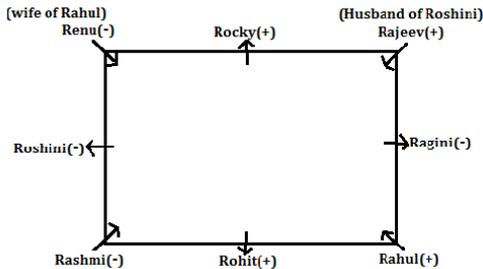


RBI Assistant Mains 2017 (Solutions)

REASONING ABILITY

Directions (1-5):



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

Directions (6-7):

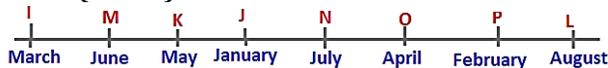
6. (c); Code for 'pa' is me. Either statement I or II is sufficient.
7. (d); From both statements, relation between seema and mangesh cannot be determined.
8. (c); $P < N \leq M \leq L$
9. (b); $K < H$

Directions (10-14):

Person	Off	Cuisine
Meena	Monday	Mexican
Maya	Thursday	Thai
Monika	Wednesday	Chinese
Monalisha	Friday	Italian
Mamta	Saturday	Indian
Meenakshi	Sunday	Continental
Madhuri	Tuesday	Spanish

10. (e); 11. (d); 12. (c);
13. (a); 14. (b);

Direction(15-19):



15. (a); 16. (a); 17. (b);
18. (c); 19. (d);

Directions (20-24):

In each step a word and a number are arranged in each step.

Words are arranged in alphabetical order from left to right according to the English alphabet (for ex- A-B-C-D.....X-Y-Z).

Numbers are arranged in increasing order from the left to right.

Input: 32 proud girl beautiful 48 55 97 rich family 61 72 17 nice life

Step I: beautiful 17 32 proud girl 48 55 97 rich family 61 72 nice life

Step II: family 32 beautiful 17 proud girl 48 55 97 rich 61 72 nice life

Step III: girl 48 family 32 beautiful 17 proud 55 97 rich 61 72 nice life

Step IV: life 55 girl 48 family 32 beautiful 17 proud 97 rich 61 72 nice

Step V: nice 61 life 55 girl 48 family 32 beautiful 17 proud 97 rich 72

Step VI: Proud 72 nice 61 life 55 girl 48 family 32 beautiful 17 97 rich

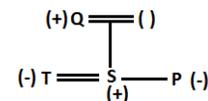
Step VII: rich 97 proud 72 nice 61 life 55 girl 48 family 32 beautiful 17

20. (c); 21. (d); 22. (c);
23. (a); 24. (b);

Direction(25-29):

FLOOR	PERSON	BRANDS
9	Q	MAX
8	W	VAN HEUSEN
7	V	DIESEL
6	P	PENTALOONS
5	U	ADIDAS
4	T	PUMA
3	Z	LEE
2	S	WOODLAND
1	R	LIFESTYLE

25. (d); 26. (d); 27. (b);
28. (a); 29. (d);
30. (e);



T is wife of S.

Hence, From statement I and II we get our final answer.

31. (d);(From I.)

$J \rightarrow R$

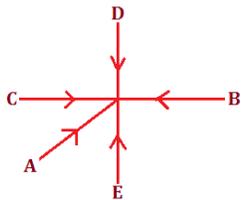
$B \rightarrow T$

From I and II.

$L \rightarrow P, Q, S$

Hence, statements are not sufficient to answer the question.

32. (e);



A's position with respect to B is third to the right and second to the left.

33. (a); Cousin;

34. (b);

35. (d); --- Soni ----- (19 girls) --- Ruby -----

$$\bar{\text{Total}} = 5 + 19 + 6 = 30$$

Direction (36-40):

Persons	Subject	Hobby
A	HINDI	COOKING
B	ENGLISH	PAINTING
C	MATH	SHAYARI
D	PHYSICS	SWIMMING
E	GEOLOGY/BOTANY	MUSIC/RAFTING
F	GEOLOGY/BOTANY	MUSIC/RAFTING
G	ZOOLOGY	POETRY
H	HISTORY	RIDING

36. (d);

37. (d);

38. (a);

39. (d);

40. (c);

QUANTITATIVE APTITUDE

41. (c); Let present age of A, B, C and D is a, b, c and d respectively.

