

DCCB Preliminary Grand Test –DCCB-190219

ANSWER KEY

1.(2)	21.(2)	41.(2)	61.(2)	81.(2)
2.(4)	22.(4)	42.(1)	62.(3)	82.(1)
3.(4)	23.(1)	43.(5)	63.(1)	83.(2)
4.(1)	24.(3)	44.(4)	64.(1)	84.(5)
5.(3)	25.(3)	45.(3)	65.(2)	85.(5)
6.(4)	26.(5)	46.(2)	66.(3)	86.(4)
7.(4)	27.(3)	47.(3)	67.(5)	87.(3)
8.(2)	28.(4)	48.(4)	68.(2)	88.(2)
9.(3)	29.(2)	49.(1)	69.(2)	89.(5)
10.(4)	30.(2)	50.(5)	70.(4)	90.(1)
11.(4)	31.(5)	51.(1)	71.(4)	91.(4)
12.(1)	32.(4)	52.(2)	72.(4)	92.(3)
13.(2)	33.(3)	53.(3)	73.(3)	93.(2)
14.(5)	34.(2)	54.(1)	74.(3)	94.(3)
15.(4)	35.(1)	55.(2)	75.(5)	95.(2)
16.(2)	36.(1)	56.(1)	76.(4)	96.(2)
17.(4)	37.(1)	57.(5)	77.(5)	97.(3)
18.(2)	38.(5)	58.(1)	78.(4)	98.(2)
19.(3)	39.(5)	59.(5)	79.(1)	99.(4)
20.(1)	40.(5)	60.(2)	80.(4)	100.(1)

HINTS & SOLUTIONS

1. (2) The trend of substantial increase in value of stocks
2. (4) The markets in both the group of countries have shown upward trend
3. (4) It prolonged the low interest rate regime
4. (1) All the three
5. (3) Either (B) or (C) only
6. (4) a transition from under-development to enrichment
7. (4) The word boost (verb) means : make something increase, become better or more successful. Therefore, the antonym of the word boosted should be damaged.
8. (2) The word Plunge (verb) means decrease (in prices, temperatures etc.) suddenly and quickly. Therefore the antonym of the word Plunged should be increased.
9. (3) The word buoyant (Adjective) means : tending to increase or stay at a high level (of prices, business activity etc.), usually showing financial success. Therefore its synonym should be upbeat.
10. (4) The word Spur (verb) means to encourage somebody to do something or to encourage them to try harder to achieve something. Therefore, the synonym of the word spurred should be stimulated.
11. (4) step - burden
12. (1) emergence - afford
13. (2) spent - bounds
14. (5) challenge - choose
15. (4) stress - including
16. (2) Here, passive voice i.e. a detective in the film, is alleged to have should be used.
17. (4) Modals could not/ would not/cannot agree with Plural Verb (V1).
Hence, could not undergo the procedure.... should be used here.
18. (2) Structure of the sentence in Passive Voice:
Subject + can /may + be + V3 (Past Participle)
Hence, forced to review the selection ... should be used here.
19. (3) Sentence shows present time Hence, where trained scientific personnel enjoy (Simple Present) should be used.
20. (1) Here, Though the book is not yet available in India should be used.
21. (2) B
22. (4) E
23. (1) A
24. (3) F
25. (3) C
26. (5) risk
27. (3) damaged
28. (4) real
29. (2) ignored
30. (2) serious
31. (5) $0 + 5 = 5$
 $5 + 13 = 18$
 $18 + 25 = 43$
 $43 + 41 = 84$
 $84 + 61 = 145$
 $\therefore ? = 145 + 85 = \boxed{230}$
32. (4) $10 \times 1 + 1 \times 7 = 10 + 7 = 17$
 $17 \times 2 + 2 \times 7 = 34 + 14 = 48$
 $48 \times 3 + 3 \times 7 = 144 + 21 = 165$
 $165 \times 4 + 4 \times 7 = 660 + 28 = 688$
 $688 \times 5 + 5 \times 7 = 3440 + 35 = 3475$
 $\therefore ? = 3475 \times 6 + 6 \times 7$
 $= 20850 + 42 = \boxed{20892}$
33. (3) $1 \times 3 = 3$
 $3 \times 8 = 24$
 $24 \times 15 = 360$
 $360 \times 24 = 8640$
 $8640 \times 35 = 302400$
 $\therefore ? = 302400 \times 48 = \boxed{14515200}$
34. (2) $12 \times 1 + 2 \times 1 = 12 + 2 = 14$
 $14 \times 2 + 2 \times 2 = 28 + 4 = 32$
 $32 \times 3 + 2 \times 3 = 96 + 6 = 102$
 $102 \times 4 + 2 \times 4 = 408 + 8 = 416$
 $416 \times 5 + 2 \times 5 = 2080 + 10 = 2090$

