Grand Test-IRPM-171002

IBPS RRB PO (Mains)

RACE

ANSWER KEY

1.(2)	21.(1)	41.(2)	61.(2)	81.(2)	101.(5)	121.(1)	141.(3)	161.(4)	181.(3)
2.(3)	22.(3)	42.(2)	62.(4)	82.(5)	102.(4)	122.(2)	142.(3)	162.(2)	182.(2)
3.(4)	23.(2)	43.(2)	63.(4)	83.(4)	103.(2)	123.(3)	143.(1)	163.(3)	183.(3)
4.(2)	24.(1)	44.(1)	64.(3)	84.(2)	104.(5)	124.(1)	144.(1)	164.(1)	184.(3)
5.(2)	25.(3)	45.(2)	65.(3)	85.(3)	105.(1)	125.(4)	145.(2)	165.(1)	185.(4)
6.(4)	26.(2)	46.(3)	66.(1)	86.(1)	106.(5)	126.(2)	146.(2)	166.(3)	186.(1)
7.(2)	27.(4)	47.(3)	67.(4)	87.(4)	107.(2)	127.(4)	147.(4)	167.(1)	187.(2)
8.(3)	28.(2)	48.(3)	68.(1)	88.(4)	108.(1)	128.(2)	148.(2)	168.(3)	188.(3)
9.(2)	29.(5)	49.(5)	69.(2)	89.(4)	109.(2)	129.(3)	149.(5)	169.(2)	189.(2)
10.(2)	30.(2)	50.(1)	70.(1)	90.(5)	110.(3)	130.(4)	150.(2)	170.(4)	190.(2)
11.(2)	31.(5)	51.(3)	71.(3)	91.(2)	111.(4)	131.(4)	151.(4)	171.(3)	191.(1)
12.(5)	32.(4)	52.(3)	72.(4)	92.(2)	112.(3)	132.(5)	152.(4)	172.(2)	192.(3)
13.(1)	33.(2)	53.(1)	73.(3)	93.(2)	113.(2)	133.(2)	153.(2)	173.(1)	193.(5)
14.(5)	34.(1)	54.(3)	74.(1)	94.(5)	114.(2)	134.(3)	154.(3)	174.(5)	194.(5)
15.(2)	35.(5)	55.(4)	75.(2)	95.(5)	115.(2)	135.(5)	155.(5)	175.(1)	195.(1)
16.(4)	36.(3)	56.(3)	76.(1)	96.(4)	116.(5)	136.(4)	156.(4)	176.(4)	196.(3)
17.(5)	37.(5)	57.(4)	77.(3)	97.(4)	117.(1)	137.(3)	157.(2)	177.(3)	197.(2)
18.(5)	38.(1)	58.(5)	78.(4)	98.(3)	118.(1)	138.(4)	158.(1)	178.(4)	198.(2)
19.(3)	39.(2)	59.(3)	79.(4)	99.(1)	119.(3)	139.(1)	159.(2)	179.(5)	199.(4)
20.(3)	40.(4)	60.(5)	80.(5)	100.(2)	120.(4)	140.(5)	160.(5)	180.(3)	200.(1)

HINTS & SOLUTIONS

- 1.(2) Sum of the ages of 6 children = $15 \times 6 = 90$ When two children left, sum of the ages of 4 children = 90 - (18 + 20) = 52Sum of the ages of New children = $(15 + 4) \times 4 = 76$ \therefore Required average = $\frac{76+52}{8}$ = $\frac{128}{8} = 16$ years
- 2.(3) Remaining distance $=12 \frac{3}{4} \times 12 = 3km$ Remaining time $= 45 - \frac{2}{3} \times 45 = 15min$ Speed $= \frac{3}{15} \times 60 = 12km/hr$

3.(4) Area of the space left out = Area of square – Area of circle

$$28 \text{ m}$$

$$= (28)^2 - \frac{22}{7} \times 14 \times 14$$

$$= 28 \left(28 - \frac{11 \times 14}{7}\right)$$

$$= 28(28 - 22)$$

$$= 28 \times 6$$

$$= 168 \text{ m}^2$$

4.(2) Original company price =
$$1660 \times \frac{100}{83} = 2000 \text{ Rs}$$

SP = $2000 \times \frac{107}{100} = 2140 \text{ Rs}.$
Alcohol in First Mixture = $\frac{3}{7}$
Alcohol in second mixture = $\frac{5}{11}$
Alcohol in Final mixture = $\frac{4}{9}$
 $\therefore \frac{3}{7} \times \frac{5}{11}$
 $\frac{1}{99} \div \frac{1}{63} = 7 \div 11$
 $\therefore \text{ Ratio} = \frac{1}{99} \div \frac{1}{63} = 7 \div 11$
 $\therefore \text{ Required quantity} = \frac{7}{18} \times 18 = 7 \text{ litres}$
6.(4) (A + B)' 4 days work = $\frac{4}{8} = \frac{1}{2}$
B's 2 days work = $\frac{2}{12} = \frac{1}{6}$
 $\therefore \text{ Remaining work = } 1 - (\frac{1}{2} + \frac{1}{6})$
 $= \frac{1}{3}$
 $\therefore \frac{4}{12} = 4 \text{ days} = \text{ days that C require}$

7.(2) Speed of current = 4 km/hr Speed of rowing in still Water = x km/hr Distance (d) = $\frac{42}{2}$ = 21 km $=2+\frac{21}{x+4}$ Then, $\frac{21}{2}$ $21\left(\frac{1}{x-4} - \frac{1}{x+4}\right) = 2$ $x^2 = 100$ x = 10 km/h8.(3) Let amount = 100 \Rightarrow for compound interest \Rightarrow 100 \rightarrow 121 Simple interest $\Rightarrow 100 \rightarrow 120$ $\Rightarrow 1 \rightarrow 28$ \Rightarrow Principal = 2800 2800 when, compounded half- yearly. 3403.41 3360 C.I. Difference = 43.41 9.(2) Let the price before increase = x Then new price = $\left(\frac{100+20}{100}\right)x^{\Box} = 1.2x$ $\frac{115}{100} \times (x \times 24) = 1.2x \times y \text{ (y = new consumption quantity)}$ y = 23 kgLet the amount of pure copper = x kg. 10.(2) Pure copper + copper in 1st alloy + copper in 2nd alloy = Copper in 3rd alloy $\Rightarrow x + \frac{4}{5} \times 10 + \frac{1}{4} \times 16 = \frac{3}{5} (10 + 16 + x)$ $\Rightarrow 12 + x = \frac{3}{5} (26 + x)$ \Rightarrow x = 9 kg. \therefore weight of new alloy = 10 + 16 + 9 = 35 kg. S. P. of Lenovo sold by $X = 25,000 \left[1 - \frac{10}{100} \right] = \text{Rs. } 22,500$ 11.(2) S.P. = 22,500 = $\left[1 + \frac{20}{100}\right] \times (C.P)_{Lenovo}$ \Rightarrow (C. P.)_{Lenovo} = Rs. 18,750 S. P. of Sony sold by $Y = 16,000 \left[1 + \frac{30}{100} \right] = 20,800$ $(MP)_{sony} \times \left[1 - \frac{20}{100}\right] = 20,800$ $(M.P.)_{Sony} = 26,000$ Desired percentage = $\frac{26,000 - 18,750}{26,000} \times 100 \simeq 27.88\% \simeq 28\%$ 26,000 Desired Ratio = $\frac{\text{C. P. of Asus by X}}{\text{C. P. of Dell by Y}}$ 12.(5) M.P. of Asus = $\left[1 + \frac{44}{100}\right] \times 25,000 = 25,000 \times \frac{144}{100}$ C. P. of Asus = $25,000 \times \frac{144}{100} \times \frac{100}{120} = 30,000$ M.P. of Dell = $16,000 \left[1 + \frac{30}{100} \right] \left[1 + \frac{56.25}{100} \right]$ $= 16,000 \times \frac{130}{100} \times \frac{156.25}{100}$ C. P. of Dell = $16,000 \times \frac{130}{100} \times \frac{156.25}{100} \times \frac{100}{125} = 26,000$

