

## IBPS PO Mains Previous Year Paper 2020 (Solutions)

### REASONING ABILITY

**Directions (1-5):** From the given statements, the persons whose name starts with a letter before the letter 'M' were born in the first half of the year and the persons whose name starts with a letter after the letter 'M' were born in the second half of the year.

It means Ayush, Gaurav, Gopi, Kishan, Kumar and Kunal were born in the months of January, March and June. Pranav, Puja, Ram, Sriti, Swati and Yati were born in the months of July, September and October.

The person whose name consists of even number of letters after counting the number of letters is born in the month having odd number of days and Vice-Versa.

It means – Pranav, Gaurav, Swathi, Puja, Kishan and Gopi were born on 7<sup>th</sup> and Kumar, Kunal, Ram, Yaati, Ayush and Sriti were born on 16<sup>th</sup>.

Months	Date	Persons
January	7	Gaurav
	16	Ayush
March	7	Gopi
	16	Kumar
June	7	Kishan
	16	Kunal
July	7	Pranav
	16	Ram
September	7	Swathi
	16	Sriti
October	7	Puja
	16	Yaati

1. (c):                      2. (e):                      3. (a):  
 4. (b):                      5. (e):

**Directions (6-10):** The logic followed here:

**In Step I:** All the words are arranged in reverse dictionary order from the left.

**In Step II:** The first and the last letter of each word is replaced with the next letter in the English Alphabetical series.

**In Step III:** All the letters of the word is arranged in alphabetical order within the word.

**In Step IV:** All the letters of the word are replaced with the next letter in the English alphabetical series.

**In Step V:** All the words are arranged in dictionary order from the left.

**Input:** dangerous duplicate murder cannot survive triangle

**Step I:** triangle survive murder duplicate dangerous cannot

**Step II:** urianglf turvivf nurdes euplicatf eangerout dannou

**Step III:** afgilnru firtuvv denrsu acefilptu aeegnortu adnnou

**Step IV:** bghjmosv gjsuvww efostv bdfgjmquv bffhopsuv beoopv

**Step V:** bdfgjmquv beoopv bffhopsuv bghjmosv efostv gjsuvww

6. (c):                      7. (d):                      8. (e):  
 9. (d):                      10. (d):

**Directions (11-13):** By using the given information:

Only three persons live between W and R, who shops on Amazon. R lives on one of the even number floor above W and Q, who does not shops on Flipkart and Myntra and also does not lives on the second floor. Both W and Q live on the even numbered floor. Two persons live between Q and the one who shops on Jabong. Three persons live between the one who shops on Jabong and the one who shops on Ajio. We have three possible cases for that. Case1, Case2, and Case3.

Floors	Case1		Case2		Case3	
	Persons	Website	Persons	Website	Persons	Website
8	R	Amazon				
7		Ajio		Jabong		
6	Q		R	Amazon	R	Amazon
5						Ajio
4	W		Q		Q	
3		Jabong		Ajio		
2			W		W	
1						Jabong

The number of persons living between the one who shops on Jabong and R is same as the number of persons living between the one who shops on Ajio and P. Now Case2 and Case3 will be eliminated as we can't place P. Three persons live between V and S, who lives below V and also does not shops on Jabong. The one who shops on Flipkart lives immediately above the one who shops on Shopclues. Neither V nor P shops on Flipkart and Myntra.

Case1		
Floors	Persons	Website
8	R	Amazon
7		Ajio
6	Q	
5	V	Flipkart
4	W	Shopclues
3		Jabong
2	P	
1	S	

T lives on one of the floors below U. Q, who does not shop on Flipkart and Myntra. Neither V nor P shops on Flipkart, TataCliq and Myntra so S shops on Myntra and Q shops on Tatacliq and P shops on Jiomart. Now we have our final arrangements.

Floors	Persons	Website
8	R	Amazon
7	U	Ajio
6	Q	Tatacliq
5	V	Flipkart
4	W	Shopclues
3	T	Jabong
2	P	JioMart
1	S	Myntra

11. (c):

12. (e):

13. (e):

**Directions (14-17):** By using given information:

If R was born on 12<sup>th</sup> May then the person born immediately after R and immediately before R should be on gap of 3 days. F was born on 16<sup>th</sup> June. So, the person born immediately before F was born on 12<sup>th</sup> June and the person born immediately after F was born on 20<sup>th</sup> June. Only two persons were born before F. From this we get all the dates. i.e. 8<sup>th</sup> June, 12<sup>th</sup> June, 16<sup>th</sup> June, 20<sup>th</sup> June, 24<sup>th</sup> June, 28<sup>th</sup> June, and 2<sup>nd</sup> July.

The number of persons born before D, who likes Apple is equal to the number of persons born after G, who likes Guava. We have four possible cases for that. Case1, Case1(a), Case2, Case2(a).

Dates	Case1	Case1(a)	Case2	Case2(a)
	Persons	Persons	Persons	Persons
8 <sup>th</sup> June	D	G		
12 <sup>th</sup> June			D	G
16 <sup>th</sup> June	F	F	F	F
20 <sup>th</sup> June				
24 <sup>th</sup> June				
28 <sup>th</sup> June			G	D
2 <sup>nd</sup> July	G	D		

Only one person was born between G and A, who likes Oranges. Now Case1(a) will be eliminated as we can't place A. B, who does not like Kiwi was born one of the dates before E but after C.

Dates	Case1	Case2	Case2(a)
Persons	Persons	Persons	Persons
8 <sup>th</sup> June	D	C	C
12 <sup>th</sup> June	C	D	G
16 <sup>th</sup> June	F	F	F
20 <sup>th</sup> June	B	A	A
24 <sup>th</sup> June	A	B	B
28 <sup>th</sup> June	E	G	D
2 <sup>nd</sup> July	G	E	E

B was not born after A. Now Case2, and Case2(a) will be eliminated as we can't place B. E do not like Grapes, Peach, and Kiwi. F does not like Peach, Kiwi, and Pear.

