

IPMAT ROHTAK 2019
ANSWER KEY & EXPLANATIONS

1. (d) None of these

$$\frac{12 \times 48}{x-6} = \frac{14 \times 24}{15+5} \times \frac{6}{7}$$

$$x-6 = 40$$

$$x = 46 \text{ km/hr}$$
2. (a) 25 kmph

$$\frac{16 \times 48}{x-5} = \frac{14 \times 24}{x+5} + 27 \frac{1}{5}$$

By option if we put $x = 25$
 Then L.H.S. = R. H. S
3. (c) Given
 Speed of boat in still water on Saturday = 27 km/hr
 and Speed of boat in still water on Wednesday = 27 + 18 = 45 km/hr
 Now, $\frac{12 \times 48}{45-6} = \frac{18 \times 24}{27+x} \times \frac{16}{13}$
 $x = 9 \text{ kmph}$
4. (d) Speed of boat in still water on Saturday = 21 km/hr
 Speed of boat in still water on Sunday = 21 + 6 = 27 km/hr

$$\frac{10 \times 48}{21-x} = \frac{5}{2} \times \frac{12 \times 24}{27+3}$$

$$21-x = 20$$

$$x = 1 \text{ km/hr}$$

Required time = $\frac{125}{21-1} = \frac{125}{20} = 6 \text{ hrs } 15 \text{ min}$
5. (d) $\frac{14 \times 48}{17-1} = 30 + \frac{11 \times 24}{x+6}$
 $x+6 = 22$
 $x = 16 \text{ km}$
 Upstream speed on Wednesday = 16 - 6 = 10 km/hr
6. (a) Total container - Milk amount = water amount
 $x - (x - 122) = 122$.
7. (b) $2460 = P + P \times 6 \times 5/12 \times 100$
 $p = 2400$
 Now Gita
 $2460 = 2400 + 2400 \times 7.5 \times x/12 \times 100$
 $x = 4$
8. (b) Radius of large circle = $\frac{30}{2} = 15$
 Radius of each small circle = $\frac{15}{2}$
 Shaded area = area of large circle - area of 2 small circles

$$= \pi R^2 - 2\pi r^2$$

$$= \pi \left[15^2 - 2 \times \left(\frac{15}{2} \right)^2 \right] = \pi \left[225 - \frac{225}{2} \right] = \pi \cdot 225 \left[1 - \frac{1}{2} \right]$$

$$= 112.5\pi \text{ square feet}$$
9. (b) Area of circle = πr^2
 $\Rightarrow r = \frac{15}{2}$
 Area of circle M = $\frac{22}{7} \times \frac{15^2}{4} = \frac{22}{7} \times \frac{225}{4}$
 Area of circle K = $\frac{22}{7} \times 225$

$$\text{Ratio} = \frac{\frac{22}{7} \times \frac{225}{4}}{\frac{22}{7} \times 225} = 1:4$$
10. (c) $(x/100)y = z$;
 $(x/z) = (100/y)$.
11. (c) $(x/z) \times 100 = 100 \times (100/y)$
 $\Rightarrow 100^2/y$
 Let speed of A = A km/hr and speed of B = B km/hr
 According to the question;
 $\Rightarrow 450/A - 450/B = 45/60$
 $\Rightarrow (1/A - 1/B) = 1/600 \text{ --- (1)}$
 And
 $\Rightarrow 450/(3B/4) - 450/A = 30/60$
 $\Rightarrow 4/3B - 1/A = 1/900 \text{ --- (2)}$
 Adding both the equations;
 $\Rightarrow 4/3B - 1/B = 1/600 + 1/900$
 $1/3B = 5/1800$
 $\Rightarrow B = 120 \frac{\text{km}}{\text{hr}}$
 Putting this value in equation 1;
 $\Rightarrow 1/A = 1/600 + 1/120 = 6/600$
 $\Rightarrow A = 100 \text{ km/hr}$
 $\therefore \text{Speed of A} = 100 \text{ km/hr}$
12. (b) From question, we can say:
 Let S.P. = 1.2 CP₂
 0.8 S.P. = CP₂
 CP₁ - CP₂ = 85
 1.2SP - 0.8SP = 85
 S.P. = Rs. 2550
13. (a) Original rate = ₹ x per egg
 New rate = ₹ $\frac{6x}{5}$ per kg