Now ATQ

$$\Rightarrow b = a + 6 \quad \dots(i)$$

$$\Rightarrow \frac{b+9}{c} = \frac{9}{8} \text{ or } \frac{a+15}{c} = \frac{9}{8}$$

$$c = \frac{8}{9}(a+15) \quad \dots(ii)$$

$$\Rightarrow c + d = 50 \Rightarrow d = 50 - c$$

Now

$$\text{Difference} = b + d - (a + c) = 8$$

Put the value of b, d and c in

$$(a+6) + \left(50 - \frac{8}{9}(a+15)\right) - \left[a + \frac{8}{9}(a+15)\right]$$

$$= 8$$

Solving

$$a = 12$$

$$b = 18$$

$$c = 24$$

$$d = 26$$

$$d\text{'s age after 5 year} = 26 + 5 = 31$$

42. (d); $2\pi rh : \pi r^2 h = 1 : 7$ (where r is radius and h is height)

$$2 : r = 1 : 7$$

$$\Rightarrow r = 14$$

$$\Rightarrow \text{diameter} : \text{Height} \Rightarrow 2r : h = 4 : 3$$

$$\Rightarrow h = 21$$

$$\text{Total surface area of cylinder} = 2\pi r(r+h)$$

$$= 2 \times \frac{22}{7} \times 14(14+21)$$

$$= 88 \times 35$$

$$= 3080$$

43. (a); Sum of the present age of mother, father and son

$$= 42 \times 3 + 6 \times 3 = 126 + 18 = 144 \text{ years}$$

$$\text{Sum of the present age of family} = 36 \times 5 = 180$$

$$\text{Present age of bride} = 180 - 144 - 5 = 31 \text{ years}$$

$$\text{Age of the bride at the time of marriage} = 31 - 6$$

$$= 25 \text{ years.}$$

44. (c); Let initially x number of truck required

$$\text{Capacity of one truck} = \frac{60}{x}$$

$$\text{Extra material left due to lower capacity} = \frac{x}{2} \text{ tons}$$

According to the question,

$$\frac{\frac{x}{2}}{\frac{60}{x} - \frac{1}{2}} = 4$$

$$\Rightarrow \frac{\frac{x}{2}}{\frac{120-x}{2}} = 4$$

$$\Rightarrow x^2 + 4x - 480 = 0$$

$$\Rightarrow x = 20$$

So, 20 Trucks were initially used to transport.

45. (c); Time taken by Cyclist to reach $25/3 \text{ km} = \frac{25}{25 \times 3} = \frac{1}{3}$

$$\text{hr} = 20 \text{ min}$$

$$\text{Car has taken to reach } 25/3 \text{ km} = 20 - 12 = 8 \text{ min}$$

$$\text{Speed of Car} = \frac{25}{\frac{8}{60}} \times 60 = 62.5 \text{ km/h}$$

Now time taken by cyclist to go further 30 km =

$$\frac{30}{25} = \frac{6}{5} \text{ hr} = 72 \text{ min}$$

$$\text{Car will go in 72 min} = \frac{72}{60} \times 62.5 = 75 \text{ km}$$

Now, according to question,

Distance between first meeting and second meeting is 30

So,

Distance between first meeting and point B will be

$$= \frac{75+30}{2} = 52.5 \text{ km}$$

$$\text{Required answer} = 52.5 + 8.33 = 60.833 \text{ km}$$

46. (b); Number of qualified candidates in BANK exam in

$$2002 = 95000 \times \frac{62.5}{100} = 59375$$

Failed candidates in SSC exam in 2001

$$= 100000 \times \frac{42.5}{100} = 42500$$

$$\begin{aligned} \text{Required percentage} &= \frac{59375-42500}{42500} \times 100 \\ &= \frac{16875}{425} \% \\ &= 39.70\% \end{aligned}$$

47. (c); Qualified candidates of BANK exam in different year,

$$\text{In year, 2000} \Rightarrow 85000 \times \frac{65}{100} = 55250$$

$$2001 \Rightarrow 90000 \times \frac{60}{100} = 54000 \text{ decrease}$$

$$2002 \Rightarrow 95000 \times \frac{62.5}{100} = 59375 \text{ increase}$$

$$2003 \Rightarrow 110000 \times \frac{67.5}{100} = 74250 \text{ increase}$$

$$2004 \Rightarrow 80000 \times \frac{55}{100} = 44000 \text{ decrease}$$

$$2005 \Rightarrow 90000 \times \frac{57.5}{100} = 51750 \text{ increase}$$

Maximum growth is recorded in 2003 i.e; $74250 - 59375 = 14875$

48. (e); Total failed student in 2004

$$= 80000 \times \frac{45}{100} + 85000 \times \frac{27.5}{100} = 59375$$

Qualified students of BANK exam in 2000 = 55250

$$\begin{aligned} \text{Required ratio} &= 59375 : 55250 \\ &= 475 : 442 \end{aligned}$$