Dates	Persons
8 <sup>th</sup> June	D
12 <sup>th</sup> June	C
16 <sup>th</sup> June	F
20 <sup>th</sup> June	B
24 <sup>th</sup> June	A
28 <sup>th</sup> June	E
2 <sup>nd</sup> July	G

E do not like Grapes, Peach, and Kiwi, so E likes Pear. F does not like Peach, Kiwi, and Pear, so F likes Grapes. The number of persons born before D, who likes Apple is equal to the number of persons born after G, who likes Guava. B, who does not like Kiwi, so B likes Peach was born one of the dates before E but after C, who likes Kiwi. Now we have our final arrangements.

Dates	Persons	Fruits
8 <sup>th</sup> June	D	Apple
12 <sup>th</sup> June	C	Kiwi
16 <sup>th</sup> June	F	Grapes
20 <sup>th</sup> June	B	Peach
24 <sup>th</sup> June	A	Oranges
28 <sup>th</sup> June	E	Pear
2 <sup>nd</sup> July	G	Guava

14. (e):

15. (b):

16. (c):

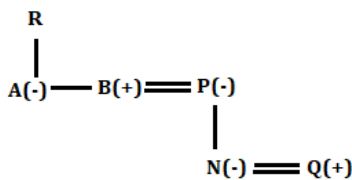
17. (a):

**Directions (18-20):**

18. (b): Only from II, we get to know box Q is placed just below the box U.

Boxes
P
U
Q
R
T

19. (a): Only from I, N is the daughter of P.



20. (c): Either I or II we get the code of "utility" as "L14".

From I.

Word	Code
Man	E23
Power	N12
Required	G15
Sector	D21
Source	Q17
Utility	L14
Global	T34

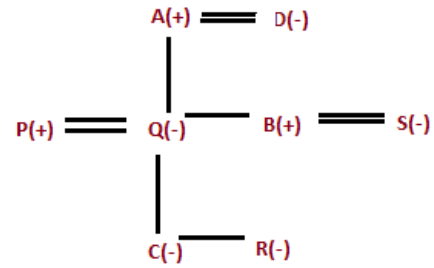
From II.

Word	Code
Source	Q17
Utility	L14
Indian	W21
Capital	B14
Income	S31
Of	M29
Surplus	F18

**Directions (21-24):**

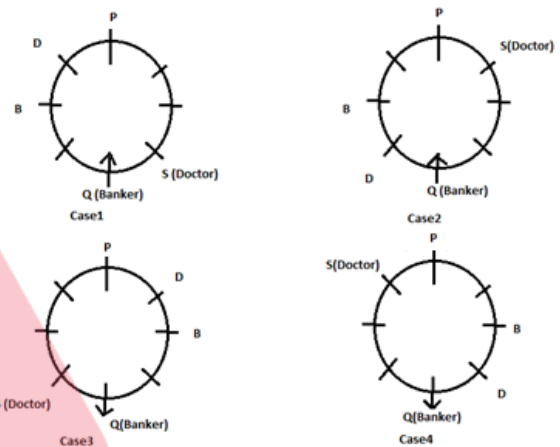
First we try to solve the blood relations:

D is the mother of Q and she sits opposite to S. A is the father of Q, who is a female. Both C and R is children of P, who is married to Q. B and R are the male members. C is a female. S is the sister-in-law of Q. We conclude that B is the brother of Q and married to S. The singer is married to the doctor.



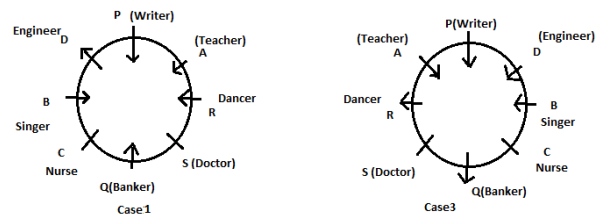
Now we place all persons in the circular seating arrangement.

The one who is Brother of Q sits second to the left of Banker. P sits opposite to Q, who is a Banker. Two persons sit between S, who is a doctor and brother of Q. D is the mother of Q and she sits opposite to S. We have four possible cases for this Case1, Case2, Case3, Case4.

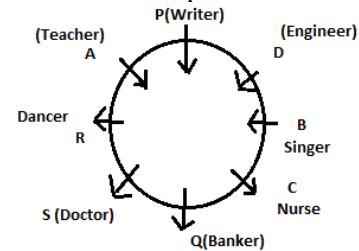


D's Daughter sits third to the left of D. Now Case2 and Case4 will be eliminated.

B who faces inside sits opposite to the Dancer. The Writer sits second to the right of the Dancer. The singer sits second to the left of Q. Three persons sit between A, who doesn't sit near to Banker and the one who is Nurse. D is an Engineer. C is a female but she is not a dancer. The teacher and the writer face inside. Not more than four persons face same direction. Now case1 will be eliminated.



R does not sit immediate left of S. Now Case3 will be our final arrangements and their professions.



Persons	Gender	Professions
A	Male	Teacher
B	Male	Singer
C	Female	Nurse
D	Female	Engineer
P	Male	Writer
Q	Female	Banker
R	Male	Dancer
S	Female	Doctor

21. (b):            22.    (b):    23.    (c):

24. (e):

25. (d): In the above question we have to find which statement can be concluded from the given passage.

For I-This is not true because it is not given in the above passage that Google's market is not good that's why Google has decided to launch new service.

For II-This statement is irrelevant. Because Google is going to launch new service it does not mean that Google is not interested to provide other services, we can't conclude this from the given passage.

For III- There is a sentence in the passage "The results will aim to streamline such listings by eliminating duplicate jobs posted on different sites." It clarifies the statement III. So we can conclude statement III from the given passage.

For IV- This is vague in the given context because Google will also show employer ratings from current and former workers, it is given in the passage.