Desired Ratio $=\frac{30,000}{26,000}=\frac{15}{13}$

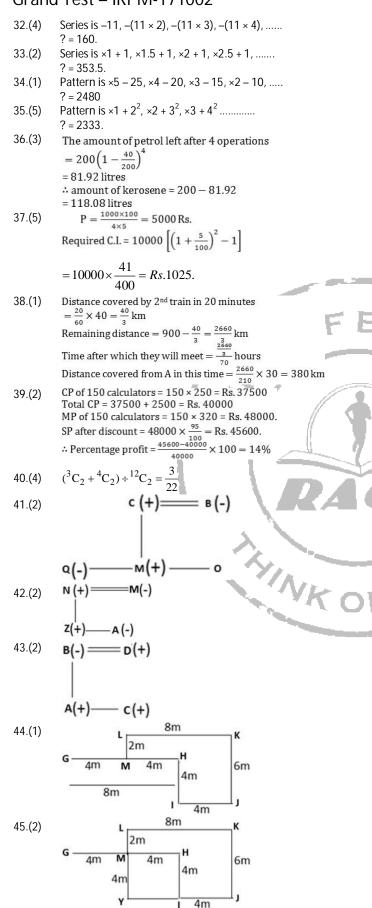
M.P. after 20% discount = $28,000 \left[1 - \frac{20}{100} \right] = 22,400$ 13.(1)C.P. = 22,400 - 2,400 = 20,000 Or, M.P after 30% discount = $28,000 \left[1 - \frac{30}{100} \right] = 19,600$ C.P. = 19,600 + 400 = 20,000 Net profit = 2 × 2400 - 6 × 400 = 2400 Profit % = $\frac{2400}{8 \times 20,000} \times 100 = 1.5\%$ S. P. of Lenovo by Y = $28,000 \times \frac{3}{4} = 21,000$ 14.(5) C. P. of Lenovo bought by X = $25,000 \times \frac{90}{100} \times \frac{100}{120} = 18,750$ C.P. of Lenovo bought by Y = $21,000 \times \frac{100}{112} = 18,750$ Desired average = $\frac{2 \times 18.750 + 6 \times 18,750}{2} = 18,750$ Let, C.P. of Asus = x15.(2) C.P. of Sony = yAccording to question, $\frac{x+y}{x+y} = 14,000$ $\Rightarrow x + y = 28,000$...(i) $x \times 1.2 + y \times 1.35 = 18,000$ 1.2x + 1.35y = 36,000 ...(ii) On solving (i) and (ii) y = 16,000x = 12,000Desired difference = 16,0000 - 12,000 = 4,000 $12x^2 - 6x - 10x + 5 = 0$ 16.(4) 6x(2x-1) - 5(2x-1) = 0 $x = \frac{1}{2}, \frac{5}{6}$ $18y^2 - 30y - 15y + 25 = 0$ 6y(3y-5) - 5(3y-5) = 0 $y = \frac{5}{3}, \frac{5}{6}$ $x \leq y$ **I**. $3x^2 + 9x + 5x + 15 = 0$ |**II**. $3y^2 + 10y + 7 = 0$ 17.(5) 3x(x+3) + 5(x+3) = 0 $x = -3, \frac{-5}{3}$ $y^{2} + 3y + 7y + 7 = 0$ 3y(y+1) + 7(y+1) = 0 $y = -1, -\frac{7}{2}$ $x = -3, \frac{-5}{3}$ No relation 18.(5) I. $x = \pm 73$ | II. $y^3 = 300763$ y = +67No relation 19.(3) I.9x + 8y = 64II. 3x + 4y = 28Solving I and II $x = \frac{8}{3}, y = 5$ So, y > x