$$\therefore \frac{24}{x} - \frac{24 \times 5}{6x} = 2$$

$$\Rightarrow \frac{24}{x} - \frac{20}{x} = 2$$

$$\Rightarrow \frac{4}{x} = 2 \Rightarrow x = 2$$

$$\therefore \text{New rate} = \frac{4}{x} = 2 \Rightarrow x = 2$$

$$\therefore \text{rate per dozen of eggs}$$

$$= ₹ \left(\frac{15}{2} \times 12 \right) = ₹ 28.80$$
14. (a) $\sin \left(\frac{13\pi}{6} \right) = \sin \left(2\pi + \frac{\pi}{6} \right) = \sin \left(\frac{\pi}{6} \right) = \frac{1}{2}$
15. (d) Remaining boys = 3, remaining fruits = 2/5th
 Eating is work here. So $M1 \times H1 \times W2 = M2 \times H2 \times W1$
 $9 \times 2 \times (2/5) = 3 \times H2 \times (3/5)$
 Solve, $H2 = 4$
16. (a) We have

$$f(x) = x^2 + 2bx + 2c^2 = (x+b)^2 + 2c^2 - b^2$$

$$\Rightarrow \min f(x) = 2c^2 - b^2$$
 Also $g(x) = -x^2 - 2cx + b^2$

$$= b^2 + c^2 - ((x+c)^2)$$

 So $\max g(x) = b^2 + c^2$,
 Since $\min f(x) > \max g(x)$

$$\text{so } 2c^2 - b^2 > b^2 + c^2$$

$$\Rightarrow c^2 > 2b^2$$

$$\Rightarrow |c| > \sqrt{2} |b|$$
17. (b) Let $f(x) = x^2 - |x+2| + x > 0$
 If $x \leq -2$