$$\therefore ? = 2090 \times 6 + 2 \times 6$$

$$= 12540 + 12 = \boxed{12552}$$

35. (1) $10 \times \frac{3}{2} = 15$

$$15 \times \frac{4}{4} = 15$$

$$15 \times \frac{5}{6} = 12.5$$

$$12.5 \times \frac{6}{8} = 9.375$$

$$9.375 \times \frac{7}{10} = 6.5625$$

$$\therefore ? = 6.5625 \times \frac{8}{12} = \boxed{4.375}$$

36. (1) Eq.-I: $3x^2 - 47x + 184 = 0$
 $\Rightarrow 3x^2 - 24x - 23x + 184 = 0$
 $\Rightarrow 3x(x-8) - 23(x-8) = 0$
 $\Rightarrow (x-8)(3x-23) = 0$
 $\Rightarrow x = 8, \frac{23}{3}$ (or) $x = 8, 7.6$

Eq.-II: $2y^2 - 23y + 66 = 0$
 $\Rightarrow 2y^2 - 12y - 11y + 6 = 0$
 $\Rightarrow 2y(y-6) - 11(y-6) = 0$
 $\Rightarrow (y-6)(2y-11) = 0$
 $\Rightarrow y = 6, \frac{11}{2}$ (or) $6, 5.5$

$\therefore x > y$.

37. (1) Eq.-I: $10x^2 - 17x - 11 = 0$
 $\Rightarrow 10x^2 + 5x - 22x - 11 = 0$
 $\Rightarrow 5x(2x+1) - 11(2x+1) = 0$
 $\Rightarrow (2x+1)(5x-11) = 0$
 $\Rightarrow x = \frac{-1}{2}, \frac{11}{5}$ (or) $x = -0.5, 2.2$

Eq.-II: $6y^2 + 19y + 15 = 0$
 $\Rightarrow 6y^2 + 9y + 10y + 15 = 0$
 $\Rightarrow 3y(2y+3) + 5(2y+3) = 0$
 $\Rightarrow (2y+3)(3y+5) = 0$
 $\Rightarrow y = \frac{-3}{2}, \frac{-5}{3}$ (or) $y = -1.5, -1.6$

$\therefore x > y$.

38. (5) Eq.-I: $20x^2 - 31x + 12 = 0$
 $\Rightarrow 20x^2 - 15x - 16x + 12 = 0$
 $\Rightarrow 5x(4x-3) - 4(4x-3) = 0$
 $\Rightarrow (4x-3)(5x-4) = 0$
 $\Rightarrow x = \frac{3}{4}, \frac{4}{5}$ (or) $x = 0.75, 0.8$

Eq.-II: $20y^2 - y - 12 = 0$

$$\Rightarrow 20y^2 + 15y - 16y - 12 = 0$$

$$\Rightarrow 5y(4y+3) - 4(4y+3) = 0$$

$$\Rightarrow (4y+3)(5y-4) = 0$$

$$\Rightarrow y = \frac{-3}{4}, \frac{4}{5}$$
 (or) $y = -0.75, 0.8$

\therefore Relationship can't be established.

39. (5) Alternate Method:

Eq.-I: $30x - 49\sqrt{x} + 20 = 0$

S-1: $30 \times 20 = 600$

S-2: $(-24, -25)$

$[(-24) \times (-25) = 600, (-24) + (-25) = -49]$

S-3: (i) 24, 25

(ii) $x = \frac{24}{30}, \frac{25}{30} \Rightarrow x = \frac{4}{5}, \frac{5}{6}$

Eq.-II: $42y - 5\sqrt{y} - 25 = 0$

S-1: $42 \times -25 = -1050$

S-2: $(30, -35)$

$[30 \times (-35) = -1050, 30 + (-35) = -5]$

S-3: (i) -30, 35

(ii) $y = \frac{-30}{42}, \frac{35}{42} \Rightarrow y = \frac{-5}{7}, \frac{5}{6}$

$\therefore x \geq y$.

40. (5) Eq.-I: $2x^2 + 3x = 14$

$$\Rightarrow 2x^2 + 3x - 14 = 0$$

$$\Rightarrow 2x^2 + 7x - 4x - 14 = 0$$

$$\Rightarrow x(2x+7) - 2(2x+7) = 0$$

$$\Rightarrow (2x+7)(x-2) = 0$$

$$\Rightarrow x = \frac{-7}{2}, 2$$
 or $x = -3.5, 2$

Eq.-II: $4y^2 + 12y = 16$

$$\Rightarrow y^2 + 3y - 4 = 0$$

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

$$\Rightarrow y(y+4) - 1(y+4) = 0$$

$$\Rightarrow (y+4)(y-1) = 0$$

$$\Rightarrow y = -4, 1$$

\therefore Relation can't be determined.