I **RACE**

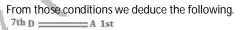
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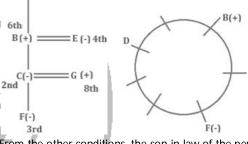
I. $4y^2 + 4y - 8 = 0$ 20.(3) Expenditure of E on Bill = $(100\% - 25\%)\frac{24000}{75} \times 10^{-10}$ 26.(2) $\Rightarrow 4y^2 + 8y - 4y - 8 = 0$ $\Rightarrow 4y(y+2) - 4(y+2) = 0$ $=\frac{75}{100} \times 3200$ $\Rightarrow y = -2, 1$ II. $x^2 + 7x + 12 = 0$ = 2400 $\Rightarrow x^2 + 4x + 3x + 12 = 0$ Expenditure of E on clothing= $\frac{2400}{2} \times 5$ $\Rightarrow x(x+4) + 3(x+4) = 0$ $\Rightarrow x = -3, -4$ = 4000 $\therefore x < y$ Saving of C = 2400 + 400021.(1) Total books sold by store A = 6400 Required sum = $6400 + \frac{24000}{75} \times 25$ $= 18 \times 257 + \frac{18}{3}\% \times 4 \times 25700$ = 14400 $= 18 \times 257 + 24 \times 257$ Expenditure of A on clothing = $\frac{25}{100} \times 16000$ 27.(4) $= 257 \times 42$ = 4000 Total books sold by store B Expenditure of C on clothing= $\frac{15}{100} \times 20,000$ $= 20 \times 257 + \frac{20 \times 257 \times 5}{4}$ = 3000 Saving of A = $\frac{125}{100} \times 4000$ $= 257 \times 45$ = 5000 Total books sold by both store Required percentage = 257(45 + 42) $\frac{5000 + 3000}{\frac{24000}{75} \times 15} \times 100$ = 257 × 87 75 8000 = 22.359 $\frac{1}{4800} \times 100$ Total books sold by store D 22.(3) $= 8 \times 257 + 8 \times 257 \times \frac{5}{4}$ 166.67% = 257(8+10)28.(2) Sum of saving of A, B, C, D, E and F $= 257 \times 18$ = 6400+8000+4800+3200+6400+4800 = 4626 = 33600 23.(2) Total books of publisher X sold by store E, F and G together Sum of expenditure all $= 44 \times 257$ = 16000+ 24000 + 20000 + 30000 + 25000+ 15000 Total books of publisher Y sold by store E, F and G together = 130,000 Required percent = $\frac{33600}{130000} \times 100$ $= 25700 \left(\frac{13\%}{13} \times 5 + 22\% \times \frac{12}{11} + 9\% \times \frac{4}{3} \right)$ $= 25 \frac{11}{13}\%$ = 25700(5% + 24% + 12%)Income of A = $\left(100\% + \frac{6100}{64}\%\right) \frac{24000}{75} \times 32$ = 25700(41%)29.(5) $= \left(1 + \frac{61}{64}\right) 10240$ $= \frac{125}{64} \times 10240$ Required percentage $=\frac{257(44-41)}{257\times41}\times100 = \frac{3}{41}\times100 = \frac{300}{41}\%$ 24.(1) Total books sold by store E in 2017 = 20,000 $=\frac{4}{3}(13\times257+5\times257)$ Required percentage $\frac{24000}{7^{c}} \times 25 - (20,000 - 16000)$ $=4 \times 257 \times 6$ $= 257 \times 24$ $\frac{24000}{25} \times 25$ Required percentage = $\frac{257 \times 13 - 257 \times 24 \times \frac{11}{24}}{257 \times 24 \times \frac{11}{24}} \times 100$ 75 $=\frac{8000-4000}{1000}$ $- \times 100$ 8000 $=\frac{257(13-11)}{257\times11}\times100=\frac{200}{11}$ = 50% Expenditure of D on education 30.(2) Average of books of publisher X sold by store B and C 25.(3) $=\frac{125}{100}\times\frac{24000}{75}\times10=4000$ $=\frac{30 \times 257}{2} = 15 \times 257$ Saving of D = $\left(100\% + \frac{700}{4}\%\right)4000$ Average of books of publisher Y sold by store E and G $=\frac{11}{4} \times 4000$ $=\left(13 \times 257 \times \frac{5}{13} + 9 \times 257 \times \frac{4}{3}\right)\frac{1}{2}$ = 11000 $=(5 \times 257 + 12 \times 257)\frac{1}{2}$ Saving of F = $=\frac{11000}{11} \times 9$ $= 8.5 \times 257$ = 9000 $\begin{aligned} \text{Required percentage} &= \frac{15 \times 257 - 8.5 \times 257}{8.5 \times 257} \times 100 \\ &= \frac{6.5}{8.5} \times 100 = \frac{13}{17} \times 100 = \frac{1300}{17} \% \end{aligned}$ Required ratio = (20,000 : 8000) = 5 : 2The series is $(35)^2 - 1$, $(45)^2 - 2$, $(55)^2 - 3$, $(65)^2 - 4$, $(75)^2$ 31.(5) - 5,; So ? = 2023.



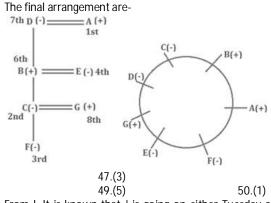


- 46-50. From the given conditions, first we try to complete blood relation tree also try to make circular arrangement as can as possible.
 - The conditions are like as, In the family of seven person, there are four generations and three couples. D's son lives on 6th floor, whose daughter is C, who lives on 2nd floor. Hence C is female. E and F belong to the same gender and F, the unmarried women. Hence E is also female and F is the last member of the family. F is daughter of the person, who lives on 8th floor. G, who is son-in-law of the person, who lives on 4th floor, lives on 8th floor. The person, who lives on 6th floor, is sitting second to the right of the person, who is unmarried women. A, the eldest person in the family, lives on 1st floor but the spouse of A does not live on 4th floor. Hence D does not live on 4th floor. The son-in-law of the person, who lives on 6th floor, means second generation persons lives on 6th floor. The person, who lives on 7th floor, is sitting second to the right of the father of the person, who lives on 2nd floor. Hence only D lives on 7th floor.





From the other conditions, the son-in-law of the person, who lives on 6th floor, is not an immediate neighbour of the persons, who lives on 3rd floor and 6th floor. Hence G is not immediate neighbour of B and F. So only one position is left of G, which is immediate right of D. The father of the person, who lives on 3rd floor, is not sitting next to any male. Hence D is female and A is male. No spouse is sitting together. Hence E sits immediate right of G and A sits immediate right of F. Rest C sits immediate right of B.



51.(3) From I, It is known that J is going on either Tuesday or Thursday. From II, it is known that J is going on Thursday.

52.(3) Data either in statement I alone or in statement II alone are sufficient to answer the question.

46.(3)

48.(3)

- 53.(1) Here in statement I it is known that A is facing outside, so all friends are not facing the centre.
- 54.(3) Data either in statement I alone or in statement II alone are sufficient to answer the question.
- 55.(4) Both statements I and II together are not sufficient to answer the question.
- 56-60. i.It is given that The Box that contains highest number of Shoes is placed at the bottom so the box which contains 37 shoes is placed at the bottom. Two Boxes are placed below the Box of Skechers Shoes. The Difference in number of Shoes of Sparx and Adidas is 7 and Adidas Shoes has less in number than sparx shoes.

ii. The Difference in number of Shoes of Woodland and Teva is equal to 18. The difference in number of Shoes between the Adidas and Teva Shoes is greater than 10.From these statements, The number of shoes of sparx is either 30 or 37 but The Box of sparx shoes is placed immediately above the Box of Adidas Shoes so The number of shoes of sparx is 30.Hence the number of shoes of Adidas is 23, The number of shoes of Teva is 36 and The number of shoes of woodland is 18.

iii. There can be three possibilities for the position of the shoes of Sparx.

