

IBPS PO SPECIAL PHASE - I MOCK TEST - 254 (SOLUTION)

REASONING

(1-5):

1. (2)

2. (1) **From I:** Suppose the marks obtained is $(10x + y)$ a two-digit number. {Note that the possibility of getting 100 marks is ruled out because in case of 100 marks interchanges of digits will not decrease 100 by 81.}

$$\text{Now, } 10x + y - (10y + x) = 81$$

$$\text{Therefore } x - y = \frac{81}{9} = 9$$

Thus, the unit's digit will be 9 less than the digit at ten's place. Hence, the only such digit is 90. Hence, marks obtained by Kishore = 90

From II: There are several such numbers sum of digits of which and the difference of the digits are same, i.e. 10, 20, 30, 40, 50, 60, 70, 80 and 90.

3. (3) **From I:** We get 1st day of the next month is Saturday. This implies that last day of the month under consideration is Friday. And thus we get :

Date	1st	8th	15th	22nd	29th	31st
Day	Fri	Fri	Fri	Fri	Fri	Sun

Hence, the total number of days in the month = 29.

From II: With the information of the last day of the month and the first day of the month (as mentioned in question part), we can find out the number of days in the month by the same method as discussed above, i.e. 31 days.

4. (3)

5. (4) It is not mentioned that Nidhi is towards left of Ranjan or right of Ranjan.

(6-10): The given trend of sample of Input and its steps indicate that the given problem is of the type of shifting. Also, the given sample indicates that it is three-type shifting.

There three changes are repeated in successive steps. If all the elements of the input are denoted by a different letter from left to right, the successive steps according to the above change become as follows:

	1	2	3	4	5	6
Input	A	B	C	D	E	F
Step I	E	F	C	D	A	B
Step II	F	E	D	C	B	A
Step III	D	E	F	A	B	C
Step IV	B	C	F	A	D	E
Step V	C	B	A	F	E	D
Step VI	A	B	C	D	E	F
Step VII	E	F	C	D	A	B
Step VIII	F	E	D	C	B	A
Step IX	D	E	F	A	B	C

On the basis of the above chart answer the questions.

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6. (1) **Step II :** 10 13 17 91 49 86
(F) (E) (D) (C) (B) (A)
Step V : (C) (B) (A) (F) (E) (D)
91 49 86 10 13 17
7. (4) **Step IX :** 9 16 62 55 38 37
(D) (E) (F) (A) (B) (C)
Input : (A) (B) (C) (D) (E) (F)
55 38 37 9 16 62
8. (5) First time input gets repeated in Step VI. Next time it would be repeated in step XII.
9. (2) **Step V:** 22 33 44 39 29 19
(C) (B) (A) (F) (E) (D)
Step VII: (E) (F) (C) (D) (A) (B)
29 39 22 19 44 33
10. (5) After changing the series becomes as follows.
E F G H A B C D M N O P I J **K** L U V W X Q R S T Z Y
Now, the required element is $(19-7 =)$ 12th element from right.

(11-15) :

Day	People	Game
Monday	D	Valleyball
Tuesday	A	Football
Wednesday	G	Cricket
Thursday	B	Kho-Kho
Friday	F	Hockey
Saturday	C	Tennis
Sunday	E	Squash

11. (4) 12. (1) 13. (5) 14. (4) 15. (1)

(16-20) :

economy and wealth balance → gh mk ru st
wealth of nations depleting → tl zm ak gh
taxes balance nations better → dj ru zm pn
better to revive economy → br ht dj st

16. (2) 17. (3) 18. (1) 19. (3) 20. (1)

From 21 - 25, first of all we understand the meanings of symbols given in the questions.

- A \$ B means $A < B$
A # B means $A \geq B$
A % B means $A = B$
A © B means $A > B$
A @ B means $A \leq B$

21. (4) Here,

$$L = T \dots (i); T \leq J \dots (ii); J \geq K \dots (iii)$$

Combining (i) and (ii), we get

$$J \geq T = L \dots (iv)$$

Now, from (iii) and (iv) we can't relate

- (a) L and K
(b) T and K

Hence, neither conclusion I ($L > K$) nor conclusion II ($T \leq K$) is necessarily true.

22. (1) Here,

$$D < L \dots (i); L \leq V \dots (ii); V \geq W \dots (iii)$$

Combining (i) and (ii), we get

$$V \geq L > D \dots (iv)$$

Now, from (iv) we get

$$D < V. \text{ Hence,}$$

conclusion I ($D < V$) is true.

Again, from (iii) and (iv), we can't relate D and W.

Therefore, conclusion II ($D \leq W$) is not necessarily true.