41.(2) Required ratio

$$= \frac{(700 + 600 + 720)}{(750 + 560 + 750)} = \frac{2020}{2060}$$

i.e. 101 : 103.

42.(1) Total number of students from all the institutes in 2002

$$= 750 + 640 + 680 + 780 + 740 + 620 + 650 = 4860$$

Therefore required number of students passed

$$= \frac{70}{100} \times 4860 = 3402.$$

43.(5) Number of students for all the given years in institute B =

$$(640 + 600 + 620 + 660 + 760 + 740 + 700) = 4720.$$

Total number of students passed

$$= \frac{60}{100} \times 4720 = 2832$$

Hence, average number of students passed

$$= \frac{1}{7} \times 2832 = 404.57 \approx 405$$

44.(4) Required %

$$= \frac{640}{(620 + 580 + 640 + 560 + 650 + 630 + 660)} \times 100\%$$

$$= \frac{640}{4340} \times 100\% \approx 14.75\%$$

45. (3) Required difference = $(780 + 700 + 660 + 840 + 720 + 660 + 740) - (740 + 760 + 690 + 790 + 780 + 650 + 680) = 5100 - 5090 = 10$.

46 – 50:

Number of girls :

$$IT \rightarrow 1500 \times \frac{18}{100} = 270$$

$$Arts \rightarrow 1500 \times \frac{38}{100} = 570$$

$$Science \rightarrow 1500 \times \frac{11}{100} = 165$$

$$Commerce \rightarrow 1500 \times \frac{21}{100} = 315$$

$$Management \rightarrow 1500 \times \frac{12}{100} = 180$$

Number of boys:

$$IT \rightarrow \left(3500 \times \frac{20}{100} - 270 \right) = 700 - 270 = 430$$

$$Arts \rightarrow \left(3500 \times \frac{30}{100} - 570 \right) = 1050 - 570 = 480$$

$$Science \rightarrow \left(3500 \times \frac{22}{100} - 165 \right) = 770 - 165 = 605$$

$$Commerce \rightarrow \left(3500 \times \frac{12}{100} - 315 \right) = 420 - 315 = 105$$

$$Management \rightarrow \left(3500 \times \frac{16}{100} - 180 \right) = 560 - 180 = 380$$

46. (2) Required number of boys = $380 + 430 = 810$

47. (3) Required ratio = $570 : 605 = 114 : 121$

48. (4) Required number of girls = $165 + 315 = 480$

49. (1) New number of management students altogether

$$= 380 + 180 + 165 \times \frac{20}{100}$$

$$= 380 + 180 + 33 = 593$$

50. (5) Number of girls enrolled in Arts, Science and Commerce

$$= 570 + 165 + 315 = 1050$$

∴ Required percentage

$$= \frac{1050}{3500} \times 100 = 30$$

51.(1) Average number

$$= \frac{1}{6} (2 + 3 + 4 + 5 + 4 + 7) \text{ lacs}$$

$$= \frac{1}{6} \times 25 \text{ lacs} = 4.1 \text{ lacs}$$

52.(2) Required % = $[25 / (5 + 6 + 5 + 8 + 5 + 9)] \times 100$

$$= 2500 / 38 = 66$$

53. (3) The total number of candidates who applied for both the banks together is 9 lacs in 2004, 2005 and 2007 separately.

54. (1) Required number of disqualified candidates = $(80/100) \times 9 \text{ lacs} = 720/100 \text{ lacs} = 7.2 \text{ lacs}$

55. (2) Required ratio = $(5 + 7) / (5 + 9) = 12/14 = 6 : 7$.

56. (1) Let the numbers be : $a < b < c$

According to the question,

$$\frac{a + b + c}{3 \times 3} = c - 8$$

$$\Rightarrow a + b + c = 9c - 72$$

Again, $a + b = 16$

$$\therefore 16 + c = 9c - 72$$

$$\Rightarrow 9c - c = 72 + 16$$

$$\Rightarrow 8c = 88 \Rightarrow c = 11$$

57.(5) Let the amount invested in scheme A be Rs. x .