Case 1- When the box of sparx shoes is placed fourth from the top, the box of sparx shoes is placed above the box of skechers shoes. The box of adidas shoes is placed just above box of Skechers shoes. There are two Boxes between the Boxes which contain Sparx Shoes and the one which contains Teva shoes. The box of Teva shoes is not placed at top place. There are two Boxes in between the Boxes that contain 17 and 27 number of Shoes; the Box that contains less number of Shoes is placed above the other so the number of shoes of skechers is 27.

iv. The Box which contains Woodland Shoes is immediately above the one which has Nike Shoes. The Box of Puma shoes contains number of shoes which is a prime number but less than 30.The box of converse shoes is not placed at the bottom so this case will be eliminated.

ommutou		
Type of Shoes	Number of Shoes	
	17	
sparx	30	
adidas	23	
Skechers	27	
Teva	36	
5	37	

v-Case 2-When the box of sparx shoes is placed third from the top, this case will be eliminated as there There are two Boxes between the Boxes which contain Sparx Shoes and the one which contains Teva shoes, which can't be possibile.

vi-Case 3- When the box of sparx shoes is placed second from the top.After using the conditions which are used in Case-1,the number of shoes of skechers is 32. The Box of Puma shoes contains number of shoes which is a prime number but less than 30 so the number of shoes of Puma is 17.

The final arrangement is-

Type of Shoes	Number of Shoes
Puma	17
sparx	30
Adidas	23
Converse	27
Гeva	36
Skechers	32
Woodland	18
Nike	37

56.(3) 58.(5)

61-65.

It is given that P lives on an odd numbered floor above the floor numbered four so there can be two possibilities-

59.(3)

Case 1-When P lives on 7th floor.

The one, who likes Pink colour lives immediately below the vacant floor. M lives immediately below the vacant floor so M likes Pink colour. The one, who likes Pink colour, lives on one of the floors below the floor number 4 so there can be another two possibilities-

60.(5)

65.(3)

Case 1(i)- When M lives on the ground floor but it is given that M lives immediately above the one who likes Brown colour so this case will be eliminated.

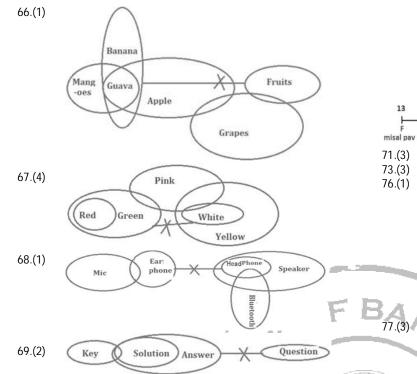
Case 1(ii)- When M lives on the 3rd floor, Fourth floor will be a vacant floor. There are three people live between R and the vacant floor so R lives on 8th floor. The number of floors above P is same as the number of floors between P and N so N lives on 5th floor. There are only three floors between N and the one who likes Red colour. Only two floors are there between the one who likes Green colour and Red colour but it cannot be possible as 4th floor is vacant.

Floor	Persons	Colours
8	R	
7	P	
6		
5	N	
4	-	
3	M	Pink
2		Brown
1		Red

Case 2- When P lives on 5th floor.

The number of floors above P is same as the number of floors between P and N so N lives on 1st floor. According to the condition given in the first case, M lives on 3rd floor and likes pink colour, P likes red colour so fourth floor will be vacant. The person who lives on top floor likes green colour. There are three people live between R and the vacant floor so R lives on top floor. There are only four floors between Q and L. The one who likes Orange colour lives immediately below to Q.Q lives on 7th floor and L lives on 2nd floor. O lives on 6th floor. L likes Brown colour. Q likes purple colour. N likes blue colour. The final arrangement is-

	Floor	Persons	Colours
	8	R	Green
	7	Q	Purple
	6	0	Orange
	5	P	Red
	4	-	-
	3	M	Pink
	2	L	Brown
	1	N	Blue
1.(2)		62	.(4)
63.(4)		64	.(3)



- 70.(1) It is clear from the above statement that statement I is the cause and statement II is its effect as companies in Delhi have become the victims of Locky ransomware is the cause and The Indian Computer Emergency Response Team (CERT-In) has issued an alert for 'Locky' is its effect.
- 71-75. i.It is given that F is third to the left of D.F sits at extreme left end. The apartment which has stall of sev puri at its gate is placed at extreme right end.The apartment E is third to the left of X and third to the right of J so J sits immediate right to F.

ii.It is given that U is third to the right of V. The number of flats of apartment V is 32.Apartment D has stall of Pav bhaji at its gate.W has stall of idli at its gate.

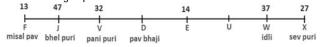
iii.Only one apartment is placed between D and the one who has stall of bhelpuri at its gate so there can be two possibilities-

iv. Case 1- When J has stall of Bhelpuri at its gate.

It is given that the apartments which have stall of bhelpuri and Ragda pav at its gate are placed next to each other. Two apartments are placed E and the one who has 27 flats. The one which has 27 flats is placed third to the right of the one which has 14 flats so X has 27 flats and E has 14 flats.

v.It is given that the sum of number of flats of E and F is equal to the number of flats of X so F has 13 flats.The number of flats of W is average of number of flats of X and J so W has 37 flats and J has 47 flats.

vi.The one which has stall of panipuri at its gate sits fourth to the left of the one which has 37 flats.The stall of missal pav is placed second to the left of the stall of panipuri.so F has stall of misal pav a its gate, so this case will be eliminated as there is no place for the stall of Ragda pav.



vii. Case 2-When U has stall of bhelpuri at its gate.

I RACE

After using all the conditions which are used in Case-1, E has stall of Ragda pav at its gate so J has stall of vada pav at its gate. It is given that the apartment which has 20 flats is placed fourth to the right of the one who has stall of vada pav at its gate so U has 20 flats and D has 60 flats. So the final arrangement is-

13	47	32	60	14	20	37	27
F misal pav	J vada bav	V pani puri	D pav bhaji	E ragda pav	U bhel puri	W idli	X sev puri
71.(3)			72.(4	4)			
73.(3)			74.(*	1)			75.(2)

For I-This could be a possible reason of this alleged controversy as a leader raised question against placing Bhagavad Gita with the statue could further lead to a controversy on this issue.

For II- This could not be a possible reason of this alleged controversy as the controversy is related to placing Bhagavad Gita not about Tamil treatise Thirukkural.

For III- This could not be a possible reason of this alleged controversy as inauguration by Prime Minister is not the subject of this controversy.

For I- This statement supports the given statement by pointing out that thousands of complaints have been filed against the Charted Accountants but only few of them have been awarded punishment which clearly indicates that amendments are required by the CA regulators for the strict and quick action.

For II- This statement does not support the given statement as it states that CAs are honest with their profession and like watchdogs against wrongdoers whereas the given statement states about the reforms the regulators are expected to take against wrongdoers or CAs involved in money laundering.

