IBPS PO Preliminary Grand Test –IPP – 170503
HINTS & SOLUTIONS

1. (2) It can be inferred from the passage, that Buffon, Needham, Voltaire and Huxley were all contemporaries. Option (2) is thus the right choice

2. (3) The line from paragraph 2, "In association with Buffon, the Irish Jesuit priest John Needham declared that he could bring about at will the creation of living microbes in heat-sterilised broths, and presumably in propitiation theorized that God did not create living things directly but bade the earth and water to bring them forth" explains that option (3) is the right answer choice.

3. (2) The line from paragraph 5, "Pasteur's conclusions caused conflict because they seemed simultaneously to support the Biblical account of creation while denying a variety of other philosophical systems" explains that option (2) is the right answer choice.

4. (2) The line from paragraph 4,"He ranged from the mountain air of Montanvert which he showed to be almost sterile, to those deep, clear wells whose waters had been rendered germ free by slow filtration through sandy soil. The latter discovery led to the familiar porcelain filters of the bacteriology laboratory" explains that option (2) is the right answer choice.

5. (2) Pasture did not work on arbitrary or spontaneous discoveries. He worked on logical premises. This is evident from the 4th paragraph. Option (2) is the right choice

6. (4) The line from the last paragraph of the passage, "It is not an exaggeration then to say that the emergence of the cell theory represents biology's most significant and fruitful advance" explains that option (4) is the right answer choice

7. (3) The line from paragraph 5, "Never will the doctrine of spontaneous generation recover from the mortal blow of this impel experiment" explains that option (3) is the right answer choice

8. (1) The line from paragraph 4, "he contended either air contained a factor necessary for the spontaneous generation of life or viable germs were born in by the air and seeded in the sterile nutrient broth" explains that option (1) is the right answer choice.

9. (1) The line from the passage, "We now knew that 'sterile' meant and we knew that there could be no such things as partial sterilization" explains that option (1) is the right answer choice.

10. (2) The line from paragraph 6, "In the above controversy, what was unreasonable was the parade of men who claimed to have 'proved' or who resolutely 'believed in' spontaneous generation on the face of proof-not that spontaneous generation cannot occur-but that their work was shot through with experimental error" explains that option (2) is the right answer choice

11. (4) Use " the house of one of my friends" in place of "one of my friend's houses" as after 'one of ' if two nouns are used then we represent the possession or ownership of one of these nouns using 'of' and not s'.

12. (1) Use "the life of the blind" in place of " The blind's life" because in the case of The+ Adjective in plural Noun scenario we don't use s' as we use the preposition 'of' to denote the relationship.
Eg- The hobbies of the rich.

13. (4) Use 'is' in place of 'are' as after 'each of' we always use a singular verb.

14. (3) Use 'does' in place of 'do' as the subject 'an ordinary man' is a 3rd person singular number.

15. (1) 'Not only' should be used before shopping as 'but also' is used before 'for having'.

16. (2) Use 'that' in place of 'since' as after 'ago' that is used as a conjunction

17. (2) 'have' should be used before 'the students' as in the sentences starting with 'never before' the verb is used before the subject (the students).

18. (1) Use 'it' before 'being' as every participle needs a subject of reference but in this sentence for 'being' the subject of reference is not given.

19. (2) Use 'bombings' in place of 'bombing', since, bombing has been used in plural sense.

20. (3) 'are' should be used in place 'have been'. since, logically the tense of the given sentence should be 'present progressive'.

21. (5) Belligerence means aggressive or warlike behaviour.

22. (1) Accounting means considering or regarding in a specified way.

23. (3) Allegiance means loyalty or commitment to a superior or to a group or cause.

24. (4) Augment means make (something) greater by adding to it; increase.

25. (2) Marginal means minor and not important; not central.

26. (1) Aloof means conspicuously uninvolved.

27. (5) Chorus means a simultaneous utterance of something by many people.

28. (4) Substitute means use or add in place of.

29. (5) Reverse means make (something) the opposite of what it was.