Case I

$$S.I. = \frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$$

$$= \frac{x \times 8 \times 14}{100} = \text{Rs.} \frac{112x}{100}$$

Case II

Amount invested in scheme B

$$= \text{Rs.} \left(x + \frac{112x}{100} \right)$$

$$= \text{Rs.} \left(\frac{100x + 112x}{100} \right) = \text{Rs.} \frac{212x}{100}$$

$$\therefore C.I. = P \left[\left(1 + \frac{R}{100} \right)^T - 1 \right]$$

$$= \frac{212x}{100} \left[\left(1 + \frac{R}{100} \right)^2 - 1 \right]$$

$$= \frac{212x}{100} \left(\frac{121}{100} - 1 \right)$$

$$= \frac{212x \times 21}{10000}$$

$$\therefore \frac{212x \times 21}{10000} = 6678$$

$$\Rightarrow \frac{6678 \times 10000}{212 \times 21} = \text{Rs.} 15000$$

58. (1) 4 years ago,

A's age = $10x$ years

B's age = $3x$ years

A's present age = $(10x + 4)$ years

B's present age = $(3x + 4)$ years

According to the question,

$$\frac{10x + 4 + 8}{2} = (3x + 4 + 8) = -2$$

$$\Rightarrow 3x + 12 - (5x + 6) = 2$$

$$\Rightarrow 3x + 12 - 5x - 6 = 2$$

$$\Rightarrow 6 - 2x = 2$$

$$\Rightarrow 2x - 6 - 2 = 4 \Rightarrow x = 2$$

∴ B's present age = $3x + 4 = 3 \times 2 + 4 = 10$ years

59.(5) Pia's monthly salary = Rs. 5x
 Percentage expenditure by Pia on Mother + Tuition fee + payment of debt
 = 60 + 15 + 18 = 93%
 Expenditure on shopping = 7%

$$\therefore 5x \times \frac{7}{100} = 2100$$

$$\Rightarrow 5x \times 7 = 21000$$

$$\Rightarrow x = \frac{21000}{5 \times 7} = 6000$$

\therefore Som's monthly salary
 = 4x = 4 x 6000 = Rs. 24000

60.(2) According to the question, 18 x 16 women = 24 x 18 children

$$\Rightarrow 2 \text{ women} = 3 \text{ children}$$

\therefore 8 women + 16 children = (12 + 16) children = 28 Children

$$\Rightarrow \frac{M_1 D_1}{W_2} = \frac{M_2 D_2}{W_2}$$

$$\Rightarrow \frac{24 \times 18}{1} = \frac{28 \times 9}{W_2}$$

$$\Rightarrow W_2 = \frac{28 \times 9}{24 \times 18} = \frac{7}{12}$$

\therefore Remaining work

$$= 1 - \frac{7}{12} = \frac{5}{12}$$

This part of work is done by 10 men.

$$\frac{M_1 D_1}{W_1} = \frac{M_2 D_2}{W_2}$$

$$\Rightarrow \frac{12 \times 20}{1} = \frac{10 \times D_2}{\frac{5}{12}}$$

$$\Rightarrow 10 \times D_2 = 12 \times 20 \times \frac{5}{12} = 100$$

$$\Rightarrow D_2 = \frac{100}{10} = 10 \text{ days}$$

61.(2) 623898 x 99 = ? x 60000

Taking approximate values, 623900 x 100 . ? x 60000

$$\Rightarrow ? = \frac{623900 \times 100}{60000} = 1039.8 = 1030$$

62.(3) $?\ = \frac{4}{5} \times \frac{3}{7} \times \frac{6}{7} \times \frac{5}{9}$

$$= \frac{4}{5} \times \frac{3}{7} \times \frac{7}{6} \times \frac{9}{5} = \frac{18}{25}$$

63.(1) $(399.98)^2 = ?$

$$\Rightarrow ? \approx (400)^2 = 160000$$

64.(1) $?\ = \frac{3\sqrt{9 \times 9 \times 9}}{3\sqrt{12 \times 12 \times 12}} \times \frac{8}{15} \times \frac{3}{8}$

$$= \frac{9}{12} \times \frac{8}{15} \times \frac{3}{8} = \frac{3}{20} = 0.15$$

65.(2) $\left(\frac{9^3}{10^3}\right)^{\frac{2}{3}} + \frac{\sqrt{12996}}{\sqrt{625}} = ? \times 10^{-2}$

$$\Rightarrow \left(\frac{9}{10}\right)^2 + \frac{114}{25} = ? \times 10^{-2} \cdot 8.$$

$$\Rightarrow \frac{81}{100} + \frac{114}{25} = \frac{?}{100}$$

$$\Rightarrow \frac{81 + 456}{100} = \frac{?}{100}$$

$$\Rightarrow \frac{537}{100} = \frac{?}{100}$$

$$\Rightarrow ? = 537$$

66.(3) B + D means B is mother of D.

