}\right) = 1$$

$$\therefore f\left(\frac{1}{2}\right) = \frac{1}{4}$$

16. [3]

$$7^{2008} = [7^4]^{502} = [2401]^{502} = [2400 + 1]^{502}$$

The expansion of the above term results in 503 terms

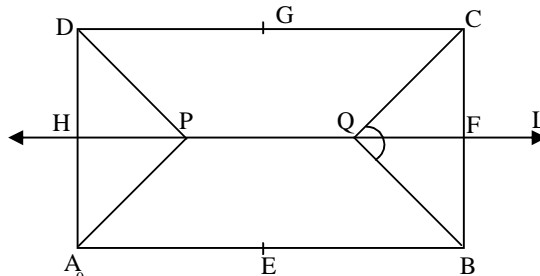
$$[2400 + 1]^{502} = (2400)^{502} + {}^{502}C_2 (2400)^{501} (1)^1 + \dots + {}^{502}C_{501} (2400)^1 (1)^{501} + (1)^{502}$$

It can be observed that the first 502 terms has a minimum index of 1 for 2400 and therefore will always end with ..00.

$$\text{The last term} = (1)^{502} = 01$$

$$\therefore (2400 + 1)^{502} = \dots\dots\dots 01.$$

17. [5]



$$\angle APD = \angle BQC = 120^\circ$$

$$\therefore \angle QCF = 30^\circ \text{ and } \angle CQF = 60^\circ$$

Let $CF = x$

$$\therefore CQ = \frac{2}{\sqrt{3}}x \text{ \& } QF = \frac{x}{\sqrt{3}}$$

$$A(\Delta CQF) = \frac{1}{2} \times CF \times QF = \frac{x}{\sqrt{3}} = \frac{x^2}{2\sqrt{3}}$$

$$\text{Similarly } a(\Delta QFB) = A(\Delta DHP) = A(\Delta AHP) = \frac{x^2}{2\sqrt{3}}$$

$$\therefore A(\Delta DAP) + A(\Delta CQB) = 4 \times \frac{x^2}{2\sqrt{3}} = \frac{2x^2}{\sqrt{3}}$$

$$\text{Also } A(\square ABCD) = 2x \times 2x = 4x^2$$

$$\begin{aligned} \therefore \text{Area of ABQCDP} &= 4x^2 - \frac{2x^2}{\sqrt{3}} \\ &= \frac{(4\sqrt{3} - 2)x^2}{\sqrt{3}} \end{aligned}$$

$$\begin{aligned} \therefore \text{Required ratio} &= \frac{(4\sqrt{3} - 2)x^2}{\sqrt{3}} \\ &= \frac{2x^2}{\sqrt{3}} = \frac{2x^2}{\sqrt{3}} = \frac{4\sqrt{3} - 2}{2} = 2\sqrt{3} - 1. \end{aligned}$$

18. [2]

Let the three consecutive roots be $(x-1)$, x & $(x+1)$

Now, b = Sum of products of roots taken two at a time

$$= (x-1)x + x(x+1) + (x-1)(x+1) = 3x^2 - 1$$

$$\therefore b_{\min} = 3x^2 - 1 = 3(0)^2 - 1 = -1$$

19. [2]

Given $f(x) = ax^2 + bx + c \dots (a \neq 0)$

Also $f(3) = 0$

$$\therefore 9a + 3b + c = 0 \dots (i)$$

$$f(5) = -3f(2)$$

$$\therefore 25a + 5b + c = -12a - 6b - 3c$$

$$\therefore 37a + 11b + 4c = 0 \dots (ii)$$

Solving (i) & (ii) we get, $a - b = 0$

$$\therefore a = b$$

$$\therefore f(x) = ax^2 + ax + c$$

Dividing $f(x)$ by $(x - 3)$ we get $c = -12a$.

$$\therefore f(x) = ax^2 + ax - 12a$$

$$\therefore f(x) = 0 \Rightarrow -4 \text{ in the second root.}$$

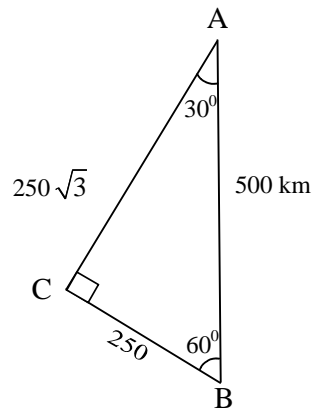
20. [5]

$$a + b + c = a + a - 12a = -10a$$

However the value of a is not known

$\therefore a + b + c$ can not be determined.

21. [2]



$$\begin{aligned} \angle A &= 30^\circ \text{ \& } \angle B = 60^\circ \\ \therefore \angle C &= 90^\circ \\ \text{Also } AB &= 500 \text{ km} \\ \therefore BC &= 250\sqrt{3} \text{ km \& } AC = 250 \text{ km} \end{aligned}$$

Rahim plans to travel from A to C at 70 km per hour.

$$\therefore \text{Total time} = \frac{250\sqrt{3}}{70} \cong 6 \text{ hours } 12 \text{ minutes (approx)}$$

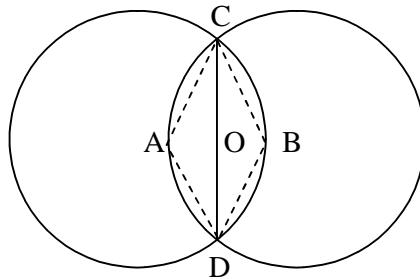
$$\text{Time required by train to travel from B to C} = \frac{250}{5} = 5 \text{ hrs}$$

\therefore Train reaches C at : 8 + 5 = 13hr = 1 p.m.

\therefore Rahim should reach at C before 1:00 – 15 min. = 12:45 p.m.

\therefore Rahim should leave A before : 12:45 – 6hrs 11min = 6:34 a.m. \approx 6:30 a.m.