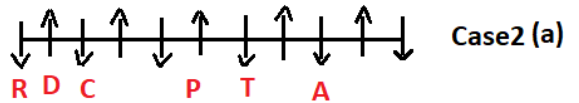
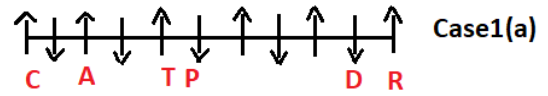
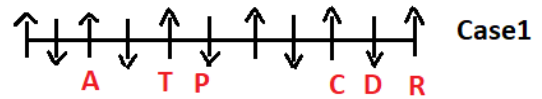
**Directions (26-29):**

By using given information:

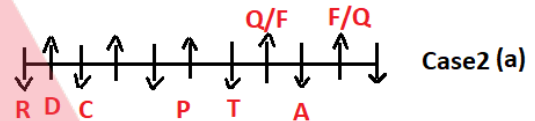
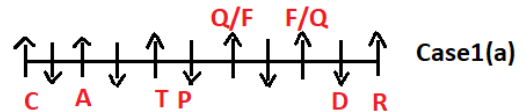
House P is located fourth to the right of House D, which is located to the immediate left of House R. Number of Houses located to the left of House P is one more than the number of Houses located between House R and House P. Only two houses are located to the left of House A. House D is 2<sup>nd</sup> from one of the ends. We have two possible cases for that Case 1 and Case 2.



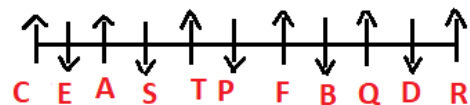
The number of houses located between House P and House A is one less than the number of Houses located between House T and House C. House T is located near House P. Now we have two more possible cases Case1(a) and Case2 (a).



Only one house is located between House F and House Q and the Gates of both of the houses doesn't open in south direction. Now Case1 will be eliminated as we can't place House Q and House F.



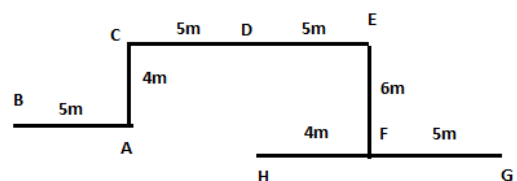
Only one house is located between House E and House S, which is not located near House C. Now case 2(a) will be eliminated as we can't place House E and House S. House B is not located near House A. House Q is located to the immediate left of House B. Now case 2 will be eliminated as we can't place B. Now we have our final arrangements.



26. (b):            27. (d):            28. (b):

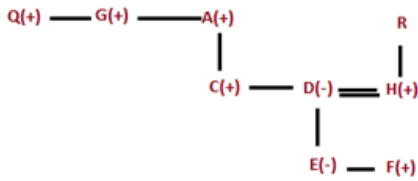
29. (a):

30. (b): Clearly Point A is in North-West of Point G.

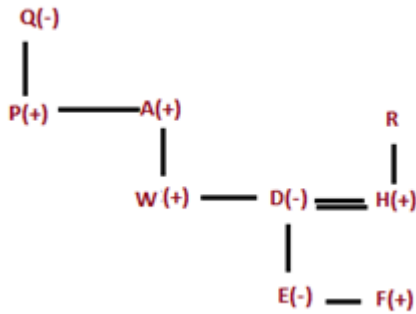


**Directions (31-32):**

31. (b): F is the Grandson of A.



32. (c): Q is the Paternal Grandmother of the E's mother.



33. (c): In the above question we have to find which statement negates the given statement.

For I-This statement supports the given statement as it describes about the revolution that technology has bring in India which is a mark of achievement of Modi's government.

For II-This statement also supports the given statement as it describes the country's growth in Modi government's tenure which is considered as victory of his government.

For III-This negates of the given statement as it defines the problems of poverty and corruption that India is still facing which can be considered as flaw of Modi's government.

For IV-It supports the given statement as number of FDI's has increased in India in current scenario as given in the statement.

34. (b): In the statement we have to pick the statement which can be assumed from above statement.

For Statement I. Wrong, Because it was not possible to destroy the existing stocks by the end of this month that is why the companies pleaded to the Supreme Court.

For Statement II. Right, Because it is clear from the above statement that the court had fixed the deadline 31 may earlier and there after extended it to 31 july.

For Statement III. Right, Because to dispose off stock and transporting it out of the state requires clearance.

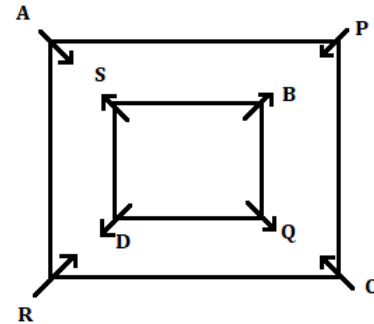
35. (e): In the above question we have to find which statement concludes the given statement.

**For I-** This statement states about compulsion of Adahaar with PAN to avoid fraud in taxation system whereas the given statement states about mandating Aadhaar in banking transactions. So this cannot be concluded from the given statement.

**For II-** It cannot be concluded as it is not given in the statement whether Adhaar is more secure or not.

**For III-**It is not related to the statement as it is general information.

**Direction (36-39):**



36. (a):                      37.                      (b):                      38.                      (e):

39. (c):

**Direction (40-43):**

Post/ Department	Production	Management	Finance
General Manager	A-53	B-30	H-60 G-40
Manager	E-48 F-36	D-84	C-24

40. (a):                      41. (b):                      42. (d):

43. (b):

**Direction (44-45):**

44. (b): In this question we have to choose that statement which can be assumed from the passage.

For Statement I: Right, As passage says that Travis Kalanick helped Uber built into colossus (enormous importance). Statement I says same thing that Travis Kalanick helped Uber built into prodigious.

For Statement II: Wrong, from passage we can't assume that shareholders forced or ordered Travis Kalanick to give-up from the post of chief executive of Uber. He stepped down as chief executive, after a seemingly endless series of scandals raised doubts over his leadership, no one forced him to do so.



For Statement III: Right, There is a sentence in a passage “Meanwhile, Shareholders released a damning report on the firm’s management culture”, it clarifies that the Shareholders released damning (fatal, condemnatory) report against management’s culture.

**45. (e):** In this question, we have to select that statement which is out of the context in regarding to the above passage.

For Statement I: from passage we can get an idea that Travis Kalanick stepped down as chief executive because of the reason and there were some other reasons behind the resignation.

For Statement II: As in passage these all are the reasons behind the Travis Kalanick stepped down as chief executive of Uber.

For Statement III: As in passage it is mentioned, Travis Kalanick spent most of the past decade turning a taxi app (Uber) into the world’s most valuable startup.