$$f(x) = x^2 + x + 2 + x$$

$$= x^2 + 2x + 2$$

$$\Delta = 2^2 - 4(2)$$

- $\Delta = -4 < 0$
 $\therefore f(x) = x^2 + 2x + 2 > 0$ (always)
 $x \in [-\infty, -2] \rightarrow$ Equation - 1
 If $x > -2$
 $f(x) = x^2 - x - 2 + x > 0$
 $x^2 - 2 > 0$
 $\therefore x \in (-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty)$
 $x \in (-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty) \rightarrow$ Equation - 2
 From 1 and 2, $x \in (-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty)$
 $\therefore x \in (-\infty, -\sqrt{2}) \cup (\sqrt{2}, \infty)$
18. (a) $46080 \div 12 = 3840$
 $3840 \div 10 = 384$
 $384 \div 8 = 48$
 $48 \div 6 = 8$
 $8 \div 4 = 2$
 $2 \div 2 = 1$
19. (c) $lb + lb = lh + hb + lh + hb$
 $2lb = 2h(l + b)$
 $h = lb/l + b$
 $h = 15 \times 6/15 + 6 = 4.29 \text{ cm}$
20. (a) The third term $t_3 = a + 3d$
 The ninth term $t_9 = a + 8d$
 $t_3 + t_9 = 2a + 10d = 8$
 Sum of first 11 terms of an AP is given by
 $S_{11} = 211[2a + 10d]$
 $S_{11} = 211 \times 8 = 44$
21. (d) B is in G.P. with $a = 2^0, r = 2, n = 65$
 $\therefore S_n = \frac{a(r^n - 1)}{r - 1} = \frac{2^0(2^{65} - 1)}{2 - 1} = 2^{65} - 1$
 $\therefore B = 2^{65} - 1$
 $\Rightarrow B = A - 1$
 $\therefore A$ is larger than B by 1.
22. (a) diameter
23. (a) at first drawn W, at second drawn G
 Probability = $5/15 \times 6/14$ (without replacement)
 at first drawn W, at second drawn B
 Probability = $5/15 \times 4/14$ (without replacement)
 at first drawn B, at second drawn W
 Probability = $4/15 \times 5/14$ (without replacement)
 at first drawn G, at second drawn W
 Probability = $6/15 \times 5/14$ (without replacement)
 So, required probability = $(30 + 20 + 20 + 30)/15 \times 14 = 10/21$
24. (b) Amount of work to be done = $\text{LCM}(20, 25, 30) = 300$ units.
 P can do 15 units/hr
 Q can do 12 units/hr
 R can do 10 units/hr
 Together they can do $15 + 12 + 10 = 17$ units/hr
 $10 \text{ hr} = 170$ units.
 Now, only P and Q work. They can fill 27 units/hr.
 remaining is $130/27$.
 Total time is $130/27 + 10 = 400/27$ hours.
25. (c) $a:b:c:d$
 $2:3:3:3$
 $5:5:2:2$
 $1:1:1:4$
 $10:15:6:24$
26. (c) 1 no 1 Rupee coin = Rs 1
 8 no 50 paise coin = Rs 4
 16 no 25 paise coin = Rs 4
 Total $1 + 4 + 4 = \text{Rs } 9$
 Rs $495 \div \text{Rs } 9 = 55$
 No of 50 paise coin = $55 \times 8 = 440$
27. (b) It is known that,
 1 hour = 60 minutes 1 minute = 60 seconds
 Thus, one hour into seconds is,
 1 hour = $60 \times 60 \Rightarrow 1 \text{ hour} = 3600$ seconds
 Now, one second into hours is,
 1 second = $1/3600$ hours $\Rightarrow 1 \text{ second} = 0.002777... \text{ hours}$
 $\Rightarrow 1 \text{ second} = 0.0027 \text{ hours}$
Therefore, the decimal value of a second in an hour is 0.0027 hours.
28. (c) 0.0056 as a fraction equals $56/10000$ or $7/1250$.
29. (c) Let the number be x and y . Then,
 $x/5 = 5y/8$
 $\Rightarrow y = 8x/25$ - (i)
 $\Rightarrow x + 35 = 4y$
 $\Rightarrow x + 35 = 32x/25$ {From (i)}
 $\Rightarrow x = 125$
 $\therefore y = 40$
30. (d) $43 \times 561 + 500 - 100/10 = 43 + 561 \times 500/100 - 10 = 43 + 561 \times 5 - 10 = 43 + 2805 - 10 = 2838$
31. (a) We know the relation between area of triangle, semi-perimeter, radius of inner circle is $R = A/S$, where A is area of triangle, s is semi perimeter, R radius of in-circle.
 Given, the side of an equilateral triangle is 24 cm.
 Also, semi perimeter s can be given as $s = (24 + 24 + 24)/2 = 36 \text{ cm}$.
 The formula for the area A for the equilateral triangle is $(\sqrt{3}/2) \text{ side}^2$.
 So, the area will be $(\sqrt{3}/2) 24^2 = 144\sqrt{3}$.
 Now, we have got the value of A and s , so we can easily calculate the value of R as follows: $R = 144\sqrt{3} / 36 = 4\sqrt{3}$
 Formula for area for the circle is $\pi \text{ radius}^2$ since we have got the radius, we can move further.
 Area of the circle will be $\pi R^2 = \pi \times 4^2 \times 3 = 48\pi$.
 Area of the remaining portion will be equal to the area of the circle subtracted from the total area of the triangle. Viz. $(144\sqrt{3} - 48)\pi \text{ cm}^2$
32. (a) The Clock strikes 4 taking 9 seconds, then to strike 12 at the same rate takes time = ?
 As we know, the clock striking 4 is simply having 3 gaps which are further called **3 intervals**.
 For 3 gaps, it takes equal time intervals.
 9 seconds/3 intervals \Rightarrow **1 interval take 3 seconds.**
Due to the same rate,
 In order to strike 12, it takes 3 seconds for each interval.
 Since it has 11 gaps also referred to as 11 intervals.
 So, **$11 \times 3 = 33$ seconds. 33 seconds is enough to strike 12 at the rate at which the clock strikes 4 by taking 9 seconds.**
Hence, A clock strikes 4 taking 9 seconds, in order to strike 12 at the same rate the time taken is 33 seconds.
33. (c) Let John's present Age be J
 John's father present Age is F
 Raman's present age is R
 John's present age is one fourth of his father's age two years ago. $J = (F - 2)/4$ -----(1)
 John's father's age will be twice Raman's age after 10 years. $F + 10 = 2(R + 10)$

$$\Rightarrow (F+10)/2 = R+10$$

$$\Rightarrow F/2 - 5 = R \text{ -----(2)}$$

If Raman's 12th birthday was celebrated 2 years

$$\text{ago, } R-2 = 12 \Rightarrow R = 14 \text{ -----(3)}$$

Putting Value of R in equation 2

$$F/2 - 5 = 14$$

$$F/2 = 19$$

$$F = 38 \text{ -----(4)}$$

Putting value of F in equation 1

$$J = (F-2)/4$$

$$J = 36/4$$

$$J = 9$$

34. (a) Assume that Monty joins for x months . Then:

$$\text{Raj : Monty} = 76000 \times 12 : 57000 \times x = 2:1$$

$$\text{or, } 76 \times 12 : 57x = 2:1$$

$$\text{or, } 76 \times 12 / 57x = 2/1 = 2$$

$$\text{or, } x = 76 \times 12 / 57 \times 2$$

$$\text{or, } x = 8$$

Hence Monty was there in the business for 8 months, or joined after $12-8 = 4$ months.