22. [5]



$$\text{Area of intersected region} = 2 \left[A(\text{sector B}) - A(\triangle CBD) \right]$$

Now, $AB = BC = AC = \text{radii}$

\therefore $\triangle ACB$ is an equilateral triangle

Similarly $\triangle ABD$ is also an equilateral \triangle

$$\angle CBD = \angle CBA + \angle ABD = 60 + 60 = 120^\circ$$

$$\therefore A(\text{sector B}) = \frac{120}{360} \times \pi r^2 = \frac{1}{3} \pi r^2 = \frac{\pi}{3}$$

$$A(\triangle CBD) = \frac{1}{2} \times \text{base} \times \text{height} = \frac{1}{2} \times CD \times BO$$

Now, $\triangle ACO = \triangle BOD$

$$\therefore A(\triangle CBD) = A(\triangle ACB) = \frac{1}{2} \times CO \times AB = \frac{1}{2} \times \frac{\sqrt{3}}{2} \times 1 = \frac{\sqrt{3}}{4}$$

$$\therefore \text{Area of intersected region} = 2 \left[\frac{\pi}{3} - \frac{\sqrt{3}}{4} \right] = \frac{2\pi}{3} - \frac{\sqrt{3}}{2}$$

23. and 24:

Raju bets Rs.3000 on Red, Rs.2000 on white and Rs.1000 on Black and end up with no profit & no loss.

∴ There are 3 possibilities as shown below:

Horse	Rank		
	Case 1	Case 2	Case 3
Red	3	4/5	4/5
White	4/5	3	2
Black	2	1	4/5
Grey	1/4/5	2/4/5	1/3
Spotted	1/4/5	2/4/5	1/3

Case 1 : $3000 + 3 \times (1000)$ i.e. Black 2nd & Red 3rd

Case 2 : $2000 + 4(1000)$ i.e. Black 1st & white 3rd

Case 3 : $0 + 3(2000)$ i.e. white 2nd & Red & Black 4/5th

Hence, we can conclude

23. [4]

24. [3]

25. [3]

Let $S_1 = 17, 21, 25, \dots, 417$ i.e. $S_1 = 17 + 4k$

And $S_2 = 16, 21, 26, \dots, 466$ i.e. $S_2 = 16 + 5m$

In order to have same terms, $17 + 4k = 16 + 5m$

This happens only 20 times: 21, 41, ..., 401.

Section II

26. to 28:

X axis represents the average revenue from transfer of each unit of data (ARDT)

$$\therefore x \text{ axis} = \frac{\text{Revenue from Data}}{\text{Volume of Data}}$$

Y axis represents Revenue from Data as a % of total Revenue

$$\therefore y \text{ axis} = \frac{\text{Revenue from Data}}{\text{Total of Data}} \times 100$$

$$\begin{aligned} \therefore \text{Revenue from Data} &= (x \text{ axis}) \times (\text{Volume of Data}) \\ &= (y \text{ axis}) \times \frac{\text{Total Revenue}}{100} \end{aligned}$$

26. [3]

Revenue from Data in 2010 for India = $3 \times 9\% = 27\%$

Revenue from Data in 2010 for Sweden = $2 \times 18\% = 36\%$

Total Revenue of India in 2010 = 2(Total Revenue of Sweden in 2010)

ARDT of Sweden remains same in 2010 i.e. \$6(from graph)

Let the volume of data transfer by 'y' for both the countries

$$\therefore \frac{6y}{x} \times 100 = 36 \Rightarrow y = \frac{6x}{100}$$

Let ARDT of India be z in 2010.

$$\therefore \frac{yz}{2x} \times 100 = 27$$

$$\therefore \frac{z}{2x} \times \frac{6x}{100} \times 100 = 27$$

$$\therefore 3z = 27$$

$$\therefore z = 9.$$

\therefore ARDT of India in 2010 = \$9.

$$\% \text{ Increase} = \frac{9-1}{1} \times 100 = 800\%$$

27. [5]

Let the volume of data transfer in India and Singapore be x,

$$\therefore \text{x axis} = \frac{\text{Re venue from Data}}{\text{Total Volume}} = \frac{\text{Re venue from Data}}{x}$$

$$\text{y axis} = \frac{\text{Re venue from Data}}{\text{Total Re venue}} \times 100$$

$$\therefore \text{Total Tevenue} = \frac{(\text{x axis}) \times x}{(\text{y axis})} \times 100$$

$$\therefore x = \frac{(\text{Total Re venue}) \times (\text{y axis})}{(\text{x axis}) \times 100}$$

Total volume for India & Singapore is 21

$$\therefore \frac{(\text{Total Re venue})\text{India} \times 9}{1 \times 100} = \frac{(\text{Total Re venue})\text{Singapore} \times 21}{9 \times 100}$$

$$\therefore (\text{Total Re venue})\text{India} = \frac{1}{4} (\text{Total Re venue})\text{Singapore}$$

28. [4]

From the equations we can see that, $\frac{\text{ARDT} \times \text{Total Volume}}{\text{Total Re venue}} = \% \text{ of total revenue}$

i.e. we want to pair for whom the ratio.

$\frac{\% \text{ of total revenue}}{\text{ARDT}}$ is approximately same.

(1) Philippines = $\frac{54}{3}$; Austria = $\frac{19}{8}$ Not same.

(2) Canada = $\frac{13}{8}$; Polond = $\frac{22}{6}$ Not same

(3) Germany = $\frac{25}{6}$; USA = $\frac{17}{11}$ Not same

(4) UK = $\frac{29}{13}$; Spain = $\frac{15}{6}$ Almost same

(5) Denmark = $\frac{12}{6}$; Mexico = $\frac{17}{3}$ Not same

Alternatively....

Draw a line from origin to one of the two countries and extend it further.

If the line intersects the other country as well then it satisfies the conditions.

Only UK & Spain can be connected to origin through a straight line.

29. to 31:

Sections where the cut-off's are not mentioned need not be considered.

The aggregate cut-off marks need not be the sum of all the sectional cut-off's.

29. [3]

In order to get calls from two colleges Charlie has to score 175 aggregate. Only then he gets calls from college 2 and (3)

Section A & D cut-off's are not mentioned for both colleges

30. [2]

To get calls from all colleges, Bhama has to clear the aggregate cut-off's as well as sectional cut-off for all colleges

Highest Section A cut-off = 45 (College 5)

Highest Section B cut-off = 45 (College 2)

Highest Section C cut-off = 46 (College 3)

Highest Section D cut-off = 45 (College 4)

∴ M in Aggregate mark = 181.

31. [3]

Aditya did not get a call from any college.