$$\begin{aligned} 49. (c); \text{Required average} &= \frac{1}{6} \left[90000 \times \frac{55}{100} + 100000 \times \frac{57.5}{100} + 105000 \times \frac{60}{100} + 85000 \times \frac{50}{100} + 85000 \times \frac{72.5}{100} + 95000 \times \frac{70}{100} \right] \\ &= \frac{1}{6} [340625] = 56771 \end{aligned}$$

50. (d); Sum of qualified student in SSC exam = $105000 \times \frac{60}{100} + 85000 \times \frac{50}{100} + 85000 \times \frac{72.5}{100} = 167125$

$$\text{Sum of qualified student in BANK exam} = 90000 \times \frac{60}{100} + 110000 \times \frac{67.5}{100} + 90000 \times \frac{57.5}{100} = 180000$$

$$\begin{aligned} \text{Required difference} &= 180000 - 167125 = 12875 \end{aligned}$$

51. (e); St. A - $K : V = 1.5 : 1$

$$\text{St. B - } R = \frac{1}{2}(K + V)$$

$$\text{St. C - } K = (340 + V)$$

So using any 2 of the 3 statements we can determine the share of Vijay

52. (d); St. A, $P + Q + R = 145$

$$\text{St. B, } P : Q : R = 8 : 9 : 12$$

$$\text{St. C, } P + Q + R = 145$$

So Either A or C is sufficient

53. (e); Difference b/w marks of A and C = 30 marks

$$\text{marks of A, B, C} = 90, 100, 120$$

$$\text{and } D = A + 10 = 100$$

$$A + B + C + D = 410$$

The question can be solved with the help of data given in questions

54. (d); Let there are x no. of columns

$$\text{St. A - } 0.625x \times x = 40, x^2 = 64$$

$$x = 8, \text{ no. of rows} = 5$$

$$\text{St. B - } \frac{5}{8}x \times x = 40, x^2 = 64, x = 8$$

$$\text{no. of rows} = 5$$

$$\text{St. C - } R < C$$

So either A or B is sufficient to answer the following questions

55. (b); Let 50 paise coin = x , 1 Rs coin = y

$$\text{St. A} \rightarrow x + y = 2x, x = y$$

$$\text{St. B} \rightarrow \frac{0.5x}{2} + y = 62.5$$

$$\text{St. C} \rightarrow \frac{x}{2} + 0.8y = 65$$

So using any 2 of them we can find the value of x and y

56. (c); Total Indians in November

$$= \frac{35}{1700} \times \frac{85}{100} \times 18000$$

$$= 315$$

Total visitors in November

$$= \frac{4}{3} \times 15000 = 20000$$

∴ Foreigners visiting in November

$$= 20000 - 315 = 19685$$

∴ Required difference

$$= 19685 - 315 = 19370$$

57. (a); Foreigner Males visiting in September

$$= \frac{3}{7} \times \frac{23}{100} \times 15400$$

$$= 1518$$

Females foreigner in September

$$= \frac{4}{7} \times \frac{23}{100} \times 15400$$

$$= 2024$$

$$\therefore \text{Required percentage} = \frac{1518}{2024} \times 100$$

$$= 75\%$$

Alternately,

$$\text{Required ratio} = \frac{3}{4} \times 100 = 75\%$$

58. (d); Foreigner who are married

$$= \frac{18}{100} \times 16800 \times \frac{1}{3} = 1008$$

Indians who are married

$$= \frac{82}{100} \times 16800 \times \frac{1}{4} = 3444$$

Remaining unmarried foreign females visitors

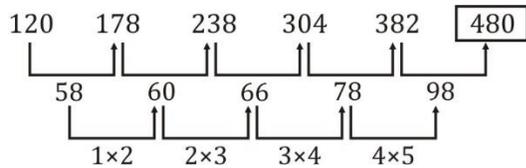
$$= \frac{2016}{4} = 504$$

Remaining Indian unmarried females visitors
 $= \frac{10332}{3} = 3444$
 \therefore Required total females
 $= \frac{1008}{2} + \frac{3444}{2} + 504 + 3444$
 $= 6174$