Monty joined after 4 months.

35. (d) Lets say 'x' is the amount of work done by R in one day.

So, 3x is the amount of work done by Q in one day

and $2 \times 3x = 6x$ is the amount of work done by P in one day

If P,Q and R together doing work in 30 days then

$$\text{total amount of work done} = 30 \times (6x + 3x + x) = 1$$

$$300x = 1$$

$$x = 1/300$$

So amount of work done by P in 1 day is

$$6x = 6 \times 1/300 = 1/50$$

So to complete the work by P alone no. of days required = 50 days.

36. (c) Rate downstream = $\left(\frac{1}{10} \times 60\right)_{\text{km/hr}} = \frac{6\text{km}}{\text{hr}}$.

$$\text{Rate upstream} = 2 \text{ km/hr.}$$

$$\text{Speed in still water} = \frac{1}{2}(6 + 2) \text{ km/hr} = 4 \text{ km/hr}$$

$$\therefore \text{Required time} = \left(\frac{5}{4}\right)_{\text{hrs}}$$

$$= 1 \text{ hr } 15 \text{ min}$$

37. (d) $25^{2.7} \times 5^{4.2} \div 5^{5.4}$

$$= 5^{5.4} \times 5^{4.2} \div 5^{5.4}$$

$$= 5^{5.4} \times 5^{4.2} \div 5^{5.4}$$

$$= 5^{5.4} \times 5^{-1.2}$$

$$= 5^{(5.4-1.2)}$$

$$= 5^{4.2}$$

38. (b) Given Expression = $18800 \div 470 \div 20$

$$(18800/470) \div 20 = 40 \div 20 = 2$$

39. (a) $2/3, 2/3, 8/27$

HCF of fractions = HCF of Numerators/ LCM of Denominator

$$\text{HCF of Numerators}(2,2,8) = 2$$

$$\text{LCM of Denominator}(3,3,27) = 27$$

$$\text{HCF of fractions} = 2/27$$

40. (b) The numbers $\log 2$, $\log (2^x - 1)$ and $\log (2^x + 3)$ are in A.P.

$$\therefore \log(2^x - 1) - \log 2 = \log(2^x + 3) - \log(2^x - 1)$$

$$\Rightarrow \log\left(\frac{2^x-1}{2}\right) = \log\left(\frac{2^x+3}{2^x-1}\right)$$

$$\Rightarrow \frac{2^x-1}{2} = \frac{2^x+3}{2^x-1}$$

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

$$\Rightarrow 2^{2x} + 1 - 2 \cdot 2^x = 2 \cdot 2^x + 6$$

$$\Rightarrow 2^{2x} - 4 \cdot 2^x - 5 = 0$$

$$\text{Let } 2^x = y$$

$$\Rightarrow y^2 - 4y - 5 = 0$$

$$\Rightarrow (y - 5)(y + 1) = 0$$

$$\Rightarrow y = 5 \text{ or } y = -1$$

$$\therefore 2^x = 5 \text{ or } 2^x = -1 \text{ (not possible)}$$

Taking log on both sides, we get:

$$\log 2^x = \log 5$$

$$\Rightarrow x \log 2 = \log 5$$

$$\Rightarrow x = \frac{\log 5}{\log 2} = \log_2 5$$

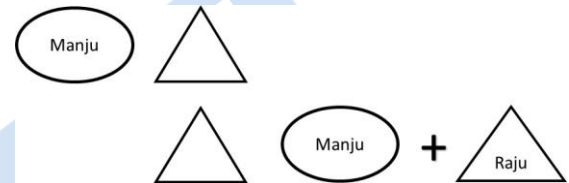
41. (a) When we fold the flaps to form a cube, we can see that half of the top side of the cube is shaded. Therefore options (1) and (4) are ruled out as (4) has completely shaded side and (1) has two half shaded sides which are not possible. Therefore options (2) and (3) are the correct answer.

The question is "Choose the box that is similar to the box formed from the given sheet of paper (X)."

Hence, the answer is 2 and 3 only

Choice C is the correct answer

42. (d)



So, Option (d) sister of father in law is correct answer.