⇒ He misses out on any one of the sectional cut-off's

To maximize his score we consider he misses out in the sectional cut-off for section C & section D as there two sections cover all the colleges.

∴ His score in section A = 50 & section B = 50.

Section C score = 41, Section D score = 43.

∴ Aditya's maximum score = 50 + 50 + 41 + 43 = 184.

Q. 32 to 34:

32. [3]

Gross pay of HR department = $5000 \times 5 \times 1.7 = 42,500$

∴ Average gross pay = $\frac{42500}{5} = 8500$

Gross pay of the person transferred to HR department = $8000 \times 1.9 = 15,200$

∴ New gross pay of department = $42,500 + 15,200 = 57,700$

New, average gross pay = $\frac{57,700}{6} \approx 9617$

∴ percentage change = $\frac{9617 - 8500}{8500} \times 100 \approx 13\%$

33. [3]

Average age of Finance department = 30 years

Let the employee transferred from Finance department be of 'x' yrs. Employee transferred from Marketing to Finance be of 'y' years & employee transferred from Marketing to HR be of 'z' year.

∴ New Average age of Finance Dept. = $\frac{30 \times 20 - x + y}{20} = 31$

∴ $y - x = 20$

Average age of Marketing Dept. = 35 years.

∴ New Average age of Marketing Dept. = $\frac{30 \times 35 + x - y - z}{29} = 35$

∴ $y + z - x = 35$

∴ $z + (y - x) = 35$

$$\therefore z + 20 = 35$$

$$\therefore z = 15.$$

$$\therefore \text{New Average age of HR Dept} = \frac{45 \times 5 + 15}{6} = 40 \text{ years}$$

34. [2]

Current Average basic pay for HR Dept. = Rs.5000

$$\text{New Average basic pay for HR Dept.} = \frac{5000 \times 5 + 2 \times 6000 + 1 \times 8000}{5 + 2 + 1} = \frac{45000}{8} = 5625$$

$$\therefore \% \text{ change} = \frac{5625 - 5000}{5000} \times 100 = \frac{625}{5000} \times 100 = 12.5\%$$

Q.35 to 38:

STAGE I :

D and E lost one match

B lost one match

C and F lost two matches

\therefore A is the only team which remains undefeated in Stage I.

Also, B, D & E have won atleast one match.

\therefore C & F lost all their Stage I matches.

Hence the 9 matches of Stage I are as follows :

Winner	vs	Loser	Winner	vs	Loser	Winner	vs	Loser
A	vs	D	B	vs	E	B	vs	F
A	vs	B	D	vs	C	E	vs	F
A	vs	C	D	vs	F	E	vs	C

Note : F did not play against the top team of Stage I is useful for filling this table.

STAGE II :

A lost the next two matches, the bottom two teams of Stage I are C and F.

Matches for Stage II are as follows :

A vs E	B vs C	C vs F
A vs F	B vs D	D vs E

F won against A (\because A lost all its matches in Stage II)

\Rightarrow F won both its matches & C lost both its matches

E also won against A and one more team lost both its matches.

\therefore 3 teams lost all the matches & 3 won all the matches in Stage II

\therefore E won against D as well

In turn, D lost to B, who both its matches

\therefore Stage II matches can be stated as :

Winner	vs	Loser	Winner	vs	Loser	Winner	vs	Loser
F	vs	A	E	vs	D	B	vs	C
F	vs	C	E	vs	A	B	vs	D

35. [5]

36. [5]

37. [2]

38. [4]

Q 39 to 41

From the information given we can understand the following:

House	Colour	Height
P	White	
Q	Green	
R	Yellow	
S		
T		(Tallest)
U	Orange	

Now, from (vii) we can see that P, U & S are on the same side; with U in the centre.

From (viii) & (ix) we get,

P/S U S/P

R/T Q T/R

The house opposite to S has to be T.

∴ Colour of S is Red.[from statement (V)]

Hence we can get the final arrangement as:

White P	Orange U	Red S
R Yellow	Q Green	T Blue

Note: We are assuming P & R to be on left and S & T on right as the assumption does not affect the case—let & no date is available on the positioning of them.

Now from (v) (vi) & (x) we get

T (tallest) > S, Q > P > R > U (shortest)

39. [5]

The second tallest house is either S or Q.

Hence the answer cannot be determined.

40. [4]

S (Red) is the house diagonally opposite to R (Yellow).

41. [2]

Colour of tallest house T is blue.

Q 42 to 46

Following are the trading pattern followed by each trade.

Abdul : Buy = 10 a.m. Sell = 3 p.m.

Bikram : Buy = 10 a.m., 11 a.m., 12 noon, 1 p.m., 2 p.m. Sell = 3 p.m.

Chetan : Buy = 10 a.m., 11 a.m., 12 noon, 1 p.m., 2 p.m. Sell = 3 p.m.

42. [5]

Abdul:

Abdul buys all his shares at a single point. However as the direction of market is not known, we cannot compare his returns to that of Bikram or Chetan.

Bikram :

Bikram buys the same numbers of shares every hour.

Chetan:

Chetan buys the same amount every time. As his strategy is based on the prices, whenever the prices are changing, Chetan will get better returns than Bikram. However, if the prices are steady the returns to Bikram & Chetan will be same.

Hence we cannot conclude.

43. [5]

The market prices are fluctuating. However in which direction, the swings are is uncertain. As a result of it we cannot conclude which trader will earn the maximum return on that day.

44. [1]

On a “Boom Day” the prices keep on rising the entire day.

∴ Abdul bought at the lowest price & sold at the highest price. He made the maximum profit.

Bikram buys the same number of shares every house.

∴ He will buy shares even at higher prices.

Chetan buys the same amount.

Hence if the price rise the number of shares he gets is lesser, thereby increasing his profits.

∴ Bikram earns the least returns in a “Boom Day”

Additional data for Q.45 & 46:

Let us assume the prices of the share at different times to be as follows:

Time	10 a.m.	11 a.m.	12 noon	1 p.m.	2 p.m.	3 p.m.
Price	a	b	c	d	e	f

Abdul made a loss.

∴ The closing price will be less than the opening price, i.e. $a > f$

Emily buys / sells same number of shares every instance and makes profit.