## QUANTITATIVE APTITUDE

**Direction (46 – 48):**

Given average speed of train on Monday during whole journey = 50 kmph

Or, Average speed of train on Tuesday during whole journey = 62.5 kmph =  $\frac{125}{2}$  kmph

Let time taken by train on Monday from A to B = t hours

So, time taken by train on Tuesday from A to B = (t + 1) hours

Time taken by train on each given day from B to C = u hours (given, train takes equal time to cover distance between B to C on both the given days)

And, time taken by train on Monday from C to D = v hours

Time taken by train on Tuesday from C to D = (v - 3) hours

Let distance between C to D = 100x km

So, distance between A to B =  $100x \times \frac{(100-40)}{100} = 60x$  km

And distance between B to C =  $60x \times \frac{150}{100} = 90x$  km

For Monday,  $\frac{\text{distance (AB+BC+CD)}}{\text{Time}} = \text{Speed}$

For Monday,  $\frac{(100x+60x+90x)}{(t+u+v)} = 50$

So, t + u + v = 5x ----- (i)

For Tuesday,  $\frac{(100x+60x+90x)}{(t+u+v-2)} = \frac{125}{2}$

From (i) put the value of (t + u + v) and we get -

$$\frac{250x}{(5x-2)} = \frac{125}{2}$$

$$x = 2$$

Now, distance between C to D =  $100 \times 2 = 200$  km

Distance between A to B =  $60 \times 2 = 120$  km

And, distance between B to C =  $90 \times 2 = 180$  km

**46. (b):** From above explanation

From (i) put the value of (t + u + v) and we get -

$$(t + u + v - 2) = 5x - 2$$

Total required time by train to cover distance from A to D on Tuesday =  $(5x - 2) = (5 \times 2 - 2) = 8$  hours

**47. (c):** Required difference =  $200 - 120 = 80$  km

**48. (e):** Let Speed of train between C to D on Monday = 2s kmph

So, speed of train between B to C on Monday =  $2s \times \frac{150}{100} = 3s$  kmph

Let time taken by train to cover distance between B to C on Monday = x hours

So, time taken by train to cover distance between C to D on Monday = x + 2 hours

ATQ -

For B to C on Monday =  $\frac{180}{3s} = x$

$$\text{Or } x = \frac{60}{s} \text{ ---- (i)}$$

For C to D on Monday =  $\frac{200}{2s} = x + 2$

$$x = \frac{100}{s} - 2 = x \text{ ----- (ii)}$$

From (i) and (ii)

S = 20 kmph

So, speed of train between C to D on Monday = 40 kmph

**49. (e): From I -**

$$\frac{2P}{5} \times \frac{11}{4} \times \frac{R}{100} = \frac{1}{2} \times P \left[ \left( 1 + \frac{R}{100} \right)^2 - 1 \right]$$

So, From I we can get the value of R

**From II -**

$$X \left[ \left( 1 + \frac{R}{100} \right)^2 \right] = 3600 \text{ ... (i)}$$

And,

$$\frac{16}{25} X \left[ \left( 1 + \frac{R-10}{100} \right)^2 \right] = 1936 \text{ ... (ii)}$$

From equ. (i) and (ii), we can get the value of R.

**From III -** From III we can get two variables first Amount ‘Q’ and second Rate of interest ‘R’. So, we can’t determine the value of two variables from one equation.

So, either statement **(I)** or statement **(II)** alone is sufficient to answer the question

**50. (a):** Given, total number of boys in school A = X

And total number of girls in school A = Y

So, total number of boys in school B = (X + Y)

And total number of girls in school B = 2Y + 30

$$\begin{aligned} \text{Required difference} &= (X + X + Y) - (Y + 2Y + 30) \\ &= 2X - 2Y - 30 \end{aligned}$$

**51. (e):** Let total number of boys in school A = a  
 And total number of girls in school A = b  
 So, total number of boys in school B = (a + b)  
 And, total number of girls in school B = 2b + 30  
 ATQ -  
 $2(a + b) - (a + b + 2b + 30) = 180$   
 $2a + 2b - a - b - 2b - 30 = 180$   
 $a - b = 210$   
 So, difference between total students in school A and total girls in school B = 180

**52. (a):** Let total number of boys in school A = a  
 And total number of girls in school A = b  
 So, total number of boys in school B = (a + b)  
 And, total number of girls in school B = 2b + 30  
 ATQ -  
 $2(a + b) - (a + b + 2b + 30) = 180$   
 $2a + 2b - a - b - 2b - 30 = 180$   
 $a - b = 210$   
 Given,  $2b + 30 = 450$   
 $2b = 420$   
 $b = 210$   
 So, total number of boys in school A = (a) = 420  
 And, total number of boys in school B = (a + b) =  
 $(420 + 210) = 630$

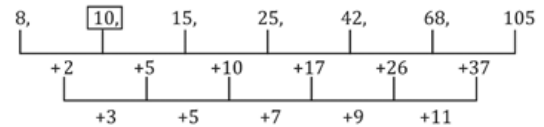
**53. (a):** In the given series -  
 If we take  $701 = X$   
 So,  $349 = Y$   
 Similarly,  $173 = X$   
 So,  $85 = Y$  and so on ----  
 Now, (i)  $701 = 2 \times 349 + 3$   
 $701 = 701$   
 If we take any term of given series, then statement  
 (i) following  
 (ii)  $349 = 701 \times 3 + 2$   
 $349 \neq 2105$   
 So, statement (ii) did not follow if we take any  
 term of the given series as 'X' & 'Y'  
 (iii)  $(701 - 349) = 2 \times (349 - 173)$   
 $352 = 2 \times 176$   
 $352 = 352$   
 So, if we take any term of given series, then  
 statement (iii) following

**54. (d):** Wrong term = 3  
 Pattern of series -  
 $1 \times 1 + 1 = 2$   
 $2 \times 2 + 2 = 6$   
 $6 \times 3 + 3 = 21$   
 $21 \times 4 + 4 = 88$   
 $88 \times 5 + 5 = 445$   
 $445 \times 6 + 6 = 2676$   
 So, IV<sup>th</sup> term of new formed series which starting  
 with wrong term '3'  
 $3 \times 1 + 1 = 4$   
 $4 \times 2 + 2 = 10$   
 $10 \times 3 + 3 = 33$

**55. (e):** Series I: 8, 9, 15, 25, 42, 68, 105

Wrong term = 9

Pattern of series -



So, 9 is the nearest square of '3'