43. (b) Quiver is a container for holding arrows i.e. Arrows are kept in a Quiver.

From the options, we can see that Money : Bank has the same relationship as that of Arrows: Quiver. Bank is a place where money is kept.

Hence, the answer is Money: Bank

44. (d) Embarrass means to disrupt someone's comfort or composure whereas humiliate means to disrupt someone's dignity and self respect. We can see that humiliation is the extreme of embarrassment.

Similarly from the choice Annoy : Exasperate have the same relationship. Annoy is making someone a little angry while exasperate is making someone frustrated or irritated intensely.

Hence, the answer is Annoy: Exasperate

45. (a) Conclusion (I) = [TRUE] [because flower and tree are in no relation]

(II) because we have definite relation between flower and fruits so it may or may not be true.

So, (A) only conclusion I follows.

46. (d) Lady's finger > cabbage
Carli flower > Lady's finger

$$\text{Cabbage} \leq \text{Peas}$$

$$\text{Cauliflower} > \text{Lady's finger} > \text{Cabbage} \leq \text{peas}$$

Option A, B, C may or may not be true. But option D is definitely true.

Hence, option D is correct answer.

47. (b)

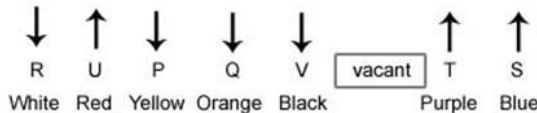


COD (I) - False

COD (II) - True

Hence option B is correct Answer.

Hint (Q.48-Q.52):



48. (c) Option is correct answer.
49. (c) Option is correct answer.
50. (b) Option is correct answer.
51. (b) Option is correct answer.
52. (d) Option is correct answer.
53. (d)

TARAIN1014A AFI01NIAAT

Option (d) is correct answer.

54. (a)

| | | |
|----|-----------|---|
| DE | Monday | A |
| | Tuesday | D |
| | Wednesday | B |
| | Thursday | E |
| DE | Friday | C |

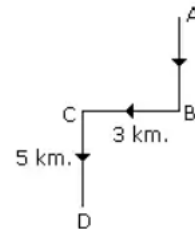
55. (a)

| | | |
|----|-----------|---|
| DE | Monday | A |
| | Tuesday | D |
| | Wednesday | B |
| | Thursday | E |
| DE | Friday | C |

56. (b)

| | | |
|----|-----------|---|
| DE | Monday | A |
| | Tuesday | D |
| | Wednesday | B |
| | Thursday | E |
| DE | Friday | C |

57. (a) Clearly, each of the given statements shows that B is sitting opposite to C or B is the partner of C.
58. (a) Correct option is B)
Statement II reveals that 17th was a Saturday and therefore, 14th was Wednesday. So, only statement II is needed to answer the given question. Option B
59. (b) Reverse the word and +1 to each letter. The reverse of CHILDREN is NERDLIHC. Add 1 to each letter. Therefore, the code of CHILDREN becomes OFSEMJID.
60. (b) is the correct answer.
61. (a) The correct option is A If only assumption I is implicit
Since the statement talks of putting the child in school at the age of 5, it means that the child is mentally prepared for the same at this age. So, I is implicit. But nothing about admission after 6 years of age is mentioned in the statement. So, II is not implicit.
62. (b) The statement talks about providing allowance to employees in order to bring punctuality in them but assumption I completely deny the statement whereas assumption II has a positive point that it may make employees to be punctual.
Hence assumption II is implicit.
Hence option B is true.
63. (d) Hence required direction is South-West.



64. (a) 2,10,18 are increased by 8.
» $7+15 = 22$
» $22+15 = 37$
7,22 are increased by 15.
So, add 15 to 37 to get missing number.
» $37+15 = 52$
Missing number is 52.
2,7,10,22,18,37,26,52
65. (b) This is a simple subtraction series.
Each number is 35 less than the previous number.
(544 - 35 = 509) (509 - 35 = 474) (474 - 35 = 439) (439 - 35 = 404)..
66. (a) So the answer is (A)