∴ $(a + d) < (c + f)$II

Similarly for Dane, $(d + e + f) > (a + b + c)$III

Prices increased from 2 p.m. to 3 p.m. i.e. $e < f$ (IV)

At 12 noon, prices were lower than opening price.

i.e. $a > c$...(V)

Now, from (I) & (II) we get, $c > d$ (VI)

From (I) (II) & (IV) we can say that $e > b$ (VII)

∴ $a > f > e > b$ and $a > c > d$

⇒ a is the highest price.

45. [1]

The share price was highest at 10 a.m.

46. [1] & [4]

$e > b$ ⇒ (1) is false.

$d > c$ ⇒ (4) is also false.

47. [4]

% change in the gap between subscription revenues in US and Europe :

Year	2003	2004	2005	2006	2007	2008	2009	2010
Gap in million	300	330	320	270	210	180	110	100
USD								
Absolute %	–	10	3	16	26	14	39	9
Change								

∴ The absolute value of changes is highest in 2008 – 09.

48. [3]

$$\text{Growth rate in 2005 (over 2004)} = \frac{270-180}{180} \times 100 = 50\%$$

$$\text{Growth rate in 2007 (over 2006)} = \frac{500-375}{375} \times 100 = 33\%$$

$$\therefore \text{Required percentage} = \frac{50-33}{50} = 35\%$$

49. [1]

Percentage growth of 2007 (over 2006) = 33%

\therefore The subscription in Europe in 2008 = $1.33 \times 500 = 666$

\therefore The difference = $666 - 610 = 56 \approx 50$ (closest option)

The closest option is [1]

50. [1]

Let the total number of subscriber in Europe in 2003 be 100.

\therefore In Europe:

Year	2003	2004	2005	2006	2007	2008	2009	2010
Men	60	63	66.15	69.5	73	76.65	80.5	84.5
Women	40	44	48.4	53.25	58.5	64.5	71	78
Total	100							162.5

\therefore Percentage growth = $162.5 - 100 \approx 62$.

51. [3]

Option 1 uses the verb 'run' appropriately with "fast" as an adverb qualifying it.

The phrase, 'against the run of play' is used in sports to describe an event or action against the flow of the game. For example, if Soccer team A has all the possession, all the chances and dictates the game and team B has one chance and score from it, then that goal is against the run of play. The term is used correctly in option 2.

Option 3 is incorrect. A person cannot "run over" someone. It can be a vehicle that can run over someone.

A person can 'run after' (chase) someone, 'run up to' or 'run around' someone.

In option 4, a book can have a "popular run", if a great number of copies of that book are getting sold.

In option 5, "run-of-the-mill production" is an 'average' or 'mediocre' or 'banal', 'commonplace' production that is not interesting. The usage here is correct.

Hence, the correct answer is option [3]

52. [5]

In option 1, "firing a round of tear gas shells" means 'a single discharge by one firearm' and the word 'round' is correctly used.

The phrase, 'round the corner' in option 2 means, 'nearby, a short distance away'.

In option 3, the usage is correct. "Merry-go-around" is a 'carrousel in amusement parks, carnivals, etc. A merry-go-round is a revolving, circular platform with wooden horses or other animals, benches, etc., on which people may sit or ride, usually to the accompaniment of mechanical or recorded music'.

In option 4, the usage "on a hospital round" is correct. This is used to signify that the doctor is surveying the wards checking on patients.

- “Come round” in the fifth option means ‘to change one’s opinion, decision, especially to agree with another’s. A better option would have been to come around to admitting it meaning to change one’s position or opinion.
Hence, the correct answer is option [5]
53. [2]
“Beginning to buckle” in option 1 indicates that their knees were ready to collapse or that they were extremely tired.
“Buckle” is inappropriately used in option 2. The horse can break into a trot or a gallop. It may buck or it may even break into somebody’s garden, but not “into a buckle”.
Option 3 uses “buckle” in the sense of ‘collapse’ or ‘surrender’.
In option 4, “buckle” again refers to ‘bend’ or ‘collapse’, even ‘break’.
“To buckle up”, in option 5, means ‘to fasten one’s belt, seat belt, or buckles’.
Hence, the correct answer is option [2]
54. [5]
“File” can be defined as ‘a folder, cabinet, other container in which papers, letters, etc., are arranged in convenient order for storage or reference. ‘Another definition is ‘a collection of papers, records, etc., arranged in convenient order’. Option 1 uses the word in this sense.
In option 2, “to file” means ‘to apply’. The usage is correct.
In option 3, “file” refers to ‘a line of persons or things arranged one behind another’. Marching in a single file is similar to marching in a single column.
A “file” can even be a tool with ridges to smoothen or even out rough surfaces. Option 4 uses this meaning.
There is no phrase or idiom “broke the file” as mentioned in option 5. A solder can break ‘rank’ but not a “file”.
Hence, the correct answer is option [5]
55. [3]
The statement condemns the way the genocides have been described and states the description to be sinister. The word for the first blank has to be synonymous to sinister.
Options 1 and 2 with ‘innovative’ and ‘eliminated’ as they do not give any negative connotations.
Option 4 too can be eliminated as ‘exigent’ has more to do with ‘demanding and urgent’ than something terrible.
In option 5, “tragic” does not fit in the context with ‘mis-described’ and ‘hand-washing rhetoric’.
‘disingenuous’ – ‘insincere’, ‘deceitful’, ‘hypocritical’ fits contextually with the word “manner” which follows the blank. In the second blank, a contrasting word to “perpetrators” is required.
‘Victims’ is a better fit compared to the words in all the other options.
Hence, the correct answer is option [3]
56. [4]
The first blank can have any of the three words mentioned in the options – ‘scrutinizers’, ‘observers’, ‘students’.
‘Scrutinizer’ means ‘one who examines or observes with great care; inspects critically’.
‘Observe’ means ‘a person who watches, views or notes for a scientific, official, or other special purpose.’
‘Student’ means ‘an individual formally engaged in learning, especially one enrolled in a school or college; pupil’
Out of these three, the part of the sentence prior to the first blank clearly suggests that the people involved in the exercise were experts in the subject under consideration. This eliminates the possibility of ‘students’ fitting into the first blank, and thus option 5.
The second blank has four possible alternatives.
‘Believe’ means ‘to have confidence in the truth, the existence or the reliability of something’.