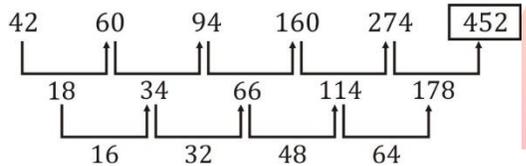
59. (c); Required ratio
 $= \frac{\frac{3}{5} \times \frac{75}{100} \times 15000}{\frac{1}{6} \times \frac{18}{100} \times 16800}$
 $= \frac{6750}{504} = 375 : 28$

60. (e); Required percentage = $\frac{\frac{15}{100} \times 18000}{\frac{75}{100} \times 15000} \times 100$
 $= 24\%$

61. (b); Pattern is



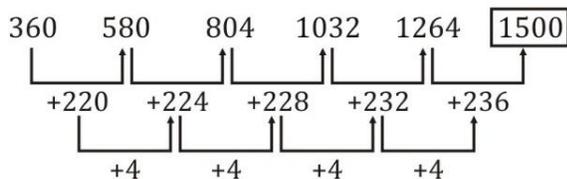
62. (d); Pattern is



63. (a); Pattern is,
 $8 \times 0.25 + 2 = 4$
 $4 \times 0.5 + 4 = 6$
 $6 \times 1 + 8 = 14$
 $44 \times 4 + 32 = 208$

64. (e); Pattern is
 $+2^2+1, +3^2-1, +4^2+1, +5^2-1, +6^2+1$
 $\therefore 104 + (6^2 + 1) = 104 + 37 = 141$

65. (b); Pattern is,



66. (c); Let CP of the 1000gm article = Rs 1000
 SP of the 1000gm article (after marking up and giving discount) = $1000 \times \frac{120}{100} \times \frac{90}{100}$
 $= 1080$
 After cheating his supplier, CP of 1100 gm = Rs 1000
 \Rightarrow CP of 1000 gm = $1000 \times \frac{10}{11}$
 After cheating his buyer or customer

SP of 900 gm = 1080
 SP of 1000 gm = $\frac{1080}{9} \times 10 = 1200$
 Profit % = $\frac{1200 - 1000}{1000} \times 100$
 $= 32\%$

67. (c); Decrease in speed of train α

$\sqrt{\text{No. of wagons attached}}$
 Decrease in speed of train = K
 $\sqrt{\text{No. of wagons attached}}$
 Where k = proportionality constant
 ATQ,
 $24 - 20 = k\sqrt{4}$
 $\frac{4}{2} = k \Rightarrow k = 2$

Number of wagons attached when speed is zero.

$\sqrt{\text{No. of wagons attachment}} = \frac{24}{2}$

No. of wagons attached = $(12)^2 = 144$

Max. No. of wagons that can be carried by the engine = $144 - 1 = 143$

68. (d); Let original salary of person = x

ATQ,
 $x \times 0.12 = (x + 4800) \times 0.1$
 $0.12x = 0.1x + 480$
 $0.02x = 480$
 $x = \frac{480}{0.02} = 24,000$
 Increased salary = $24,000 + 4800 = 28,800$

69. (c); Ratio of concentration of wines = 10% : 20% : 30%
 $= 1 : 2 : 3$

Mixing ratio = 2 : 3 : x

$\times \begin{pmatrix} 1 & 2 & 3 \\ 2 & 3 & x \end{pmatrix}$
 Resulting mixture = $\frac{1}{2} : \frac{2}{6} : \frac{3}{3x} = 23$
 $\Rightarrow 2 + 6 + 3x = 23$
 $\Rightarrow x = 5$

70. (a); CP of 1 kg rice = Rs 10

CP of 800 gm rice = $\frac{10}{1000} \times 800 = \text{Rs } 8$
 SP of 1000 gm rice = 12
 Profit percentage = $\frac{12-8}{8} \times 100$
 $= \frac{4}{8} \times 100 = 50\%$

71. (b); I. $3x^2 - 35x + 100 = 0$

$3x^2 - 15x - 20x + 100 = 0$

$3x(x-5) - 20(x-5) = 0$

$(3x-20)(x-5) = 0$

$x = \frac{20}{3}, 5$

II. $5y^2 - 49y + 120 = 0$

$5y^2 - 25y - 24y + 320 = 0$

$5y(y-5) - 24(y-5) = 0$

$(5y-24)(y-5) = 0$

$y = \frac{24}{5}, 5$

$x \geq y$

72. (d); I. $2x - 15\sqrt{x} + 28 = 0$
 $2x - 8\sqrt{x} - 7\sqrt{x} + 28 = 0$
 $2\sqrt{x}(\sqrt{x} - 4) - 7(\sqrt{x} - 4) = 0$
 $(2\sqrt{x} - 7)(\sqrt{x} - 4) = 0$
 $\sqrt{x} = \frac{7}{2}, 4$
 $x = \frac{49}{4}, 16$