**56. (c):** Wrong term = 1380

Pattern of series -

$$60 \times 3 = 180$$

$$180 \times 2.5 = 450$$

$$450 \times 2 = 900$$

$$900 \times 1.5 = 1350$$

$$1350 \times 1 = 1350$$

$$1350 \times 0.5 = 675$$

$$(i) \frac{1380}{30} + 1 = 47$$

47 is a prime number, so statement (i) following

$$(ii) \frac{1380}{30} + 1 = 47$$

$$\text{Sum of digits} = 4 + 7 = 11$$

$$\text{And, } 11 > 9$$

So, statement (ii) did not follow

$$(iii) \frac{1380}{30} + 1 = 47$$

$$\frac{47}{5}, \text{ remainder is 2 not 4}$$

So, statement (iii) did not follow

**57. (b):** Let total population of village E = 100x

$$\text{Total literate population of village E} = 100x$$

$$\times \frac{85}{100} = 85x$$

$$\text{And total illiterate population of village E} = 100x -$$

$$85x = 15x$$

$$\text{Given, literate male population of village E} = 1530$$

$$\text{So, total literate female population of village E} =$$

$$85x - 1530$$

$$\text{Total illiterate male population of village E} = 15x$$

$$\times \frac{60}{100} = 9x$$

$$\text{And, total illiterate female population of village E}$$

$$= 15x - 9x = 6x$$

ATQ -

$$6x + 85x - 1530 = 1746$$

$$91x = 3276$$

$$x = 36$$

$$\text{So, total population of village E} = 100 \times 36 = 3600$$

**58. (c):** Let total population of village A = 100x

$$\text{Total literate population of village A} = 100x$$

$$\times \frac{75}{100} = 75x$$

$$\text{And total illiterate population of village A}$$

$$= 100x - 75x = 25x$$

$$\text{Given, total literate male population of village A}$$

$$= 1050$$

So, total literate female population of village A  
 $= 75x - 1050$   
 Total illiterate male population of village A  $= 25x$   
 $\times \frac{40}{100} = 10x$   
 And total illiterate female population of village A  
 $= 25x - 10x = 15x$   
 ATQ -  
 $75x - 1050 + 15x = 750$   
 $90x = 1800$   
 $x = 20$   
 Required difference  $= (1050 + 10 \times 20) - 750$   
 $= 1250 - 750 = 500$

**59. (b):** Let total population of village B =  $100x$   
 Total literate population of village B =  $100x$   
 $\times \frac{72}{100} = 72x$   
 And total illiterate population of village B =  $100x - 72x = 28x$   
 Total literate male population of village B =  $72x$   
 $\times \frac{75}{100} = 54x$   
 And total literate female population of village B =  
 $72x - 54x = 18x$   
 Total illiterate male population of village B =  $28x$   
 $\times \frac{75}{100} = 21x$   
 And total illiterate female population of village B =  
 $28x - 21x = 7x$   
 Required ratio  $= (54x + 21x) : (18x + 7x)$   
 $= 75x : 25x = 3 : 1$

**60. (e):** Let total population of village C =  $100x$   
 Total literate population of village C =  $100x$   
 $\times \frac{80}{100} = 80x$   
 And total illiterate population of village C =  $100x - 80x = 20x$   
 Given, total literate male population of village C =  
 1280  
 So, total literate female population of village =  
 $(80x - 1280)$   
 And total illiterate male population of village C =  
 $20x \times \frac{60}{100} = 12x$   
 So, total illiterate female population of village C =  
 $20x - 12x = 8x$   
 Given, total female graduate female in village C =  
 number of illiterate males in village C =  $12x$   
 ATQ -  
 $56x - 1280 = 120$   
 $56x = 1400$   
 $x = 25$   
 So, total population of village C =  $100 \times 25 = 2500$

**61. (a):** Let total population of village D =  $100x$   
 Total literate population of village D  
 $= 100x \times \frac{96}{100} = 96x$   
 And total illiterate population of village D  
 $= 100x - 96x = 4x$   
 Total literate male population of village D  
 $= 96x \times \frac{70}{100}$   
 Total literate female population of village D  
 $= 96x \times \frac{30}{100}$   
 Total illiterate male population of village D  
 $= 4x \times \frac{50}{100} = 2x$   
 So, illiterate female population of village D  
 $= 4x - 2x = 2x$   
 ATQ -  
 $(96x \times \frac{70}{100} + 2x) - (96x \times \frac{30}{100} + 2x) = 1152$   
 $69.2x - 30.8x = 1152$   
 $38.4x = 1152$   
 $x = 30$   
 So, total number of illiterate females in village D  
 $= 2 \times 30 = 60$

**62. (e):** Let total number of ball bag kept = X  
 And, total number of green balls bag kept = a  
 While total blue balls bag kept = b  
 ATQ -  
 $\frac{a}{x} - \frac{7}{x} = \frac{1}{7}$  ----- (i)  
 And,  $\frac{b}{x} - \frac{7}{x} = \frac{9}{35}$  ----- (ii)  
 From equation (ii) we can say the value of X should  
 be multiple of 35  
 So, let X = 35  
 Now when we take X = 35, so both equations  
 satisfied by it and we get a = 12 & b = 16  
 So, total blue balls bag kept = 16

**63. (a):** Let age of Aman's father at time of marriage  
 $= x$  years  
 So, age of Aman's mother at time of marriage  
 $= (x - 3)$  years  
 And, age of Aman's father at time when he born  
 $= (x + 3)$  years  
 Age of Aman's mother at time when he born  
 $= x$  years  
 Let, Age of Aman = y  
 Present age of Aman's father =  $(x + 3 + y)$  years  
 (given present Aman is 20 years younger than his  
 mother)  
 So, present age of Aman's father =  $(23 + y)$  years  
 And present age of Aman's mother =  $(20 + y)$  years  
 ATQ -  
 $\frac{23+y}{26+y} = \frac{10}{11}$   
 $253 + 11y = 260 + 10y$   
 $y = 7$   
 So, Aman's parents got married  $(7 + 3) = 10$  years  
 before



**64. (d):** Given, marked price of pen = Rs. Y  
**From I** - We can't know the cost price of pen. So, we can't determine marked up how much percentage above its cost price.