‘Agree’ means ‘to have the same views’.

‘Suggest’ means ‘to mention or introduce’.

‘Concede’ means ‘to make concessions, yield’.

The verb prior to the second blank denotes that the action is not voluntary but performed under duress.

It is not possible to be forced to place confidence in something. Therefore, it is difficult to be forced to ‘believe’ in something. This eliminates option 1.

The first part of the sentence makes it clear that contrary evidence was being gathered. If evidence opposite in nature or character is being gathered then it cannot be said that the ancient astronomers had the same view.

This removes ‘agree’ from further consideration as fitting into the second blank. This eliminates option 2.

The very element of force or compulsion eliminates ‘suggest’ as an appropriate fit for the second blank.

Therefore, option 3 is eliminated.

Both ‘observers’ and ‘concede’ fit in correctly.

Hence, the correct answer is option **[4]**

57. **[2]**

The first word needs to be related to something that is ‘inborn’, because it is an endowment or gift.

Two words come close to mean that ‘congenital’ and ‘genetic’.

‘Congenital’, may be ‘innate’ or ‘inherited’ or caused by the “environment”.

“Genetic”, means ‘pertaining to origins’.

However, the “effect of the environment” is more related to general teaching or ‘education’ than to ‘pedagogy’. ‘Pedagogy’ is ‘the function or work of a teacher’ or ‘science of teaching; education; instructional methods’.

Hence, the correct answer is option **[2]**

58. **[1]**

The first blank can have ‘institutions’, ‘organs’ or ‘tenets’. ‘Aspects’, compared to other options can be eliminated.

The second blank has the key to the answer. The phrase ‘suited by’ can be best followed by ‘fixated’, to make the sense complete – minds which were suited by ‘fixation’ or a preoccupation with one subject, issue, an obsession “to an earlier kind of world”. Also, ‘fixation’ flows perfectly with the idea of ‘an earlier kind of world’.

Hence, the correct answer is option **[1]**

59. **[1]**

Statement A is incorrect because the word immigrant has been mis-spelt as “immigrant” (with an ‘m’ missing). Option 3, 4 and 5 can be eliminated.

We are left with only options 1(B only) and 2(B and C).

Statement C should have a comma at the end, after “David Stern”

Statement B is correct.

Statement D should be ‘an owner of a dry goods business’.

Statement E can be corrected in at least two different ways. “This dry goods business would later be known as...” Or, “This dry goods business later became known as ...” (Omitted ‘would’).

Hence, the correct answer is option **[1]**

60. **[4]**

The sentence takes off correctly in statement A.

Statement B is incorrect because there is a pronoun agreement error. It should be, “Nike implemented comprehensive changes” in its (not their) labour policy. The possessive pronoun ‘its’ should replace ‘their’ as it refers to the antecedent “Nike” which is singular.

Statement C does not require the comma given at the end of the line. The sentence (C and D) can be phrased as ‘Perhaps sensing that the rising tide of global labour concerns from the public would become a prominent media issue.’ It can be seen from this sentence that part D can be left unaltered and can be taken as correct.

The word ‘industry’ begins with a vowel sound and hence the article ‘an’ should be used and not ‘a’.

Hence, the correct answer is option [4]

61. [3]

Statement A and C are correct.

A million people (in B) would have lost their homes– not “home”. Therefore, statement B is incorrect.

Statements D does not logically continue the idea started in C. Therefore, it is incorrect.

Statement E is incorrect. There is a subject–verb agreement error here. In place of “The death count have just begun”, it should be, ‘The death count has just begun.’ ‘Death count’, a singular subject, should take a singular verb (has).

Hence, the correct answer is option [3]

62. [5]

Statement B has tense inconsistency. ‘Lived’ is in past tense, hence, ‘associated’ in the same sentence should be ‘associated’ (in simple past as well)

Statement C again has tense inconsistency. The word ‘seem’ should become ‘seemed’ to go with ‘were’ and ‘visited’ in the same sentence.

Statement E is incorrect and we need to rephrase it. We may either change ‘effort’ to ‘efforts’ or change it to ‘an effort’.

Statements A and D are correct.

Hence, the correct answer is option [5]

63. [3]

Anita wore a “brooch”, a pin or a clasp. “Broach” is used in several ways(e.g. ‘broach a subject’, introduce a new topic’) but none in context of jewellery or something to be worn.

The second word is “councilor” which means ‘a person specially designated or selected to act in an advisory, administrative, or legislative capacity’ as against a “counselor” meaning ‘a person who counsels or advises’ which is more generic.

“Advice” is used as a noun whereas “advise” is used as a verb. In the third sentence, ‘I would like your advice/advise..’ we need a noun.

Therefore, “Advice” is the right word.

The fourth word refers to the end of the “film”, the ‘climax’. “Climactic” is the adjective form of ‘climax’ and the word for the fourth sentence. “Climatic pertains ‘to climate’.

“Flair” is a natural talent, aptitude, ability or knack’. The word to be used here is “flare”, which mans, ‘to spread gradually outward as the bottom of a pair of trousers or a wide skirt’.

Therefore, the correct sequence is BAAAB.

Hence, the correct answer is [3].

65. [2]

A “retort” can be “ironic”, but only after it is uttered or said. Here, a more appropriate word would be “caustic” or ‘sarcastic.’ “Cogent” is ‘convincing’ or ‘well–argued’ and has a better ring to it than just “valid”. It is a more appropriate word than “valid” in this context. The third word is “averse” meaning ‘unwilling or unenthusiastic’. “Adverse” means ‘unfavourable’ and it is usually used with words like weather)adverse weather, conditions etc.)

“Coup e” is the ‘end compartment in a railroad car’. Contextually a “coup e” gets detached while a train is climbing up the hill’ fits in.

“Coup” is a ‘clever action or accomplishment’ and is irrelevant in this context.

A peal is 'a ringing of a set of bells. (Alternate usage : 'she broke into peals of laughter'). Thus, the word required is 'pealing' as it deals with bells.

"peel" means to 'to strip or cut away the skin or bark from' eg. Peeling away the skin made it easier to cut the fruit.

Therefore, the correct sequence BBBAB.

Hence, the correct answer is [2].