67. (a) According to the statement, 80% of the total runs were made by spinners. So, I does not follow. Nothing about the opening batsmen is mentioned in the statement. So, II also does not follow.
68. (a) Clearly, I directly follows from the given statement. Also, it is mentioned that old ideas are replaced by new ones, as thinking changes with the progressing time. So, II does not follow.
69. (a) is the correct answer.
70. (c) is the correct answer.
71. (d) is the correct answer.
72. (c) 16 years ago, let $T = x$ years and $G = 8x$ years
After 8 years from now,
 $T = (x + 16 + 8)$ years and $G = (8x + 16 + 8)$ years
 $\therefore 8x + 24 = 3(x+24)$
 $\Rightarrow 8x - 3x = 72 - 24$
 $\Rightarrow 5x = 48$
8 years ago,
 T/G
 $= x+8/8x+8$
 $= 48/5+8/8 \times 48/5+8$
 $= 48+40/384+40$
 $= 88/424$
 $= 11/53$
73. (a) Actual time passed = (6 days \times 24 hours) + 19 hours
= 163 hours.
Given that the clock losses 4 minute in every single day.
1 day = 24 hours = $24 \times 60 = 1440$ minutes.
In 1440 minutes, the clock losses 4 minutes.
Therefore, the minute hand moves at a slightly slower pace.
The speed of minute hand can be expressed as $1436/1440$ fractional part of one minute.
Actual time elapsed is just the reciprocal of it.
(i.e.) $1440/1436$
Thus in the given time of 163 hours,
Actual time elapsed = 163 (hours) \times 60 (minutes)

$\times 1440/1436$ (minutes hand)
But due to loss in time, the time elapsed by clock is
 $= 163 \times 60$
 Difference $= (163 \times 60 \times (1440/1436)) - (163 \times 60)$
 $= 9780/359$
 This difference must be added to get the right time.
 Hence, the answer is **9780/359**

74. (d) Consolidating the inequalities, we get $A < M = V < S \leq R \leq U$
 We can see that $U \geq S$ and therefore conclusion I is not entirely true.
 Also $R \geq S$ and therefore it is either II or III.
 Hence, the answer is Either II or III is true
 Choice D is the correct answer

75. (d) Conclusion I says $U > V$. We definitely know that both U and V are lesser than Q but not sure about whether $U > V$ or $V > U$. So this is not definite.
 We know that $A < P = C$ and $B < A$ and therefore $B < A < P = C$. Conclusion II is correct.
 We know that $P = C < Q$ and $D \leq P = C$ and therefore $D \leq P = C < Q$. Conclusion III is also correct.
 Only II and III are correct.
 Hence, the answer is Only II and III is true
 Choice D is the correct answer

76. (d) I is not a fact as we know that some chairs are stuffed with beans but nothing about whether those chairs are children's chair or not.
 II is not a fact as we have no information on stuffed tigers and beans.
 III is also not a fact as there is no mention of monkey anywhere in the facts.
 None of the statements is a known fact.
 Hence, the answer is None of the statements is a known fact.
 Choice D is the correct answer
77. (b) Atul is twelfth from the right. This means there are 11 boys from the right excluding him.
 Atul is fourth from the left. This means there are 3 boys from the left excluding him.
 Total number of boys in the line $= 11 + 3 + 1(\text{Atul}) = 15$.
 To get 28 boys in the line, we need to add 13 more boys to the line.
 Hence, the answer is 13
 Choice B is the correct answer

78. (d)
- I. B is between E and C \rightarrow

| | | |
|-----|---|-----|
| E/C | B | C/E |
|-----|---|-----|
- II. B is to the right of E \rightarrow

| | | |
|---|---|---|
| E | B | C |
|---|---|---|
- III. D is between A and E \rightarrow

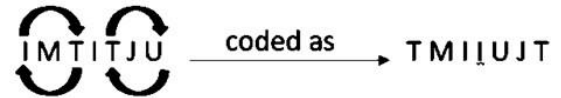
| | | |
|---|---|---|
| A | D | E |
|---|---|---|
- Consolidating the constraints, we get the following arrangement.
- | | | | | |
|---|---|---|---|---|
| A | D | E | B | C |
|---|---|---|---|---|

We can see that we need all the statements to get the arrangement.
 I, II and III together.