For III- This statement supports the given statement by pointing out that PM is asking the ICAI to hasten action against CAs for helping tax evaders.

78.(4) For I-This statement is in-line with the given statement. As given that Saudi Arabia keeps the original passport of crew members on arrival and the personnel then have only photocopies of their travel document and Xerox are invalid or big risk a spokesperson further added.

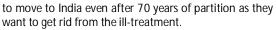
For II- This statement is not-in-line with the given statement as it is about rerouting their flights to Doha, capital of Qatar which is not related to given statement. For III- This statement is in-line with the given statement as states that this issue of keeping passport has been raised by a senior pilot of Jet Airways with the aviation and external affairs ministry.

79.(4) For I-This statement can be deduced from the given statement as the government revised its methodology for the survey Swachh Survekshan so it is clear that it has some major drawbacks because of which it needs to be revised.

For II- This statement cannot be deduced from the given statement as it is not given that revised methodology introduces negative marking or not.

For III-This statement cannot be deduced from the given statement as sources of feedback are not mentioned in the given statement.

80.(5) For I-This can be hypothesized from the given statement because it is clear that Hindus in Pakistan are still hoping



For II- This cannot be hypothesized from the given statement because violation of ceasefire by Pakistan is nowhere related to the given statement.

For III- This can be hypothesized from the given statement as given that like many others Jogdas dreamed of moving to India to escape the persecution but the reality of life over the border is a far cry from those dreams so it can be hypothesized that many have to face discrimination and harassment and cannot move without authorities' permission.

- 81.(2) Air Marshal Hemant Narayan Bhagwat took over as Air Officer-in-Charge Administration (AOA) of Indian Air Force at Air Headquarters in New Delhi.
- 82.(5) Kenya has imposed World's toughest law against plastic bags. In Kenya, selling or even using plastic bags will risk imprisonment of up to four years or fines of \$40,000. It is the world's toughest law which is aimed at reducing plastic pollution came into effect.
- 83.(4) HDFC Bank announced a software upgrade to create a single point-of-sale (PoS) machine which will accept payments through Unified Payments Interface (UPI), BharatQR, SMS Pay and the bank's mobile wallet, in addition to the traditional mode of swiping cards.
- 84.(2) A fixed deposit (FD) is a financial instrument provided by banks which provides investors with a higher rate of interest than a regular savings account, until the given maturity date. The tenure of an FD can vary from 7, 15 or 45 days to 1.5 years and can be as high as 10 years. These investments are safer than Post Office Schemes as they are covered by the Deposit Insurance and Credit Guarantee Corporation (DICGC). However, DICGC guarantees amount up to 1,00,000 per depositor per bank. They also offer income tax and wealth tax benefits.
- 85.(3) Insurance premium is a specified amount stipulated by the insurance company, which the insured individual should periodically pay to maintain the actual coverage of insurance.
- 86.(1) Small finance banks will provide banking products to the unserved and undeserved sections of the country, which includes small and marginal farmers, micro and small industries, and other organized sector entities, at an affordable cost.

Maximum loan size to a single person cannot exceed 10% of total capital funds; cannot exceed 15% in the case of a group.

- 87.(4) Manipur's Nungthaang Tampak village has emerged as the '100 percent computer literate' not only in the state but in the entire North East. The computer course, which is affiliated to All India Society for Electronics and Computer Technology (AISECT), was organized by Mangal Rural as a part of the Digital India program.
- 88.(4) Finance Minister Arun Jaitley launched 'Aaykar Setu', an e-initiative for the Income tax Department to directly communicate with the taxpayers and aimed at providing information on useful tax services.
- 89.(4) A truncated cheque means a cheque which is truncated during the course of clearing cycle either by the clearing house or by the bank.
- 90.(5) England has been awarded the right to host the 2018 Table Tennis Team World Cup, which will be held in London. The event will take place at the Copper Box

Arena in the Queen Elizabeth Olympic Park from 22-25 February 2018.

91.(2)

- 92.(2) P V Sindhu won the Silver medal in World Badminton Championship 2017. She lost the historic match against Japan's Nozomi Okuhara in an epic final, in Glasgow, Scotland.
- 93.(2) The Telangana Government has launched a digital wallet, named T-Wallet, which doesn't charge transaction fee from consumers. The government is planning to use the wallet, available in Google Play, for remittances under job guarantee scheme MNREGA and scholarships for students.
- 94.(5) Justice Dipak Misra was sworn in as the 45th Chief Justice of India. At a brief ceremony in the Darbar Hall of Rashtrapati Bhawan, President Ramnath Kovind administered the oath of office to Mr. Misra.

95.(5) Maithon Dam is built on the river of Barakar located at Maithon and is a big dam in tribal state Jharkhand. Maithon Dam is one of the most popular dams in Jharkhand and one of the most successful multipurpose projects in India.

96.(4) National Housing Bank, a wholly owned subsidiary of Reserve Bank of India, was set up on 9 July 1988 under the National Housing Bank Act, 1987. NHB is an apex financial institution for housing

97.(4) Department of Ministry of Finance:-

Department of Economic Affairs

Department of Expenditure

Department of Revenue

Department of Financial Services

Department of Investment and Public Asset Management

- 98.(3)
 99.(1) Vansda National Park, also known as Bansda National Park,is a protected area which represents the thick woodlands of the Dangs and southern Gujarat, and is situated in the Vansda tehsil, Navsari District of Gujarat State, India.
- 100.(2) 2016 Nobel Peace Prize. The 2016 Nobel Peace Prize was awarded to the President of Colombia Juan Manuel Santos "for his resolute efforts to bring the country's more than 50-year-long civil war to an end, a war that has cost the lives of at least 220,000 Colombians and displaced close to six million people.
- 101.(5) Ujjivan Small Finance Bank Ltd, a wholly-owned subsidiary of Ujjivan Financial Services Ltd, has been given scheduled bank status by RBI. Currently, Ujjivan SFB has 65 full-fledged brick and mortar branches in eight states and two Union Territories. Ujjivan SFB commenced its operations as a Small Finance Bank with effect from February 1, 2017.
- 102.(4) There are several money market instruments, including treasury bills, commercial paper, bankers' acceptances, deposits, certificates of deposit, bills of exchange, repurchase agreements.
- 103.(2) Credit Information (Companies Regulation Act, 2005) provides for regulation of credit information companies and to facilitate efficient distribution of credit and for matters connected therewith or incidental thereto.
- 104.(5) Axis Bank has introduced Shubh Aarambh Home Loans, in which 12 EMIs are waived — four EMIs each after the fourth, eighth and 12th year — from the date of the first



disbursement. The waiver will be in the form of reduction in tenure.