23. (4) Here,

$$G \leq K \dots (i); K \leq F \dots (ii); F < M \dots (iii)$$

Combining (i), (ii) and (iii), we get

$$M > F \geq K \geq G \dots (iv)$$

Now, from (iv) we get $G \leq F$ and $K < M$,

Hence, neither conclusion I ($G > F$) nor conclusion II ($K \leq M$) is true.

24. (4) Here,

$$M \geq T \dots (i); T > H \dots (ii); F \leq H \dots (iii)$$

Combining all, we get

$$M \geq T > H \geq F \dots (iv)$$

Now, from (iv) we get, $T > H$.

Hence, neither conclusion I ($H \leq T$) nor conclusion II ($H > T$) is true.

25. (2) Here,

$$V \geq F \dots (i); F > J \dots (ii); J = D \dots (iii)$$

Combining all, we get

$$V \geq F > J = D \dots (iv)$$

Now, from (iv), we get

$$V > D \text{ and } F > D.$$

Hence, conclusion II ($F > D$) is true but conclusion I ($V \geq D$) is not true.

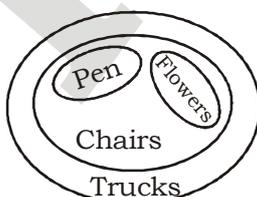
(26-30) :

26. (5)



I. × II. × III. ✓ IV. ×

27. (1)



I. ✓ II. × III. ✓ IV. ×

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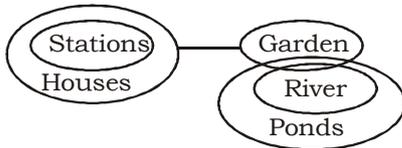
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28. (5)



I. × II. × III. × IV. ✓

29. (5)



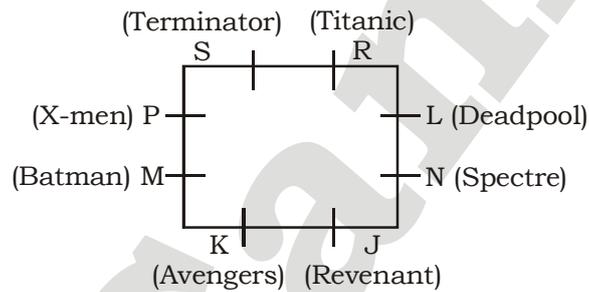
I. ✓ II. × III. × IV. ×

30. (5)



I. Doubt II. ✓ III. × IV. Doubt

(31-35) :



31. (5)

32. (4)

33. (4)

34. (2)

35. (3)

MATHS

36. (2) $? = \frac{623898 \times 99}{60000} = 1029.43 \approx 1030$

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

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

38. (1) $(399.98)^2 = ?$

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

39. (3) $\sqrt{624.9995} + (4.9989)^2 = ? \div \frac{1}{4.9900865}$

$$\sqrt{625} + (5)^2 \approx ? \div \frac{1}{5}$$

$$25 + 25 = ? \times 5$$

$$? = \frac{50}{5} = 10$$

40. (3) $989.001 + 1.00982 \times 76.792 = ?$
 $? \approx 989 + 1 \times 77$
 $= 989 + 77 = 1066 \approx 1065$
41. (4) The pattern of the number series is :
 $325 - 1 \times 11 = 314$
 $314 - 2 \times 11 = 292$
 $292 - 3 \times 11 = 259$
 $259 - 4 \times 11 = 215$
 $215 - 5 \times 11 = 160$
42. (2) The pattern of the number series is :
 $45 \times 1 + 1 = 46$
 $46 \times 1.5 + 1 = 70$
 $70 \times 2 + 1 = 141$
 $141 \times 2.5 + 1 = 353.5$
43. (3) The pattern of the number series is :
 $620 + 1 \times 12 = 632$
 $632 - 2 \times 12 = 608$
 $608 + 3 \times 12 = 644$
 $644 - 4 \times 12 = 596$
 $596 + 5 \times 12 = 656$
44. (5) The pattern of the number series is :
 $15 \times 2 - 1 \times 5 = 25$
 $25 \times 2 - 2 \times 5 = 40$
 $40 \times 2 - 3 \times 5 = 65$
 $65 \times 2 - 4 \times 5 = 110$
 $110 \times 2 - 5 \times 5 = 195$
45. (5) The pattern of the number series is :
 $120 \times 2.5 + 20 = 320$
 $320 \times 2.5 + 20 = 820$
 $820 \times 2.5 + 20 = 2070$
 $2070 \times 2.5 + 20 = 5195$
46. (4) From statement I,
 $3 \times 5 = 15 ; 5 \times 9 = 45$ (An odd number)
It is also obvious from statement II.
47. (5) The answer is not possible with the help of even both the statements. We need more information like sum or average of their ages or ratio of their after some time or before sometime etc.
48. (2) $A + B + C + D$
 $= ₹ (4 \times 62880)$
From statement II,
 $A + C + D = ₹ (3 \times 61665)$
 \therefore B's salary = $(A + B + C + D)$'s
salary - $(A + C + D)$'s salary