D x M means D is father of M.

M ÷ N means M is brother of N.

Therefore, M is grandson of B.

Option (1)

67.(5)

J ÷ R means J is brother of R

R - T means R is sister of T.

T x F means T is father of F.

Therefore, J is uncle of F.

Option (2)

J + R means J is mother of R

J is a female.

Option (3)

J ÷ M means J is brother of M.

M - N means M is sister of N.

N x F means N is father of F.

Therefore, J is uncle of F.

68.(2)

Option (1)

M ÷ K means M is brother of K.

K x T means K is father of T.

T - R means T is sister of R

The sex of R is not clear.

R is either nephew or niece of M.

Option (2)

M - J means M is sister of J.

J + R means J is mother of R

R - N means R is sister of N.

Therefore, R is niece of M.

69.(2)

70.(4)

71.(4)

First and third Premises are Universal Affirmative (A-type).

Second Premise is Particular Affirmative (I-type).

Some cycles are wheels.

All wheels are mirrors.

I + A \Rightarrow I-type Conclusion.

Conclusion : Some cycles are mirrors.

This is Conclusion I.

Conclusion III is converse of this Conclusion.

Therefore, Conclusions I and III follow.

72.(4)

First and second Premises are Particular Affirmative (I-type).

Third Premise is Universal Affirmative (A-type).
Some hammers are beads.



All beads are rings.

$I + A \Rightarrow$ I-type Conclusion

Conclusion : Some hammers are rings.

Conclusion I is converse of this Conclusion.

Conclusion II is Converse of the first Premise.

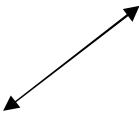
73. (3)

First Premise is Universal Affirmative (A-type).

Second Premise is Universal Negative (E-type).

Third Premise is Particular Affirmative (I-type).

All jackets are trousers.



No trouser is shirt.

$A + E \Rightarrow$ E-type

Conclusion : No jacket is shirt.

No trouser is shirt.



Some shirts are caps.

$E + I \Rightarrow$ O₁- type Conclusion.

Conclusion : Some caps are not trousers.

Conclusion III is converse of the first Premise.

(74-75) :

(i) $A \$ B$ means $A * B$

Therefore, $A \geq B$

(ii) $A # B$ means $A * B$

Therefore, $A \leq B$

(iii) $A @ B$ means $A * B$ and $A \neq B$

Therefore, $A > B$

(iv) $A @ B$ means $A * B$ and $A = B$

Therefore, $A = B$

(v) $A \% B$ means $A * B$ and $A \neq B$

Therefore, $A < B$

74. (3)

$H \% J \Rightarrow H < J$

$J @ N \Rightarrow J = N$

$N @ R \Rightarrow N > R$

Therefore, $H < J = N > R$

Conclusions :

I. $R \% J \Rightarrow R < J$: True

II. $H @ J \Rightarrow H > J$: Not true

III. $N @ J \Rightarrow N > J$: Not true

75. (5)

$M @ G \Rightarrow M > J$

$J \$ T \Rightarrow J \geq T$

$T @ N \Rightarrow T = N$

Therefore, $M > J \geq T = N$

Conclusions :

I. $N \# J \Rightarrow N \leq J$: True

II. $T \% M \Rightarrow T < M$: True

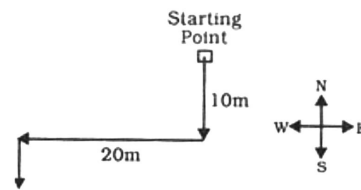
III. $M @ N \Rightarrow M > N$: True

76. (4)

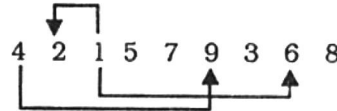
77. (5)

78. (4)

79. (1)



80. (4)



81-85.

Mothers	Children	Place	Ice-Cream
A	P/Q	Shopping Mall	Kasta
D	Q/P	Shopping Mall	Chocobar
E	T	Garden	Black Current
B	S	Clinic	Vanila
F	R	Parlour	Chocobar
C	U	Shop	Vanila

81. (2)

83. (2)

85. (5)

86. (4)

88. (2)

90. (1)

92. (3)

94. (3)

96. (2)

97. (3)

98. (2)

100. (1)

82. (1)

84. (5)

87. (3)

89. (5)

91. (4)

93. (2)

95. (2)

Option (2) is implicit as keeping in mind people's desire and hope of positive response, the company uses a phrase like "a hassle-free holiday package" in the advertisement.

We can conclude only that those who do not take dowry respect womanhood.

99. (4)