**From II** - Give, Cost price of pen = Rs. x  
 So, selling price of pen = Rs. 1.08x  
 And given, shopkeeper allows a discount of 4% on marked price

So, 96% = Rs. 1.08x  
 100% (marked price) = 1.125x Rs.

ATQ -  
 $1.125x - x = 28$   
 $x = 224$

Marked price of pen (Y) =  $1.125 \times 224 = 252$  Rs.  
 So, from II we can determine the value of Y.

**From III** - Given, cost price = Rs. P  
 And, selling price of pen = Rs. (P + 70)  
 ATQ -

Marked price of pen =  $\frac{9(P+70)}{7}$

**From I & III -**

$P \times \frac{180}{100} = \frac{9(P+70)}{7}$   
 $12.6P - 9P = 630$   
 $3.6P = 630$   
 $P = 175$

So, marked price of pen (Y) =  $\frac{9(175+70)}{7} = 315$  Rs.

So, either statement **(II)** alone or statement **(I)** and **(III)** together sufficient to answer the question.

**65. (d):** Let volume of cylindrical jar = V  
 So, volume of conical vessel =  $\frac{V}{27}$   
 We know volume of cylinder =  $\pi r^2 h$   
 Let radius of conical vessel = R  
 Given, height of conical vessel is four times of the height of cylindrical jar

So, required ratio =  $\frac{V}{\frac{V}{27}} = \frac{\pi r^2 h}{\frac{1}{3}\pi R^2 4h}$

$= \frac{r^2}{R^2} = \frac{36}{1}$   
 $r : R = 6 : 1$

**Direction (66 - 67):**

Let distance between home and shop be 'd' km

ATQ -

$$d = 7 + \frac{1}{3} \times \sqrt{\frac{1}{11} \times 83259}$$

$$d = 7 + \frac{1}{3} \times \sqrt{7569}$$

$$d = 7 + \frac{1}{3} \times 87$$

$$d = 36$$

let time taken by man = t

So, speed of man = 4t

$$4t \times t = 36$$

$$t^2 = 9 \Rightarrow t = 3$$

And speed of man =  $4 \times 3 = 12$

**66. (a):** Speed of man =  $4 \times 3 = 12$  kmph

**67. (c):** Time taken by man = 3 hours

**68. (a):** From (C) given Circumference of circle = 44 m

$$2 \times \frac{22}{7} \times r = 44$$

So,  $r = 7$  m

Now we get,  $B = C = 7$  m

Let height of Y be  $h_Y$  and side of square be 's'

We determine  $h_Y \sim s > 20$

When we take radius of Y & circle in which square inscribe = 7 m

$$\text{Given, } \frac{22}{7} \times 7^2 \times h_Y = 1848$$

So,  $h_Y = 12$

And side of square =  $7 \times 2 = 14$

So, value of  $r = 7$  not satisfied the equation  $h_Y \sim s > 20$

Now we radius of Y = 14 m

So,  $h_Y = 3$  m

Also take radius of circle in which square inscribe = 14

So, side of square (s) =  $14 \times 2 = 28$  m

Now we get  $25 - 3 = 22$  m

So, here for (i) all A, B & C satisfied

For (ii) only A satisfied

Form (iii) only A satisfied

So, Answer will be

(a) (i) Only A, either B or C

(ii) Only A

(iii) Only A

**69. (b):** Let height of X be  $h_x$  and height of Y be  $h_y$

We have to find  $h_x > h_y$

When we take radius of Y = 7 m

We get height of Y = 12 m

And when we take radius of Y = 14 m

We get height of Y = 3 m

$$\text{Now, } \frac{1}{3} \times \frac{22}{7} \times r^2 h + \frac{2}{3} \times \frac{22}{7} \times r^3 = 1232$$

$$r^2 (h + 2r) = 168 \times 7$$

now when take  $r = 7$  m for X

then  $h_x = 10$  m

and when we take  $r = 14$  m for X we get  $h_x$  in negative which not possible

Now for satisfied  $h_x > h_y$ , height of Y should be 3 m

So, answer should be

(i) Either B or C

(ii) Only A

(iii) Only A, either B or C

**70. (b):** Let total employees in company B =  $100x$   
 Total female employees in company B =  $100x \times \frac{40}{100} = 40x$   
 Total managers in company B =  $100x \times \frac{25}{100} = 25x$   
 And total Non-managers employee in company B =  $(100x - 25x) = 75x$   
 Also, give total Non-managers female employees in company B =  $75x \times \frac{40}{100} = 30x$   
 $40x - 30x = 56$   
 $10x = 56$   
 $x = 56/10$   
 So, total number of Non managers employee in company B  $75x = \frac{56}{10} \times 75 = 420$

**71. (e):** Let total employee in company C =  $100x$   
 So, total managers in company C =  $100x \times \frac{30}{100} = 30x$   
 Given,  $30x = (80 + 100)$   
 $x = 6$   
 total employee =  $100x = 100 \times 6 = 600$   
 Total number of male employees (Non managers + managers) in company C = Total number of employees in company C (Non managers + managers) – Total number of female employees in company C (Non managers + managers)  
 Total number of male employees (Non managers + managers) in company C =  $6 \times 100 - 260 = 340$   
 Required percentage =  $\frac{(340-100)}{100} \times 100 = 240\%$

**72. (a):** Let total employee in company A =  $100x$   
 So, total number of managers in company A =  $100 \times \frac{20}{100} = 20x$   
 Total number of male managers in company A =  $(20x - 32)$   
 And, total number of employee (Non managers) in company A =  $(100x - 20x) = 80x$   
 ATQ –  
 $80x - 20x = 288$   
 $60x = 288$   
 $10x = 48$   
 $x = 48/10$   
 Total number of male managers in company A =  $(20 \times \frac{48}{10} - 32)$   
 $= 96 - 32 = 64$

**73. (d):** Let total number of employees in company F =  $100x$   
 Total number of managers in company F =  $100x \times \frac{18}{100} = 18x$   
 Total number of employees (Non managers) in company F =  $100x - 18x = 82x$   
 total male managers in company F to total female managers in same company is  $7u : 2u$   
 $2u = 18$   
 $u = 9$   
 total no of (male and female) managers in company F =  $9u = 9 \times 9 = 81$   
 So,  $18x = 81$   
 $x = 81/18$   
 Required number of total employee (Non managers) in company F =  $\frac{81}{18} \times 82x = 369$