79. (d) From statement II, we know that Gopal's brother was born in 1982.
 From statement III, we find that Gopal's brother was

8 years younger to him i.e. Gopal was born in 1974.
 From statement I, we find that Sanjay is 6 years older than Gopal
 Thus, Sanjay was born in 1968.
 So, all the three statements are required
 Hence, the answer is I, II and III together.
 Choice D is the correct answer

80. (b)



We can see that the even letters remain the same while odd letters are interchanged.
 First and third letter are interchanged and fifth and seventh letter are interchanged to get the code.
 We can follow this pattern to find the code for TEMREMP.
 The code for TEMREMP IS METRPME
 Hence, the answer is METRPME
 Choice B is the correct answer

81. (b) 'Abominate' means to hate someone to a great extent. 'Esteem' is the most appropriate option as it stands for utmost respect and admiration. 'Support' and 'gratify' are not exact equivalents of like or respect, while 'console' means to comfort someone.
82. (d) 'Abhor' is extreme hatred towards someone/something. 'Credit' and 'Improve' are clearly not antonyms, while 'Inspire' too doesn't fit here. 'Greatly admire' is the right antonym.
83. (b) Enormous means large in size or quantity. Its exact antonym will thus be tiny which means very small or minute.
84. (a) 'Impromptu' refers to an action or task delivered spontaneously. 'Unimportant' and 'unreal' are not related closely to the word. 'Offhand' relates to doing things on a whim and without preparation.
85. (a) 'Wretched' is a sorrowful or unfortunate state. 'Foolish' and 'insane' are primarily mental states, while 'strained' is a state of exhaustion. 'Poor' is the most appropriate word as it means not good.
86. (d) Erroneous means wrong or incorrect. Here option D has the same as answer.
87. (c) "...he found himself in a land where small slug-like animals with slimy tentacles lived on people's bodies. The people tolerated the loathsome creatures..." This line states the answer clearly.
88. (c) "In it, he found himself in a land where small slug-like animals with slimy tentacles lived on people's bodies. The people tolerated the loathsome creatures..." As the line from the passage suggests these disgusting/loathsome creatures were small slug like animals with slimy tentacles.
89. (a) Harold succeeded in overcoming the need for security
90. (d) There is no mention of snakes in it. Option C doesn't fit the context. According to option A he came face to face with reality but it was not fearful. The slimy creatures feeding on people's bodies were fearful.
91. (a) his heart is full of compassion for others
 But 'is' is a coordinating conjunction that is used to express two contrasting ideas. The given part of the statement talks about his probably "stern" physical

- appearance, hence we are looking for an exactly opposing trait. Option B and C are ruled out because they add to the existing statement. Option D is not exactly the opposite of the strictness that is given. Option A gives the exact opposite nature of his appearance.
92. (d) Voluntarily offered to render additional services in lieu of nothing. Since the statement talks of enhancing profit, the first three options would not fit here exactly because in all three the company will have to spend money in some form or the other. The last option fits perfectly as the company will not have to compensate in any way for the additional services of the employees.
93. (d) nouveau riche means newly arrived, modern or developed. In the first blank "morals" fits better than style and wealth. In the second blank "theme" fits better than "story" as it's recurring in literature.
94. (c) R cannot follow S1 because of the presence of "also". There should be some statement before R. S cannot follow S1 because S1 ends with "us", and hence logically, the following statement should speak about "us". This brings us to Q, which questions what we need to do. That leaves us with option B and C. Q ends with "endeavor", and we are looking for explanations about the endeavors. In that case, P cannot follow Q. Hence, the right order is QSRP. P also blends naturally into the context of S6 ("hard work ahead" and "no resting for any one of us"). Therefore, option C.
95. (a) The right follow-up to S1 should be the answer to why he/she had to halt. Hence, S should follow S1. This eliminates options B and C, leaving us with only A and D. P looks like an organic follow through to S, because of the presence of "As soon as". Note that this was probably an unexpected halt (from the tone of S1). The reflex of the emergency is best expressed in the phrase "as soon as". In R, the tone gradually starts shifting to a relaxed one, and blends organically into the concluding statement ("must" was already passing off" and "watch him for a while"). Hence, the order should be SPQR. Therefore, option A.
96. (b) Statement 1 talks about the noise, and hence we are looking at something that tells us the purpose of the noise or something in more detail about the noise. Q is the right continuation. "Something was wrong" is an expression of an impending danger or disaster, in which case there should be prevention. Since there is no detail of any mitigation, we are looking for contrasting statements. P gives the right contrast. People should have been more prudent, but they did not take it seriously. That was a bad act, and hence the ship sank and many died. So, the order is QPRS. Therefore, option B.
97. (c) Both represent the system of numbers based on multiples in mathematics while the other examples do not.
98. (b) Paw is cat's foot while hoof is present in horse's foot.
99. (c) The idiom means to tell someone the truth about something wrong that one has done which is similar to option C.
100. (a) The idiom means to have a private reason for doing or being involved in something. Here option A fits perfectly.
101. (a) "I" is a singular, which should be followed up with "was". Only when there is imaginary conditional clause (where the usage of "if" comes in), "I" has to be followed up with "were". Hence, the error is in option A. Therefore, the right answer choice is option A.
102. (a) Since we have "know" which is in present tense the first option should have "can" instead of "could".
103. (a) The passage mentions that husbands and wives both are working "these days". It can be inferred that this was not the case earlier, which means option B can be inferred. "... increased today as compared to earlier" gives away the fact that income level was lower earlier. Hence, option C can be inferred. Option D is a probability which can be inferred. Option A is the only one the passage does not talk about, as there is no mention of incomes of husbands and wives separately. Hence, the right answer choice is option A.
104. (a) If only 1 is implicit. Argument 1 is the answer to the question posed thus it is implicit as it's a suggestion.
105. (c) Capitol is a legislative building. Capetol is misspelt. Capitalisation is the process of using upper case letters, or is used to denote things to do with the market of the capitalist framework. Hence Capital is the correct answer.
106. (a) Father represents a relationship. Further means in addition to, while Ferther is misspelt. Thus the correct answer is farther which expresses distance.
107. (d) Room means all - seat, space and accommodation, hence there is no need for any improvement.
108. (c) The rule of conditional clauses states that "would" should be present in the main clause only. The subordinate clause must contain a past perfect tense. The only available option is "had tried". Hence, the right answer choice is option C.
109. (a) Conflate refers to combining two entities or processes together into a blend. The second option is talking about dividing and in third it means separated. Hence both are incorrect.
110. (d) Rare means not occurring or found very often, here both 1 and 2 have the same meaning while the word in the 3rd sentence should be "rear" which means at the back.
111. (c) Option A can be inferred from the statement, "Proper tackling form using the arms and shoulders to aim for a player's midsection should be taught at an early age." Option B can be inferred from the statement, "Recent autopsies performed on the brains of football players who have committed suicide have shown advanced cases of CTE in every single victim". Option D can be inferred from the statement, "When the media exalts such dangerous behavior, professionals are rewarded for injuring each other on the field and amateurs become more likely to try to imitate their favorite NFL athletes." Hence, these three options can be eliminated. That leave us only with option C, which is exactly the opposite of what has been mentioned about the NFL in the passage ("stricter penalty calls", "calling the