49. (3) From statement I,
The three digit number is divisible by 9.
From statement II,
Number = 6×6
A number is divisible by 9 if sum of its digits is divisible by 9.
Clearly, $* = 6$
because $666 \div 9 = 74$

50. (4) From statement I,
Let CP of 1 printer = ₹ 1
CP of 5 printers = ₹ 5 and SP of 5 printers = ₹ 6

$$\text{Gain \%} = \frac{1}{5} \times 100 = 20\%$$

$$\text{CP} = \frac{100}{120} \times 3000 = ₹ 2500$$

$$\text{Gain} = ₹ (3000 - 2500) = ₹ 500$$

From statement II, we can also find the answer.

51. (2) I. $4x^2 - 32x + 63 = 0$
 $4x^2 - 14x - 18x + 63 = 0$
 $2x(2x - 7) - 9(2x - 7) = 0$
 $(2x - 7)(2x - 9) = 0$

$$x = \frac{7}{2} \text{ or } \frac{9}{2}$$

- II. $2y^2 - 11y + 15 = 0$
 $2y^2 - 6y - 5y + 15 = 0$
 $2y(y - 3) - 5(y - 3) = 0$
 $(y - 3)(2y - 5) = 0$

$$y = 3 \text{ or } \frac{5}{2}$$

Clearly, $x > y$

52. (2) I. $x^3 = (216)^{\frac{1}{3} \times 3} = 216$
 $x = \sqrt[3]{216} = 6$

II. $6y^2 = 150$

$$y^2 = \frac{150}{6} = 25$$

$$y = \pm 5$$

Clearly, $x > y$

53. (1) I. $12x^2 + 17x + 6 = 0$
 $12x^2 + 9x + 8x + 6 = 0$
 $3x(4x + 3) + 2(4x + 3) = 0$
 $(4x + 3)(3x + 2) = 0$

$$x = -\frac{3}{4} \text{ or } -\frac{2}{3}$$

II. $6y^2 + 5y + 1 = 0$
 $6y^2 + 2y + 3y + 1 = 0$
 $2y(3y + 1) + 1(3y + 1) = 0$
 $(3y + 1)(2y + 1) = 0$

$$y = -\frac{1}{3} \text{ or } -\frac{1}{2}$$

Clearly, $x < y$

54. (3) I. $20x^2 + 9x + 1 = 0$
 $20x^2 + 5x + 4x + 1 = 0$
 $5x(4x + 1) + 1(4x + 1) = 0$
 $(4x + 1)(5x + 1) = 0$

$$x = -\frac{1}{4} \text{ or } -\frac{1}{5}$$

II. $30y^2 + 11y + 1 = 0$
 $30y^2 + 6y + 5y + 1 = 0$
 $6y(5y + 1) + 1(5y + 1) = 0$
 $(5y + 1)(6y + 1) = 0$

$$y = -\frac{1}{5} \text{ or } -\frac{1}{6}$$

Clearly, $x \leq y$

55. (4) I. $x^2 + 17x + 72 = 0$
 $x^2 + 8x + 9x + 72 = 0$
 $x(x + 8) + 9(x + 8) = 0$
 $(x + 9)(x + 8) = 0$
 $x = -9 \text{ or } -8$

II. $y^2 + 19y + 90 = 0$
 $y^2 + 10y + 9y + 90 = 0$
 $y(y + 10) + 9(y + 10) = 0$
 $(y + 9)(y + 10) = 0$
 $y = -9 \text{ or } -10$

Clearly, $x \geq y$

56. (1) In 2010, profit of Company M = 4.5 crore
Profit of Company (P + N) = (4 + 3) = 7 crore

$$\therefore \text{Required\%} = \frac{4.5}{7} \times 100 = 64.28\%$$

57. (4) Expenditure of Company M in the year 2011 is 75 crore.
Profit of Company M in year 2011 is 4 crore.
Income of Company M in year 2011 is $75 + 4 = 79$ crore
Now, expenditure of Company P in the year 2011 is 68 crore.
Profit of Company P in the year 2011 is 7 crore.
Income of Company P in the year 2011 is $(68 + 7) = 75$ crore
 \therefore Required ratio = $79 : 75$
58. (2) In the year 2012 profit of Company M = 6 crore

Expenditure = $6 \left(1 + \frac{50}{100}\right) = 9$ crore

Income = $(9 + 6) = 15$ crore
Profit of Company N in the year 2012 = 6.5 crores

Expenditure = $6.5 \left(1 + \frac{60}{100}\right) = 6.5 \times \frac{8}{5} = 1.3 \times 8 = 10.4$ crore