- 105.(1) The new route was launched on August 12, 2017. It will boost trade between the two countries. It will also offer "fast and secure" corridor for importers and exporters, with transit time of six days from Qatar to Karachi and eight days back.
- 106.(5) The Blue Whale Challenge is a suicide game in which the player is given certain tasks to complete for a period of 50 days and the final task leads to suicide. Mumbai and West Midnapore district have reported deaths linked to this game.
- 107.(2) Kotak Mahindra Bank launched KayPay World's First Bank Agnostic Instant Funds Transfer Platform using Facebook. Millions of bank account holders can transfer money to each other at any hour of the day or night, without needing net banking, or know various bank account related details of the payee.
- 108.(1) The beneficiary can expect to get credit for the NEFT transactions within two business hours (currently NEFT business hours is from morning 8 AM to evening 7 PM on all week days and from morning 8 AM to afternoon 1 PM on Saturdays) from the batch in which the transaction was settled.
- 109.(2) Corporation Bank is the first bank to launch the Mudra Card based on the RuPay platform under the Pradhan Mantri MUDRA Yojana (PMMY).
- 110.(3) Commercial Paper is an unsecured money market instrument issued in the form of a promissory note
- 111.(4) Drawee is a legal and banking term used to describe the party that has been directed by the depositor to pay a certain sum of money to the person presenting the check or draft. A typical example is if you are cashing a paycheck.
- 112.(3) CEO: Shri. Ashwani Kumar Headquarters: Mumbai
- 113.(2) The capital of a business (working capital) which is used in its day-to-day trading operations, calculated as the current assets minus the current liabilities.
- 114.(2) Sushma Swaraj is an Indian politician and the current Minister of External Affairs of India. A leader of Bharatiya Janata Party, Swaraj is the second woman to be India's Minister of External Affairs, after Indira Gandhi and is the Member of Parliament from Vidisha.
- 115.(2) The Central Board of Excise and Customs (CBEC) has appointed Bollywood megastar Amitabh Bachchan as new brand ambassador for Goods and Services Tax (GST). A 40-second video "GST – An initiative to create a unified national market" featuring him has already been shot and is being circulated by the Finance Ministry.
- 116.(5) In November 2003, Reserve Bank of India (RBI) constituted the Committee on Procedures and Performance Audit of Public Services under the Chairmanship of Shri S.S.Tarapore (former Deputy Governor) to address the issues relating to the availability of adequate banking services to the common person. Therefore, the Committee recommended setting up of the Banking Codes and Standards Board of India (BCSBI). BCSBI was set up to ensure that the common person as a consumer of financial services from the banking Industry is in no way at a disadvantageous position and really gets what he/she has been promised.



- 117.(1) Only ICICI Bank is authorized to handle the Senior Citizens Savings Scheme (SCSS), 2004.
- 118.(1) ICICI Bank has unveiled the country's first contactless mobile payment solution to enable its credit and debit customers to make in-store contactless payments by just waving their smartphones near a NFC-enabled merchant terminal. The mobile payment solution available in the Bank's 'Pockets' app, provides the improved convenience of 'Touch & Pay' as customers are no longer required to carry the physical card or cash to pay in stores.
- 119.(3) Indian captain Mithali Raj created a world record by becoming the first player to cross 6000 runs in the history of women's One-Day Internationals (ODIs) during the ICC World Cup match against Australia in Bristol, Mithali surpassed former England captain Charlotte Edwards's 5992 runs.
- 120.(4) Currency: Turkish lira

Capital: Ankara President: Recep Tayyip Erdogan Prime Minister: Binali Yıldırım

- 1) Choice (1) is the best answer. The narrator admits that his job is "irksome," (sentence 2 of paragraph 1) and reflects on the reasons for his dislike. The narrator admits that his work is a "dry and tedious task" (sentence 3 of paragraph 1) and that he has a poor relationship with his superior: "the antipathy which had sprung up between myself and my employer striking deeper root and spreading denser shade daily, excluded me from every glimpse of the sunshine of life" (sentence 4 of paragraph 1). Choices (2), (3), and (4) are incorrect because the narrator does not become increasingly competitive with his employer, publicly defend his choice of occupation, or exhibit optimism about his job.
- 122.(2) Choice (2) is the best answer. The first sentence of the passage explains that people do not like to admit when they've chosen the wrong profession and that they will continue in their profession for a while before admitting their unhappiness. This statement mirrors the narrator's own situation, as the narrator admits he finds his own occupation "irksome" (sentence 2 of paragraph 1) but that he might "long have borne with the nuisance" (sentence 3 of paragraph 1) if not for his poor relationship with his employer. Choices (1), (3), and (4) are incorrect because the first sentence does not discuss a controversy, focus on the narrator's employer, Edward Crimsworth, or provide any evidence of malicious conduct.
- 123.(3) Choice (3) is the best answer. The first paragraph shifts from a general discussion of how people deal with choosing an occupation they later regret (sentence 1 of paragraph 1) to the narrator's description of his own dissatisfaction with his occupation (sentences 2 to 4 of paragraph 1).

Choices (1), (2), and (4) are incorrect because the first paragraph does not focus on the narrator's self doubt, his expectations of life as a tradesman, or his identification of alternatives to his current occupation.

124.(1) Choice (1) is the best answer. In sentence 4 of paragraph 1, the narrator is describing the hostile relationship between him and his superior, Edward Crimsworth. This relationship causes the narrator to feel like he lives in the "shade" and in "humid darkness." These words

evoke the narrator's feelings of dismay towards his current occupation and his poor relationship with his superior—factors that cause him to live without "the sunshine of life".

Choices (2), (3), and (4) are incorrect because the words "shade" and "darkness" do not reflect the narrator's sinister thoughts, his fear of confinement, or his longing for rest.

125.(4) Choice (4) is the best answer. The narrator states that Crimsworth dislikes him because the narrator may "one day make a successful tradesman" (sentence 2 of paragraph 2). Crimsworth recognizes that the narrator is not "inferior to him" but rather more intelligent, someone who keeps "the padlock of silence on mental wealth in which [Crimsworth] was no sharer" (sentence 3 of paragraph 2). Crimsworth feels inferior to the narrator and is jealous of the narrator's intellectual and professional abilities.

Choices (1) and (3) are incorrect because the narrator is not described as exhibiting "high spirits" or "rash actions," but "Caution, Tact, [and] Observation" (sentence 4 of paragraph 2). Choice (2) is incorrect because the narrator's "humble background" is not discussed.

126.(2) Choice (2) is the best answer. Sentence 1 of paragraph 3 states the narrator "had long ceased to regard Mr. Crimsworth as my brother." In these lines, the term "brother" means friend or ally, which suggests that the narrator and Crimsworth were once friendly towards each other.