**74. (e):** Let total number of employees in company D =  $100x$   
 So, total number of Non managers employees in company D =  $100x \times \frac{(100-15)}{100} = 85x$   
 Given,  $85x = 612$   
 $x = 7.2$   
 total number of managers in company D =  $15x$   
 Total number of male managers in company D =  $7.2 \times 15 - 50 = 58$

**75. (c):** Let total employee in company E =  $100x$   
 And, total number of managers in company E =  $100x \times \frac{12}{100} = 12x$   
 Total number of male managers in company E =  $12x - 24$   
 Give,  $12x - 24 - 24 = \frac{24}{2}$   
 $12x = 60$   
 $x = 5$   
 So, total number of employees in company E =  $5 \times 100 = 500$

**Direction. (76 -80):**

For total cookies produced pie chart  
 $2N\% + (N + 5)\% + N\% + (N + 20)\% = 100\%$   
 $(5N + 25)\% = 100\%$   
 $5N = 75$   
 $N = 15$   
 Let total cookies produced by all four companies =  $100x$   
 So, total cookies produced by A =  $100x \times \frac{(15+5)}{100} = 20x$   
 Total cookies produced by B =  $100x \times \frac{15}{100} = 15x$   
 Total cookies produced by C =  $100x \times \frac{(15+20)}{100} = 35x$   
 Total cookies produced by D =  $100x \times \frac{2 \times 15}{100} = 30x$   
 Similarly, for total chocolate cookies produced pie chart  
 $(M + 10)\% + M\% + 20\% + 40\% = 100\%$   
 $(2M + 70)\% = 100\%$   
 $2M = 30 \Rightarrow M = 15$

Let total chocolate cookies produced by all four companies =  $100y$

So, total chocolate cookies produced by A

$$= 100y \times \frac{15}{100} = 15y$$

$$\text{Total chocolate cookies produced by B} = 100y \times \frac{20}{100} = 20y$$

$$\text{Total chocolate cookies produced by C} = 100y \times \frac{40}{100} = 40y$$

$$\text{And total chocolate cookies produced by D} = 100y \times \frac{(15+10)}{100} = 25y$$

Give,

$$20x - 15y = 110$$

$$\text{Or, } 4x - 3y = 22 \text{ ----- (i)}$$

$$\text{And, } 15x - 20y = 30$$

$$3x - 4y = 6 \text{ ----- (ii)}$$

From (i) and (ii) we get -

$$x = 10, y = 6$$

$$\begin{aligned} \text{76. (a): Required difference} &= (30 \times 10 - 25 \times 6) - \\ &= (35 \times 10 - 40 \times 6) \\ &= 150 - 110 \\ &= 40 \end{aligned}$$

$$\begin{aligned} \text{77. (b): Required ratio} &= (100 \times 10 - 100 \times 6) : 100 \times 6 \\ &= 400 : 600 \Rightarrow 2 : 3 \end{aligned}$$

$$\text{78. (c): Total butter cookies produced by all four companies} = 100 \times 10 - 100 \times 6 = 400$$

$$\text{Total butter cookies produced by company C} = (35 \times 10 - 40 \times 6) = 110$$

$$\text{Required angle} = \frac{110}{400} \times 360 = 99^\circ$$

$$\begin{aligned} \text{79. (d): Total chocolate cookies produced by B} \\ &= 20 \times 6 = 120 \end{aligned}$$

$$\begin{aligned} \text{Total butter cookies produced by D} \\ &= (30 \times 10 - 25 \times 6) = 150 \end{aligned}$$

$$\text{Required difference} = 150 - 120 = 30$$

80. (e):

$$\begin{aligned} \text{Total butter cookies produced by company C} \\ &= (35 \times 10 - 40 \times 6) = 110 \end{aligned}$$

$$\begin{aligned} \text{Total butter cookies produced by D} \\ &= (30 \times 10 - 25 \times 6) = 150 \end{aligned}$$

$$\begin{aligned} \text{Total revenue got by company C} \\ &= 110 \times \frac{60}{100} \times 12 = 792 \end{aligned}$$

$$\begin{aligned} \text{Total revenue got by company D} \\ &= 150 \times \frac{80}{100} \times 15 = 1800 \end{aligned}$$

$$\text{Required percentage} = \frac{1800-792}{1800} \times 100 = 56\%$$

## ENGLISH LANGUAGE

81. (c): The first paragraph of the passage indicates that option (c) is the correct answer choice as the sentence mentioned in the passage is: *The last few months have been great for the economy. New cases have fallen, and economic activity is racing back to pre-pandemic levels.*

82. (a): Replace 'outline' with 'outlined' to make the sentence grammatically correct.

83. (a): 'Soon by consumer durables' suits the blank best and completes the sentence.

84. (d): The second and first paragraph of the passage respectively indicates that the sentences (b) and (c) are incorrect. The correct sentences according to the passage are-

(b) Thankfully, pent-up services demand can play that role. Still 25% below normal, services can get a shot in the arm as herd immunity rises, in part led by vaccine roll-out

(c) After a c.24% contraction in the quarter ending June 2020, we expect GDP to grow by a positive 1.8% in the quarter ending December 2020.

85. (a): The last paragraph of the passage indicates that the sentence mentioned in option (a) is the correct answer choice and the relevant sentence is: "A Niti

Aayog report predicted that water demand will be twice the present supply by 2030 and India could lose up to 6% of its GDP during that time. Water shortages are hurting India's capacity to generate electricity because 40% of thermal power plants are located in areas where water scarcity is high."

86. (c): The word 'vulnerable' means 'weak and easy to hurt physically or emotionally'. All Words except 'protected' are similar to the word 'vulnerable'. Thus, 'protected' is the term opposite to it.

87. (b): Dwellers means 'people who live permanently in a place'. All words except 'Tenants' are opposite to the word 'Dwellers'. Thus, 'Tenants' is the term similar to it.