II. $3y - 26\sqrt{y} + 56 = 0$
 $3y - 12\sqrt{y} - 14\sqrt{y} + 56 = 0$
 $3\sqrt{y}(\sqrt{y} - 4) - 14(\sqrt{y} - 4) = 0$
 $(3\sqrt{y} - 14)(\sqrt{y} - 4) = 0$
 $\sqrt{y} = \frac{14}{3}, 4$
 $y = \frac{196}{9}, 16$
 $y \geq x$

73. (c); I. $x^2 = 15^2 - 19^2 + 280$
 $= 225 - 361 + 280$
 $= 144$
 $\Rightarrow x = \pm 12$

II. $y = \sqrt{529 - 289 - 71} = \sqrt{169}$
 $y = 13$
 $y > x$

74. (a); I. $2x^2 + 9\sqrt{3}x + 27 = 0$
 $2x^2 + 6\sqrt{3}x + 3\sqrt{3}x + 27 = 0$
 $2x(x + 3\sqrt{3}) + 3\sqrt{3}(x + 3\sqrt{3}) = 0$
 $(2x + 3\sqrt{3})(x + 3\sqrt{3}) = 0$
 $x = -3\sqrt{3}, -\frac{3\sqrt{3}}{2}$

II. $5y^2 + 36\sqrt{3}y + 192 = 0$
 $5y^2 + 20\sqrt{3}y + 16\sqrt{3}y + 192 = 0$
 $5y(y + 4\sqrt{3}) + 16\sqrt{3}(y + 4\sqrt{3}) = 0$
 $(5y + 16\sqrt{3})(y + 4\sqrt{3}) = 0$
 $y = -4\sqrt{3}, -\frac{16\sqrt{3}}{5}$
 $x > y$

75. (b); I. $2x^2 - 41x + 210 = 0$
 $2x^2 - 20x - 21x + 210 = 0$

$2x(x - 10) - 21(x - 10) = 0$
 $x = 10, \frac{21}{2}$

II. $2y^2 - 39y + 190 = 0$
 $2y^2 - 20y - 19y + 190 = 0$
 $2y(y - 10) - 19(y - 10) = 0$
 $y = 10, \frac{19}{2}$
 $x \geq y$

76. (c); Let speed of man be x km/hr and that of current be r kmph.

$\frac{2}{x-r} = \frac{15}{60}$ or, $x - r = 8$ (i)

$\frac{2}{x+r} = \frac{10}{60}$ or, $x + r = 12$ (ii)

Solving (i) and (ii),

$x = 10, r = 2$

Required time = $\frac{2}{10-2} = \frac{2}{8} = \frac{1}{4}$ hr. = $\frac{1}{4}$ hr = 20 minutes

77. (a); Let speed of longer train be x and that of shorter train be y .

Then, $\frac{x+y}{x-y} = \frac{42}{21}$

or, $x + y = 2x - 2y$

or, $x = 3y$

or, $\frac{x}{y} = \frac{3}{1}$

78. (c); No. of ways = ${}^8C_5 \times {}^4C_2 + {}^8C_6 \times {}^4C_1 + {}^8C_7$
 $= \frac{8 \times 7 \times 6}{3 \times 2} \times \frac{4 \times 3}{2} + \frac{8 \times 7}{2} \times 4 + 8$
 $= 456$

79. (a); Area leveled by roller = $400 \times 2 \times \frac{22}{7} \times \frac{0.42}{2} \times 1$
 $= 528 m^2$
 Total cost = $528 \times 100 = \text{Rs. } 52800$

80. (e); For the biggest cube, face diagonal of cube = diameter of cylinder

$\sqrt{2}a = 30$

or, $a = 15\sqrt{2}$ But 'a' can't be greater than 20cm \therefore

$a = 20cm$

Volume = $a^3 = 20^3 = 8000 cm^3$

ENGLISH LANGUAGE

81. (e); Refer the last few lines of the second paragraph "On the one hand, Ram Mohan bravely went against tradition by attempting to open up Vedic knowledge to all those who might be moved to seek it, irrespective of their social origin."

82. (d); Refer the first line of the passage "The early Orientalist movement and the rapid growth of English as the principal medium of instruction after the 1830s, considerably enhanced the educated Indian's familiarity with his tradition."