Choices (1), (3), and (4) are incorrect because the narrator originally viewed Crimsworth as a friend, or ally, and later as a hostile superior; he never viewed Crimsworth as a harmless rival, perceptive judge, or demanding mentor.

127.(4) Choice (4) is the best answer. In sentence 4 of paragraph 2, the narrator states that he exhibited "Caution, Tact, [and] Observation" at work and watched Mr. Crimsworth with "lynx eyes." The narrator acknowledges that Crimsworth was "prepared to steal snake like" if he caught the narrator acting without tact or being disrespectful towards his superiors (sentence 5 of paragraph 2). Thus, Crimsworth was trying to find a reason to place the narrator "in a ridiculous or mortifying position" (sentence 4 of paragraph 2) by accusing the narrator of acting unprofessionally. The use of the lynx and snake serves to emphasize the narrator and Crimsworth's adversarial, or hostile, relationship.

Choices (1) and (2) are incorrect because the description of the lynx and snake does not contrast two hypothetical courses of action or convey a resolution. Choice (3) is incorrect because while sentences 4 to 5 of paragraph 2 suggest that Crimsworth is trying to find a reason to fault the narrator's work, they do not imply that an altercation, or heated dispute, between the narrator and Crimsworth is likely to occur.

128.(2) Choice (2) is the best answer. Sentence 5 of paragraph 3 states that the narrator noticed there was no "cheering red gleam" of fire in his sitting room fireplace. The lack of a "cheering," or comforting, fire suggests that the narrator sometimes found his lodgings to be dreary or bleak.

ACE

Choices (1) and (4) are incorrect because the narrator does not find his living quarters to be treacherous or intolerable. Choice (3) is incorrect because while the narrator is walking home he speculates about the presence of a fire in his sitting room's fireplace (sentence 5 of paragraph 3), which suggests that he could not predict the state of his living quarters.

- 129.(3) Referring to the second paragraph of the passage we can conclude that India's relationship with ASEAN is one of the cornerstones of its foreign policy as it helps to build bilateral relations with South East nations. Hence sentence (3) is true in context of the passage.
- 130.(4) As indicated in fourth paragraph that India has upgraded the FTA and is giving emphasis on the "Trilateral Highway", which clearly explains the efforts by India to make the link strong. Hence both sentences (I) and (III) are correct.
- 131.(4) Sentence (I) is not correct as according to the first paragraph India got serious engagement with the ASEAN with the "Look East" policy under Prime Minister P.V. Narasimha Rao. All other statements can be well verified from the passage. Hence option (4) is the right choice.

132.(5) Refer to the last paragraph of the passage, we find that all of the given statements are true in context of passage. Hence (5) is the correct option.

- 133.(2) If we see the passage as a whole then we find that no other theme will fit the passage than "Balancing the relations among the nations" as the passage talks about ASEAN summit which aims Peace and Shared Prosperity and hence balancing the relations through trade and investments among the nations. Hence option (2) is the correct choice
- 134.(3) The author's tone is 'Critical' as the author is giving his opinion regarding the ASEAN summit held in Phnom Penh
- 135.(5) All the given statements about China are correct in context of the passage. Hence (5) is the correct option.
- 136.(4) "between, leading" is the correct set of words that make the sentence meaningful.

Unrivaled means better than everyone or everything of the same type.

137.(3) "proactive, inspire" is the correct set of words that make the sentence meaningful.

Proactive means creating or controlling a situation rather than just responding to it after it has happened. Enervate means exhaust.

Instigate means bring about or initiate.

Fanatical means filled with excessive and single-minded zeal.

Dissuade means discourage.

- 138.(4) "perceive, becomes" is the correct set of words that make the sentence meaningful.
 Descry means catch sight of.
 Perceive means become aware or conscious of (something); come to realize or understand.
- 139.(1) "remove, aligned" is the correct set of words that make the sentence meaningful.
 Aligned means give support to.
 Askew means wrong, awry.
 Coarse means rough.

Blemish means a small mark or flaw which spoils the appearance of something.

- 140.(5) "inevitable, partisan" is the correct set of words that make the sentence meaningful. Inevitable means certain to happen, unavoidable. Partisan means a strong supporter of a party, cause, or person. Fortuitous means happening by chance rather than intention. Adherent means someone who supports a particular party, person, or set of ideas. 141.(3) 'reside' will be used in place of 'resides' as the subject of the sentence is 'I'. 142.(3) 'has' will be used in place of 'had' as the 'has' used in part (1) of the sentence indicates that it is in present tense. 143.(1) Use 'I have been working' in place of 'I am working' as
- we get the idea from the phrase 'for the last thirty years' used in part (4) of the sentence that the sentence is in Present perfect continuous tense. Example: I have been working here for the last two years.
- 144.(1) 'which' will be used in place of 'who' as to make the choice in the form of interrogative Pronoun, 'which' is used.
- 145.(2) 'you may' will be used in place of 'you are' because if the main clause is in present tense then in purpose telling clause starting from that/ so that/ in order, 'may' is used after the subject.
 Example: She works hard that (1)/ so that (2)/ in order

that she may pass this examination.) 'reported' fits appropriately to the blank as this word is

- 146.(2) 'reported' fits appropriately to the blank as this word is also used in other sentences of the paragraph and the paragraph is telling about the result of an observation.
 147.(4) Alarming means worrying or disturbing.
- 'Alarming' is the correct word to be filled in the blank as the next sentence indicates that there is an increase in the number of influenza A (H1N1)cases of the virus, which is a factor to worry.
- 148.(2) As we can see from the data given that there is a large increase in the number of influenza A (H1N1)cases and deaths last month. Hence 'sharp' is suitable replacement to the blank.
- 149.(5) The sentence states that many people have lost their lives due to virus in Gujarat. So, 'affected' will be correct word to be filled in the blank.
- 150.(2) As we can see that the starting sentences of the paragraph talk about the comparison between last year and this year's data of different states of the number of influenza A (H1N1) virus cases and deaths. Hence ' compared' is the correct word.
- 151.(4) 'undergone' will be the word used in the blank as it is also used in the following sentences of the paragraph.
- 152.(4) 'resulted' is the correct word. Tempered means strengthen.
- 153.(2) 'effective' is the correct word to be filled in the blank as it was mentioned in the paragraph that people are not immune to the new strain that means it is no longer 'effective'.

Facile means easily achieved, effortless.

154.(3) 'Caused' is the correct word to be filled in the blank as it has been mentioned in the paragraph that the Michigan strain replaced the California strain which is responsible for the increase in number of influenza A (H1N1) virus cases and deaths.

- **B**RACE
- 155.(5) 'Vulnerable' is the correct word.