- ball dead when a helmet gets wrenched", "concussion sideline assessment", etc.) Therefore, the right answer choice is option C.
112. (c) Statement I can be inferred from the statement, "However, new regulations at the professional level cannot protect amateur players, especially young people. Fatal cases of CTE have been reported in victims as young as 21", in the passage. Statement II can be inferred from the statement, "Furthermore, young athletes should be educated about the serious dangers of head injuries at an early age."
Coming to Statement III, the passage only states amateurs are "more likely to emulate the behavior of the professionals", and does not lay a firm hand on it. Hence, the right answer choice is option C.
113. (a) laudable means deserving praise and commendation. Here option A means the same.
114. (d) The author does not express sorrow or remorse and is not hopeless so the first two options can be eliminated. He is not confused either. His tone is insistent which is demanding or commanding
115. (a) Exalts means to think or speak very highly of someone or something or speed up/raise something to a higher position. Venerate means to respect, mollify means to allay or appease, expedite means to

- accelerate, so none of these are the antonyms. Mitigate is to make something less severe or lessen the gravity of something. Thus it is the antonym.
116. (a) "Perhaps the most important factor in reducing the number of traumatic brain injuries, however, lies not with the players, the coaches, or the administrators, but with the media and fans." "Announcers, commentators, television producers, and sportswriters should engage in a collective effort to cease glorifying brutal plays." Such lines highlight the media's responsibility.
117. (a) "Sports media producers have become accustomed to showcasing the most aggressive tackles and the most intense plays..." and more such lines show how media highlights violence in their shows. The other options are a follow up of this chain.
118. (b) Overthrown is removed forcibly. Only devastated is similar to it and means to be destroyed forcibly.
119. (a) In the context of the passage leveled means destroyed and flattened. Here razed means destroyed and brought to the ground as well.
120. (b) The passage describes the damage and destruction caused by the storm. Hence option c and d are positive and don't fit in the context. Velocity is a measure and can't leave its traces, thus fury which depicts the storm's anger fits in the blank.

supergrads | **IPM**
By Toprankers

Notes:

supergrads | IPM
By Toprangers