66. [1]

"Defusing" or de-fusing is 'to resolve or cool (a situation)'.
"Deffusing" is 'spreading' (Guru's ideas) and the appropriate word for the first sentence.

To "bait" is 'to trap or to tease'. The students were asking irrelevant questions to tease or torment the instructor

"Bate" is to 'lessen' or 'restrain'.

"Horde", the third word, refers to ' a mass or group'

"Hoard" is to stockpile".

"Internment" is 'imprisonment' and is the fourth word.

"Interment" is 'burial'.

"Unsocial" is 'having or showing a lack of desire for the company of others".

"Unsociable" goes a step further. It means, 'not sociable: having, showing, or marked by disinclination to friendly social relations; withdrawn. 'A team "could not deal' with someone – is a bit extreme. So, here, "unsociable" is more appropriate. Another way to arrive at the appropriate word here is by elimination. If you were able to figure out most of the other words, "unsocial" would have been in one of the eliminated options.

Therefore, the correct sequence is BABBA.

Hence, the correct answer is option [1]

67. [3]

The main sentence of the paragraph that decides the ending is "On this basis, Henry Perowne loses a number of cases each year. "Option 1 moves away from the core of the paragraph – losing patients.

Option 5 does not complete the paragraph and leaves one wanting for more data to explain the importance of hands being large.

Option 4 loses out on the sentence structure and style. There is no logical continuity to the paragraph.

Option 3 provides a logical finish to the paragraph by showing that inspite of the losing patients, Perowne is not concerned.

Option 2 brings in a disconnect to the idea from the paragraph. It states that other patients 'observations are also negative and those who stay with Perowne do so out of ignorance of available alternatives. This is not in continuation of the main idea expressed in the paragraph.

Hence, the correct answer is option [3]

68. [4]

Option 1 has already been mentioned in the first statement of the paragraph. This does not make it an effective paragraph ending.

Option 2 mentions only OECD countries while the paragraph mentions "powerful industrialized countries" of which the OECD countries are only a part. Furthermore, the option is again a repetition of ideas presented in the paragraph.

The focus of option 3 is on 'China' and 'India', while the focus of the paragraph is not.

Option 5 brings in 'global economic inequity' which is an opinion not expressed or implied in the passage.

Option 4 addresses the fist of the paragraph. Powerful countries, including the OECD countries are posing as climate change champions due to their lackluster economic performance as compared to

China and India which are growing rapidly. 'Climate change champions' in this option completes the paragraph and addresses the point raised in the first sentence.

Hence, the correct answer is option [4]

69. [1]

The paragraph starts with a location (as a backdrop) and moves on to describe things associated with the location. While various things are described about the location, we are looking for a sentence that completes the ideas stated in the paragraph. The paragraph juxtaposes various disparate ideas and cultures together note the saree and sarong, the Indian Jews and the image of religious tolerance.

Option 2 is a disconnect from the main idea of the paragraph – it talks about religious discrimination which is not an idea found in the paragraph.

Option 1 is about Matancherry, which the whole paragraph is about. It brings together the ideas in the paragraph to a logical, cohesive whole.

Option 5, with 'thus' for pretty streets is disconnected. No reason is provided in the paragraph for pastel streets being popular.

It is the majority community which has to show tolerance towards a minority group, not the other way round. The paragraph clearly states "home to the last twelve..." indicating the Indian Jews to be very few in numbers. Option 3 can be eliminated.

Option 4 is contrary to the data provided in the passage.

Hence, the correct answer is option [1]

70. [5]

The essence of the paragraph is the difficulty in differentiating between "Western" and "Eastern" thoughts.

The paragraph starts with a difference between "Western" and "Eastern" and moves on to "thoughts".

The logical completion of the paragraph needs to be in that vein.

Option 2 is logically inconsistent due to the word "dichotomous" between "Occidentalism" and "orientalism" whereas the paragraph states that this dichotomy is "illusory".

Option 3 moves back again to the broad idea of "Western" and "Eastern".

Option 4 is contrary to the paragraph.

Option 5 completes the paragraph logically. The usage of the words, 'thought' and 'purity' (pure) in a slightly different manner makes it the ideal choice as it resonates with the paragraph in that "given the intellectual interconnections" that exist today the origin of a thought can no longer be classified as purely "Western" or purely "Indian." Therefore the origin of a thought cannot be pure in terms of origin.

Both, options 1 and 5, state the idea of thoughts not being easily classified. However, option 5 continues the idea of purity mentioned in the final part of the paragraph whereas option 1 does not. In this context, 1 is generic and 5 is specific.

Hence, the correct answer is option [5]

71. [1]

The question asks for the factor best denoting the case of Rwanda and Haiti.

From the second paragraph, "...one strand consisted of population growth outstripping available resources: a dilemma similar to the one foreseen by Thomas Malthus in 1798 and being played out today in Rwanda, Haiti, and elsewhere. As the archaeologist David Webster succinctly puts it, 'Too many farmers grew too many crops on too much of the landscape.' Compounding that mismatch between population and resources was the second strand: the effects of deforestation and hillside erosion, which caused a decrease in the amount of useable farmland at a time when more rather than less farmland was needed, and possibly exacerbated by an anthropogenic drought resulting from deforestation, by soil nutrient depletion and other soil problems, and by the struggle to prevent bracken ferns from overrunning the fields".