Malignant means evil in nature or effect, malevolent. Formidable means inspiring fear or respect through being impressively large, powerful, intense, or capable.

 156.(4) The paragraph is about the lessons of demonetization. Going through the sentences, we find that sentences BECA form a coherent paragraph while sentence (4) is not a part of the paragraph. The coherent paragraph talks about failure to

recapitalize the bank as the value of notes returned was not greater than the value of currency printed by the Indian central bank while sentence (4) talks about broadening the set of benefits from demonetization which does not relate to other sentences. Hence sentence (4) is the right choice.

157.(2) Going through the sentences, we find that sentences CEAD form a coherent paragraph while sentence (2) is not a part of the paragraph. The sentences forming the coherent paragraph talks about the negative economic consequences of demonetization and reasons behind the non-failure of Indian economy because of disruption of the monetary base while sentence (2) talks about policy having goal and consequences, which is unrelated

here. Hence sentence (2) is the correct choice.
158.(1) Sentence CEBD forms a coherent paragraph as the paragraph is about Myanmar's refusal to address the Rohingya issue that diminishes its democratic transition. Sentence (1) is not a part of the paragraph as it is about powers vested in the military which is unrelated to other sentences. Hence sentence (1) is the right choice.

159.(2) Sentences CEAD forms a coherent paragraph as it talks about difference between the conventional produce and organic produce and what steps are to be needed to grow, handle, price and distribute the organic produce that brings many challenges.

Sentence (2) is not a part of the paragraph as it talks about what regulators need to do in defining clear regulations.

160.(5) Sentence DBAC forms a coherent paragraph as it talks about the result of prolonged rainfall in urban cities like Mumbai, which is densely populated leading to loss of urban infrastructure, local trains and BEST buses.

Sentence (5) talks about India's flood management that was restricted to rural areas and hence it is unrelated to other sentences.

- 161.(4) A peripheral device is generally defined as any auxiliary device such as a computer mouse or keyboard that connects to and works with the computer in some way.
- 162.(2) Joystick is used for gaming.
- 163.(3) Modular programming is a software design technique that emphasizes separating the functionality of a program into independent, interchangeable modules, such that each contains everything necessary to execute only one aspect of the desired functionality.
- 164.(1) Java can be used to create applets. Applet is a very small application, especially a utility program performing one or a few simple functions.
- 165.(1) A metasearch engine (or aggregator) is a search tool that uses another search engine's data to produce their own results from the Internet. Metasearch engines take input from a user and simultaneously send out queries to third party search engines for results.
- 166.(3) By pressing ESC key you can exit the menu.

- 167.(1) MP3 file format of music/sound type files. It is not a hardware.
- 168.(3) Scanner can be used to capture an image (drawing or photo) so that it can be stored on a computer
- 169.(2) They all are input devices.
- 170.(4) Except Wide Area Web all other terms are related to the given context.
- 171.(3) Multiprocessing is the use of two or more central processing units (CPUs) within a single computer system. The term also refers to the ability of a system to support more than one processor and/or the ability to allocate tasks between them.
- 172.(2) Half Duplex support two-way traffic but in only one direction of a time. For example, a walkie-talkie is a halfduplex device because only one party can talk at a time. In contrast, a telephone is a full-duplex device because both parties can talk simultaneously.
- 173.(1) Computers generally use binary number system.
- 174.(5) Electronic commerce, commonly written as e-commerce or e-commerce, is the trading or facilitation of trading in products or services using computer networks, such as the Internet or online social networks.
- 175.(1) Single-user mode allows only one connection to a database at a given moment in time.
- 176.(4) Output devices can be used to view/ print data. Output devices provides processed output by the system to the user.
- 177.(3) Majority of buffers use the faster RAM to store temporary data not the ROM, due to the much faster access time compared with hard disk drives.
- 178.(4) All are memory access mechanism which a CD Player can use.
- 179.(5) A Toggle key is a key that is operated the same way but with opposite effect on successive occasions
- 180.(3) It is illegal to break copyright laws. Copyright infringement is the use of works protected by copyright law without permission, infringing certain exclusive rights granted to the copyright holder, such as the right to reproduce, distribute, display or perform the protected work, or to make derivative works. Copyright infringement disputes are usually resolved through direct negotiation, a notice and take down process, or litigation in civil court.
- 181.(3) Microsoft word is an application software
- 182.(2) Warm booting is the process of restarting a computer.
- 183.(3) The icons on the toolbars are organized according to function and according to the most commonly used commands in MSWord. The toolbar that usually appears directly below the menu bar is called the Standard Toolbar. The toolbar just below that is called the Formatting Toolbar.
- 184.(3) American Standard Code for Information Interchange, is a character encoding standard (the Internet Assigned Numbers Authority (IANA) prefers the name US-ASCII). ASCII codes represent text in computers, telecommunications equipment, and other devices.
- 185.(4) Personal Computer (PC) A microprocessor-based computer which is primarily intended to be used by one person at a time. It is usually characterized by relatively low cost and small physical size.
- 186.(1) EBCDIC stands for Extended Binary Coded Decimal Interchange Code. It is a binary code for alphabetic and



numeric characters that IBM developed for its larger operating systems.

- 187.(2) In computer architecture, a bus is a communication system that transfers data between components inside a computer, or between computers. Early computer buses were parallel electrical wires with multiple connections, but the term is now used for any physical arrangement that provides the same logical function as a parallel electrical bus. Modern computer buses can use both parallel and bit serial connections.
- 188.(3) PROM is an acronym for Programmable Read Only Memory.
- 189.(2) A function key is a key on a computer or terminal keyboard which can be programmed so as to cause an operating system command interpreter or application program to perform certain actions.
- 190.(2) Delete key is used to delete data.
- 191.(1) Microsoft provided Operating System to IBM PC DOS
- 192.(3)

199.(4) 200.(1)

- 193.(5) DHCP stands for Dynamic Host Configuration Protocol.
- 194.(5) An integrated circuit or monolithic integrated circuit (also referred to as an IC, a chip, or a microchip) is a set of electronic circuits on one small plate ("chip") of
- semiconductor material, normally silicon. 195.(1) The Analytical Engine was a proposed mechanical general-purpose computer designed by English mathematician and computer pioneer Charles Babbage. It was first described in 1837 as the successor to Babbage's difference engine, a design for a mechanical computer.
- 196.(3) Java Database Connectivity (JDBC) is an application programming interface (API) for the programming language Java, which defines how a client may access a database. It is part of the Java Standard Edition platform, from Oracle Corporation.
- 197.(2) The bit rate is quantified using the bits per second unit
- 198.(2) Pascal's calculator is a mechanical calculator invented by Blaise Pascal in the early 17th century. It was called the arithmetic machine and later became known as the Pascaline.

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