88. (d): Options (a) and (b) are incorrect while option (d) is more comprehensive than option (c)

89. (c): Referring the second paragraph of the passage, it is concluded that the author advises the World Bank to change its ideology to one encouraging both public and private sector investment in basic infrastructure. The relevant sentence for this answer choice is:

*"Practical development strategy recognizes that public investments - in agriculture, health, education, and infrastructure- are necessary complements to private investments."*

- 90. (a):** Untenable means 'not able to be maintained or defended against attack or objection'. 'Indefensible' means 'not able to be protected against attack; not justifiable by argument'. Plausible means 'reasonable'. Legitimate means 'reasonable or acceptable'. Pardonable means 'able to be forgiven; excusable'. Arguable means 'that you can give reasons for'.
- 91. (e):** Crusade means 'a vigorous campaign for political, social, or religious change. Hence, 'Stoppage' is the word most opposite in meaning to it. Scrimmage means 'a confused struggle or fight'. Strife means 'trouble or fighting between people or groups'. Ravage means 'to damage something very badly; to destroy something'. Expedition means 'a long journey for a special purpose'.
- 92. (c):** Dawn means 'the beginning'. 'Gloom' and 'murk' are opposite to dawn. Hence, the word 'dawn' suits the blank best.
- 93. (d):** Revival and amelioration means the same as 'the act of becoming or making something strong or popular again'. But the word droop means 'to bend or hang downwards'. Hence the words Revival and Amelioration suit the blank best.
- 94. (d):** Slid means 'to move or make something move quietly without being noticed'. 'Limped' means 'to walk with difficulty because you have hurt your leg or foot' and Stumped means 'to cause somebody to be unable to answer a question or find a solution for a problem'. Hence, the word slid suits the blank best.
- 95. (e):** Revenues means 'money regularly received by a government'. Expenditure means 'the act of spending money' and Asset means 'a person or thing that is useful to somebody/something'. Hence, the word 'Revenues' suits the blank best.
- 96. (c):** The terms 'shrink and dwindle' mean the same as 'to become smaller or make something smaller' while the term 'aggrandize' means 'to increase the power'. Hence, the words 'shrank' and 'dwindled' suit the blank best.
- 97. (d):** Postulates means 'to suggest or accept that something is true so that it can be used as the basis for a theory, etc.' The terms 'ionates' and 'charges' are opposite to the term 'postulates'. Hence, the term 'Postulates' suits the blank best.

- 98. (c):** Phenomenon means 'a fact or an event in nature or society' while 'movement' and 'criteria' are irrelevant terms here. Hence, the word 'Phenomenon' suits the blank best.
- 99. (e):** However, the starter (A) is incorrect as it will change the meaning of the sentence. After combining (B) and (C) the sentence so formed will be: " Mukesh Ambani's Reliance is keen to sign a binding agreement before the next annual shareholders meeting, which is due to take place before the end of April."
- 100. (c):** The starters (A) and (B) are incorrect as it will change the correct meaning of the statement. After using (C) the sentence so formed will be: Though the bank plans to set aside Rs100 crore to Rs200 crore for the merger, it wants to run this merger scheme on a pilot basis at least eight months.
- 101. (a):** The starters (B) and (C) are incorrect as it will change the correct meaning of the statement. After using (A) the sentence so formed will be: "Even though social issues are distinguished from economic issues, some issues have both social and economic aspects."
- 102. (b):** The starters (A) and (C) are incorrect as it will change the correct meaning of the statement. After using (B) the sentence so formed will be: Within the sensex pack, 22 stocks gained ground with Reliance Industries, HDFC Bank ,ICICI Bank contributed the maximum to the day's gains.
- 103. (b):** The starters (A) and (C) are incorrect as it will change the correct meaning of the statement. After using (B) the sentence so formed will be : "By including an additional explanation that states that 'pledge' would also refer to 're-pledge' of securities for margin or settlement obligations, SEBI has amended the Depository and Participants Regulations."
- 104. (d):** The first sentence must introduce a new concept without any prior reference and the best option for this is sentence 'Q'. The second sentence is given and this extends the discussion by naming the interesting aspects. The third sentence must either continue this description or introduce a related sub-topic i.e ; sentence 'P'. The fourth sentence can continue to elaborate the third sentence and i.e ; sentence 'S'. The fifth sentence is already given. The sixth sentence must extend the sub-topic and that is sentence 'R'. The last sentence should introduce the step taken to cure the problem and that is sentence 'T'.  
So, the correct order of the paragraph is :  
**Q2PS5RT**

**105. (a):** The first sentence must introduce a new concept without any prior reference and the best option for this is sentence 'Q'. The second sentence is given and this extends the discussion by naming the interesting aspects. The third sentence must either continue this description or introduce a related sub-topic i.e ; sentence 'P'. The fourth sentence can continue to elaborate the third sentence and i.e ; sentence 'S'. The fifth sentence is already given. The sixth sentence must extend the sub-topic and that is sentence 'R'. The last sentence should introduce the step taken to cure the problem and that is sentence 'T'.

So, the correct order of the paragraph is :  
**Q2PS5RT**

**106. (c):** C-A will replace each other in order to make the sentence grammatically and contextually correct. Hence, option (c) is the right answer choice.

**107. (c):** A-D will replace each other in order to make the sentence grammatically and contextually correct. Hence, option (c) is the right answer choice.

**108. (c):** C-A will replace each other in order to make the sentence grammatically and contextually correct. Hence, option (c) is the right answer choice.

**109. (a):** Both A-C and B-D will replace each other in order to make the sentence grammatically and contextually correct. Hence, option (a) is the right answer choice.

**110. (a):** 'Gateway, breakthrough' fit the blanks best as gateway means 'the place which you must go through in order to get to somewhere else' and breakthrough means 'an important discovery or development'.

**111. (b):** 'Set, venture' fit the blanks best as venture means 'a daring journey or undertaking'

**112. (e):** The words "exiting bonds" after the first blank indicate that the blank is a word that conveys that these bonds need to re-enter the market. Hence 'reissue, stocks' fit the blanks best.

**113. (b):** The word 'shored up' means 'to make something stronger by supporting it'. Hence 'flag, shored' fit the blanks best.

**114. (c):** The idiom '**back to the drawing board**' means to 'start planning something again because the first plan failed.'

**115. (d):** The idiom '**a far cry from**' means 'being very different from'.