72. [4]
This was essentially a vocabulary question – you need to know or guess the meaning of Anthropogenic. Anthropogenic means ‘caused or produced by humans’.
From the second paragraph, “...anthropogenic drought resulting from deforestation, by soil nutrient depletion and other soil problems, and by the struggle to prevent bracken ferns from overrunning the fields.
Option [1] is incorrect because lack of rain cannot be attributed to human intervention.
Options [2] and [3] are incorrect because they are reasons to the causes of the drought and why the drought and why the drought was anthropogenic.
Option [4] means the same as anthropogenic. Deforestation and soil nutrient depletion can only be caused by humans.
Option [5] is incorrect because a drought caused by climate changes cannot be said to be caused by humans.
73. [3]
This is a direct question.
Option [1] is the fifth strand in the passage, but there is nothing to indicate that had a different impact compared to earlier droughts.
Option [2] has no supporting data in the passage.
Option [4] contradicts the third paragraph, “Maya warfare, already endemic, peaked just before the collapse”.
Option [5] is incorrect because “the third strand consisted of increased fighting, as more and more people fought over fewer resources.” This implies that environmental degradation had nothing to do with this particular drought.
The third paragraph mentions “at the time of previous droughts, there were still uninhabited parts of the Maya landscape, and people at a site affected by drought could save themselves by moving to another site. However, by the time of the Classic collapse the landscape was now full, there was no useful unoccupied land in the vicinity on which to begin anew, and the whole population could not be accommodated in the few areas that continued to have reliable water supplies.” From this option [3] is correct.
74. [4]
Option [1]: The passage does not talk about Copan inhabitants destroying the records.
The first paragraph mentions that “detailed archaeological studies are available for some Maya sites” which contradicts options [2].
Further, since there is no other evidence in the passage, we have no ground for option [3].
Option [5] is mentioned in the third paragraph; however, it does not explain the reasons for Maya collapse.
The passage mentions five possible strands for the Maya collapse. The passage states, “I acknowledge, however, that Maya archaeologists still disagree vigorously among themselves– in part, because the different strands evidently varied in importance among different parts of the Maya realm; because detailed archaeological studies are available for only some Maya sites; and because it remains puzzling why most of the Maya heartland remained nearly empty of population and failed to recover after the collapse and after re-growth of forests.” The summary of this paragraph is option [4].
75. [4]
The second paragraph states, “...population growth outstripping available resources”. This led to deforestation and soil erosion which ultimately led to environmental degradation. This eliminates option [1].
The last paragraph states “...the Maya peak population numbers were followed swiftly by political and social collapse”. This eliminates option [2].

Option [3] is also mentioned in the passage. The third paragraph states “the third strand consisted of increased fighting, as more and more people fought over fewer resources. Maya warfare, already endemic, peaked just before the collapse.”

Option [4] is not mentioned in the passage. The fourth paragraph does state “short-term concerns of the kings and the nobles” but option [5] talks about the ‘Maya population’.

Hence the correct answer is option [5].

76. [3]

Option [1] is incorrect because of the word planned. The passage states, “...many of the concepts of modern art, by contrast, have resulted from the almost accidental meetings of groups of talented individuals at certain times and certain places. The ideas generated by these chance meetings...”.

Neither option [2] nor 4 have been mentioned in the passage.

Option [5] contradicts the passage states, “A scientific discipline develops systematically once its bare tenets have been established, named and categorized as conventions. Many of the concepts of modern art, by contrast, have resulted from the almost accidental meeting of groups of talented individuals at certain times and certain places.” This implies that the concepts of modern art have not been the product of systematic conventions. Moreover the following extract. “Certainly one can understand that artists are wary of being pigeon-holed” as well as “There is good reason to accept the ideas codified by artists and critics, over the past sixty years or so, as having attained the status or independent existence” indicates that the concepts of modern art have not been the product of codification.

Option [3] is explicitly mentioned in the passage, “...many of the concepts of modern art, by contrast, have resulted from the almost accidental meetings of groups of talented individuals at certain times and certain places. The ideas generated by these chance meetings...”

77. [5]

Option [4] is literally correct. But the word “fossil” in this case has been used to draw an analogy between the physical world and “dead” art. Therefore the interpretation of the word “fossil” in this instance is incorrect.

Option [5] can be implied from, “As an art movement slips into temporal perspective, it ceases to be a living organism—becoming, rather, a fossil. This is not to say it becomes useless or uninteresting. Just as a scientist can reconstruct the life of a prehistoric environment from the messages codified into the structure of a fossil, so can an artist decipher whole webs of intellectual and creative possibility from the recorded structure of a ‘dead’ art movement.”

78. [1]

Option [2] is incorrect. The passage states, “Not all movements were exclusively concerned with innovation”—implying that some artistic movements were concerned with innovation. However, there is no mention of the status of innovation with regard to science. Hence there is no data for comparison.

Option [3] is incorrect. While it is mentioned that groups of artists, painters and thinkers collaborated together to develop concepts of modern art, the passage is silent on the case of the scientific world.

Option [4] is incorrect because ‘the dissemination of ideas’ is only referred to in the case of Art and not to science.

Option [5] applies only to Art and not to Science.

Option [1] can be obtained from “It is almost tempting to see a pattern emerging within the art field— or alternatively imposed upon it a posteriori – similar to that which exists under the umbrella of science where the general term covers a whole range of separate, though interconnecting, activities. Any parallelism is however— in this instance at least – misleading.” The last sentence shows that the author of the passage feels that the analogy is misleading –leading to erroneous conclusions.

79. [4]
Options [1], [2] and [3] are tangential –while mentioned in the passage they do not address the question stem.
In option [5], the phrase, ‘efficient technology’ makes it incorrect because this has not been mentioned in the passage as a cause for the range of concepts and ideologies in the art of the twentieth century.
Option [4] can be inferred from, “Briefly, then, the concepts of modern art are of many different (often fundamentally different) kinds and resulted from the exposures of painters, sculptors and thinkers to the more complex phenomena of the twentieth century, including our ever increasing knowledge of the thought and products of earlier centuries. Different groups of artists would collaborate in trying to make sense of rapidly changing world of visual and spiritual experience”. Here “visual” and “spiritual” are synonymous with ‘perceptual’ and ‘transcendental’.
80. [5]
The questions refers to the end of the passage, “As T.S. Eliot observed, no one start anything from scratch; however consciously you may try to live in the present, you may try to live in the present, you are still involved with a nexus of behaviour patterns bequeathed from the past. The original and creative person is not someone who ignores these patters, but someone who is able to translate and develop them so that they confirm more exactly to his–and our–present needs”.
Option [1] is incorrect. The second sentence means that original ‘creative processes’ exist although the artist may be “involved with a nexus of behaviour patterns bequeathed from the past.”
Options [2] and [3] do not maintain the tone of the passage, and hence are eliminated in favour of option [5].
Option [4] contradicts the passage. The passage mentions that the ‘originality’ of ideas and concepts developed by artists owe genesis to behaviour patterns bequeathed from the past.
Option [5] can be inferred from the extract above, especially the italicised portions.
81. [3]
Option [1]: The passage mentions that society is slowly moving from a Spartan (rigorously self–disciplined or self–restrained) existence to that of a Sybarites’ (a person devoted to pleasure and luxury) one. As a result today’s society is more extravagant than the society of the 1930s.
Option [2]: The passage depicts the procedure of eating two ice–cream cones with a ceremonial air. The passage states, “...advanced proudly with one cone in their right hand and one in their left; and expertly moving their head from side to side, they licked first one, then the other.”
Option [4]: The author has plainly said in the passage that in present times things given are what they are worth even if they appear to be more. The passage states, “the consumer civilization pretends to give more, but actually gives, for four cents, what is worth four cents”.
Option [5]: The last two paragraphs of the passage give various examples of how the consumer civilization attempts to spoil children and adults alike. Hence, option [5] is eliminated.
Option [3] cannot be inferred from the passage. Rather the italicised words in the passage suggest the opposite. “The pathetic, and obviously mendacious, justification was that a boy concerned with turning his eyes from one cone to the other was more inclined to stumble over stones, steps, or cracks in the pavement. I dimly sensed that there was another secret justification, cruelly pedagogical, but I was unable to grasp it”.
82. [4]
“Parvenus” means ‘a person who has suddenly risen to a higher social and economic class and has not yet gained social acceptance by others in that class’. The appropriate reference is to ‘young upstarts’.
The author points out the extravagance of today’s society. The author mentions in the passage, “Two two–cent cones instead of one at four cents did not signify squandering, economically speaking, but symbolically they surely did it was for this precise reason, that I yearned for them: because two ice creams suggested excess. And this was precisely why they were denied me:

because they looked indecent, an insult to poverty, a display of fictitious privilege, a boast of wealth. Only spoiled children ate two cones at once, those children who in fairy tales were rightly punished, as Pinocchio was when he rejected the skin and the stalk. And parents who encouraged this weakness, appropriate to little parvenus, were bringing up their children in the foolish theatre of “I’d like to but I can’t.” They were preparing them to turn up at tourist-class cheek-in with a fake Gucci bag bought from a street peddler on the beach at Rimini”.

The author refers to the parents as ‘parvenus’ or upstarts who muscle their way into a world where they are uninvited.

83. [2]

The passage states “Two two-cent cones instead of one at four cents did not signify squandering, economically speaking, but symbolically they surely did, it was for this precise reason, that I yearned for them.”

Intemperance means ‘excessive indulgence of appetite’.

84. [2]

The passage does not hint at instances of immorality. This eliminates options [1] and [3].

Option [4] is incorrect because though moralistic risks have been mentioned they have been said to be at odds with morality. There are no indications of them having risen.

Option [5] is incorrect. There is no mention of purists in the passage. Therefore, the popularity of the purist’s view of morality cannot be established.

Option [2]: The passage states, “Nowadays the moralist risks seeming at odds with morality, in a world where the consumer civilization now wants even adults to be spoiled, and promises them always something more, from the wristwatch in the box of detergent to the bonus bangle sheathed, with the magazine it accompanies, in a plastic envelope”. The second half of the sentences points to the changes norms/mores in society, and this is our indicator that option [2] is correct.

85. [1]

The passage talks about how the issue of whether a single cone or two cones should be purchased was not economical but that of morality. The author infers from his elder’s behavior that was the only justification.

The meanings of the options are:

Didactic means ‘teaching or intending to teach a moral lesson’.

Dietetic means ‘pertaining to diet or to regulation of the use of food.’

Dialectic means ‘pertaining to, or of the nature of logical argumentation.’

Diatonic means ‘pertaining to the tones, intervals, or harmonious of such scales.’

Diastolic means ‘indicating the arterial pressure during the interval between heartbeats’.

86. [5]

The passage states, “For these reasons some cognitive scientists have described language as a psychological faculty, a mental organ, a neural system, and a computational module. But I prefer the admittedly quaint term “instinct”. Combine this extract with “Thinking of language as an instinct inverts the popular wisdom” and we arrive at option [5] as the correct answer option.

Option [1]: While the passage mentions ‘cultural artifact’, it does not relate it to popular wisdom. Hence, option [1] is incorrect.

Option [2] is mentioned in the passage but there is no data to suggest that it is not popular wisdom.

Option [3] is incorrect because the author has criticized the common view that children learn language as they grow, he instead says that children are born with it.

Option [4] is mentioned in the passage and does not invert popular wisdom in any way.

87. [2]
The analogy describes an action which is a critical activity to the species, such that it is instinctive and not something that develops over time. The analogy emphasises the fact that language is instinctive, and not something that is learnt.
Option [3], [4] and [5] about a donkey carrying the load, a horse running the derby and a pet dog protecting property, are not instinctive and basic actions attributed to those animals. They have to be trained to perform these functions.
Option [1] is about 'learning', whereas the original example is about instinctively 'knowing'.
88. [2]
At the end of the second paragraph, "a knack for communication information about who did what to whom by modulating the sounds we make when we exhale". This ability to humans as mentioned in the passage.
This resonates with option [2].
Option [1], [3] and [4] are negated as the author has not mentioned or implied in any way that non-humans cannot use symbols, cannot communicate information or do not use sound as a means of communication.
Therefore, option [5] all of the above – is incorrect.
89. [1]
The passage states, "The complexity of language, from the scientist's point of view, is part of our biological birthright; it is not something that parents teach their children or something that must be elaborated in school". This implies that children are born with an instinctive skill for language and that it cannot be taught.
Option [2] is about learning as they grow and not about instinctively knowing language.
Option [3] is close, but the question is related to 'complexity' of language. The author is silent on whether language is amenable to teaching or not.
Option [4] is irrelevant as there is no comparison between the language skills of teachers/parents and their children.
Option [5] contradicts the passage. "Semiotics" is the study and signs and the passage states that children are not good at semiotics.
90. [4]
Option [4] succinctly summarizes the crux of the author's arguments. The author is trying to propound the 'instinctive' nature of language. He mentions it is unique to "Homo sapiens" but that is not the crux of the passage making option [1] unsuitable as a summary.
Option [2] focuses on a non critical aspect of language which deals with 'learning' or 'teaching', which is true yet not central to the discussion.
Option [3] is incorrect as it focuses on ancillary aspects.
Option [5] has no base in the paragraph, and is a radical statement.