83. (d); Refer the first few lines of the second paragraph "The success of the printing press is also tied up with certain extremely important shifts that began

to occur in the social and religious thinking of early nineteenth century Bengal."

84. (c); Refer the second sentence of the second paragraph "Hitherto, texts considered to be the most important in Hinduism had been zealously guarded by a class of Brahmins which prevented their wider circulation."

85. (c); Refer the first two sentences of the passage "The early Orientalist movement and the rapid growth of English as the principal medium of instruction after the 1830s, considerably enhanced the educated Indian's familiarity with his tradition. But, perhaps equally importantly, it also fostered a sense of shared culture."

86. (b); Refer the third last sentence of the first paragraph "Over time, the success of print-culture enormously increased the importance of written texts within a tradition that had hitherto greatly relied on orality."
87. (a); **Fostered** means encourage the development of (something, especially something desirable). Hence it has the similar meaning to **promoted**.
88. (b); Refer the first sentence of the second last paragraph "When a culture is in a state of disintegration or transition the freedom of the artist increases-but the question of subject matter becomes problematic for him: he, himself, has to choose for society."
89. (c); Refer the first paragraph of the passage.
90. (a); Refer the first two sentences of the fifth paragraph "Thus, for a painting to succeed it is essential that the painter and his public agree about what is significant. The subject may have a personal meaning for the painter or individual spectator; but there must also be the possibility of their agreement on its general meaning."
91. (a); Refer sixth paragraph for option (b), seventh paragraph for option (c) and last few lines of the fifth paragraph for option (d).
92. (a); Refer the second last paragraph of the passage "he, himself, has to choose for society.....".
93. (e); **Accrue** means be received by someone in regular or increasing amounts over time. Hence it has an opposite meaning to **dissipate**. **Accost** means approach and address (someone) boldly or aggressively. **Callous** means showing or having an insensitive and cruel disregard for others. **Frost** means freeze.
94. (e); **Precede** means come before in order or position. Hence it has the same meaning as **antecedent**. **Filiation** means the fact of being descended or derived from something.
95. (c); **Encouraged** means give support, confidence, or hope to (someone). Hence it has the same meaning as **invigorate**. **Solicit** means request. **Inundate** means overwhelm (someone) with things or people to be dealt with. **Ameliorate** means make better.
96. (c); 'Since - exciting' is the correct use. **Since** is used to express reason here
97. (b); 'located - havoc' is the correct use. **Havoc** - widespread destruction.
98. (d); 'antiquated - almost' is the correct use. **Antiquated** - old-fashioned or outdated.
99. (b); 'strategy - disabling' is the correct use. **Strategy**- a plan of action designed to achieve a long-term or overall aim.
100. (d); 'essentially - bolster' is the correct use. **Bolster**- to support or strengthen.
101. (a); Replace 'will be coming' by 'come' as the **clause** starting with "**when, if, before, after, in case, as long as, as soon as**" for future action takes **Simple Present Tense**.
e.g. **When** he **comes**, he will give me some money. If you **work hard**, you will succeed.
102. (d); Replace 'invitation for' by 'invitation to' as Preposition '**to**' is used after '**invite**' or '**invitation**'.
103. (d); Remove 'to' before 'help' as '**offer**' is a Di-Transitive verb (verb which takes two objects). So object 'help' will be used after 'him' and not the infinitive 'to help'. e.g. I offered him a job. (Here, 'him' is an indirect object while 'a job' is a direct object.)
104. (b); Use 'Only' before 'he' as generally '**only** is used before that word which it signifies'.
e.g. **Only** you saw him.
You **only** saw him.
You saw **only** him.
In all these sentences, 'only' signifies different words.
105. (b); Use 'the' in place of 'a' as the word 'letter' is particularly specified i.e. **the letter which his wife had written**.
e.g. He gave me **the book which** he had bought in Delhi. [not 'a book']
For question (106-110): The correct sequence is **DEACB**.
106. (d); 107. (a); 108. (a);
109. (c); 110. (b); 111. (c);
112. (c); 113. (a); 114. (b);
115. (e);
116. (b); Verb 'depends' cannot be used since 'is' is there before 'still'.
117. (a); 118. (c);
119. (d); 'outright' means straight and immediate.
120. (e); 'acrimonious' means angry and full of strong, bitter feelings, words, etc. 'Risk' is a noun, hence cannot be used here. 'detrimental, that means 'harmful' is the right answer.

BOOKS



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