Hence, Income = $(6.5 + 10.4) = 16.9$ crore Again, Profit of Company P in the year 2012 = 5 crore

Expenditure = $5 \left(1 + \frac{80}{100}\right) = 5 \times \frac{9}{8} = 9$ crore

Hence, Income = $(9 + 5) = 14$ crore

Now, average income of all three companies = $\frac{1}{3} (15 + 16.9 + 14) = \frac{45.9}{3} = 15.3$ crore
59. (3) Profit of Company N in the year 2009 = 2 crore
Profit of Company N in the year 2012 = 6.5 crore
Increase = $(6.5 - 2) = 4.5$ crore

 $\% \text{ increase} = \frac{4.5}{2} \times 100 = 225\%$
60. (5) Income of Company P in the year 2010 = 40 crore

Income of Company M in the year 2010 = $40 \left(1 + \frac{20}{100}\right) = 48$ crore

Now, profit of Company M in the year 2010 = 4.5 crore
 \therefore Expenditure of Company M in the year 2010 = $(48 - 4.5)$ crore = 43.5 crore
61. (5) According to the question,
Sum of five numbers = $5 \times 306.4 = 1532$
 \therefore Third number = $1532 - 2 \times 431 - 2 \times 214.5$
 $= 1532 - 862 - 429 = 241$
62. (2) $SI = \frac{15000 \times 9 \times 2}{100} = ₹ 2700$

 $CI = 12000 \left[\left(1 + \frac{8}{100}\right)^2 - 1 \right] = 12000 \left[\left(\frac{27}{25}\right)^2 - 1 \right]$

 $= 12000 \left[\frac{729 - 625}{625} \right] = 12000 \times \frac{104}{625} = ₹ 1996.8$

 \therefore Total interest earned
 $= ₹ (2700 + 1996.8) = ₹ 4696.8$

63. (1) Let the listed price be ₹ x .

$$\text{Discount} = 30\% \text{ of } x = \frac{30x}{100} = ₹ \frac{3x}{10}$$

According to the question,

$$\frac{3x}{10} = 82.5$$

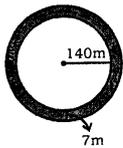
$$x = \frac{82.5 \times 10}{3} = ₹ 275$$

∴ Required cost price of calculator = 70% of 275

$$= ₹ \frac{70 \times 275}{100} = ₹ 192.50$$

64. (2) Required time = LCM of 18, 24 and 32 seconds = 288 seconds.

65. (5)



Radius of the field = 140 m

Width of garden = 7 m

Area of garden = $\pi (147^2 - 140^2)$

$$= \frac{22}{7} (147 + 140) (147 - 140) = 22 \times 287 = 6314 \text{ m}^2$$

Required cost = ₹ $(21 \times 6314) = ₹ 132594$

66. (4) Required % = $\left(\frac{760}{2640} \times 100 \right) \% = 28.78\% \approx 28\%$

67. (3) Required difference = $(440 + 760) - (260 + 320)$
 $= 1200 - 580 = 620$

68. (2) Required ratio = $(340 + 320 + 440) : (320 + 660 + 440)$
 $= 1100 : 1420 = 55 : 71$

69. (5) Required ratio = $440 \times \frac{110}{100} : 760 \times \frac{115}{100}$
 $= 484 : 874 = 242 : 437$

70. (3) Required difference

$$= \left(\frac{340 + 480 + 320 + 750 + 440 + 760}{6} \right) - \left(\frac{260 + 320 + 420 + 660 + 540 + 440}{6} \right)$$

$$= 520 - 440 = 80$$

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English

91. (2) The error is in part B of the sentence, which means the word “underline” has been used wrongly here. Note that the word mentioned after “underline” is “problem”, which is a noun. So, we need an adjective to modify this noun. Thus, “underlined” should replace the highlighted word mentioned in B. An underlined problem means an emphasised problem.
92. (2) The error is in part B of the sentence, which means the word “vertebrate” has been used wrongly here. Note that the sentence mentions that the heat causes some action in the molecules, which means we need a verb instead of the noun “vertebrate” (an animal of a large group distinguished by the possession of a backbone or spinal column). Thus, the word “vibrate” must be used which means move continuously and rapidly to and fro.
93. (2) Fleet is the collective noun used for ships. Here, ‘sheeps’ has been used in the first part, which needs to be replaced with ‘ships’.
94. (2) Dew should be replaced by due. Dew means tiny drops of water that form on cool surfaces at night, when atmospheric vapour condenses. Due to means owing to something or because of something.
95. (1) Here “creating” should be used in place of “created” in order to make sentence context appropriate.

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IBPS PO SPECIAL PHASE -I MOCK TEST - 254 (ANSWER KEY)

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