30. (2) Equipped means supply with the necessary items for a particular purpose.

31. (3)
Given, length of garden = 24 m and
Breadth of garden = 14 m
$\therefore$ Area of the garden = $24 \times 14 \, m^2 = 336 \, m^2$.
Since, there is 1 m wide path outside the garden
$\therefore$ Area of Garden (including path)
= $(24 + 2) \times (14 + 2) = 26 \times 16 \, m^2 = 416 \, m^2$.
Now, Area of Path = Area of garden (including path) –Area of Garden
= $416 - 336 = 80 \, m^2$.
Now, Area of Marbles = $20 \times 20 = 400 \, cm^2$
$\therefore$ Marbles required = $\dfrac{Area \, of \, Path}{Area \, of \, Marbles}$
= $\dfrac{80,0000}{400}$ = 2000

32. (4)

5% of A = 15% of B ⇒ 5A = 15B ⇒ A = 3B
10% of B = 20% of C ⇒ 10B = 20C ⇒ B = 2C
If C = 2000, then B = 4000
∴ A = 12000
Hence, the total income of A, B and C = 18000.

33. (1)

2 × 1 men of first group = 3 × 1.5 men of second group
Or, 2 men of first group = 4.5 men of second group
∴ 38 men of first group = $\frac{4.5}{2} \times 38 = 19 \times 4.5$ men of second group
∴ (19 × 4.5) men do 1 work, working 6 hrs/ day in 12 day
∴ 1 man does 1 work working 1 hr/day in (12 × 19 × 4.5 × 6) days.
∴ 57 men do 2 work working 8 hrs/day in = $\frac{12 \times 19 \times 4.5 \times 6}{57 \times 8} \times 2 = 27$ days

34. (4) Suppose the person had deposited Rs.x at the time of opening the account.

∴ After one year, he had
Rs. $\left[x + \frac{x \times 10 \times 1}{100} \right] = Rs. \frac{11x}{10}$
After two years, he had
Rs. $\left[\frac{11x}{10} + \frac{11x}{10} \times \frac{10 \times 1}{100} \right] = \frac{121x}{100}$ (1)
After withdrawing Rs. 5,000 from Rs. $\frac{121x}{100}$, the balance = Rs. $\frac{121x - 500000}{100}$
After 3 years, he had
$\frac{121x - 500000}{100} + \frac{121x - 500000}{100} \times \frac{10 \times 1}{100}$
$= \frac{11(121x - 500000)}{1000}$ (2)

After withdrawing Rs. 6,000 from amount (2), the balance
= Rs. $\left[\frac{1331x}{1000} - 11500 \right]$
∴ After 4 years, he had
Rs. $\left[\frac{1331x - 5500000}{1000} \right] + 10\% \text{ of } Rs. \left[\frac{1331x - 5500000}{1000} \right]$
= Rs. $\frac{11}{10} \left[\frac{1331x}{1000} - 11500 \right]$ (3)
[After withdrawing Rs. 10,000 from amount (3), the balance = 0]
∴ $\frac{11}{10} \left[\frac{1331x}{1000} - 11500 \right] - 10,000 = 0$
⇒ x = Rs. 15,470.

35. (4)

Let the yearly total profit be Rs. x
Amount paid to B as salary = Rs. (120 × 12) = Rs. 1,440
Share of each = Rs. $\left(\frac{x - 1440}{2} \right)$
Interest paid by B = Rs. $\left(\frac{22500 \times 10}{100} \right) = Rs. 2,250$
Total money received by A
= Rs. $\left(\frac{x - 1440}{2} + 2250 \right) = Rs. \left(\frac{x + 3060}{2} \right)$
Total money received by B
= Rs. $\left[\left(\frac{x - 1440}{2} \right) + 1440 - 2250 \right] = Rs. \left(\frac{x - 3060}{2} \right)$
Given : $\frac{1}{2} \left(\frac{x + 3060}{2} \right) = \left(\frac{x - 3060}{2} \right)$
Or, $\frac{x + 3060}{4} = \frac{x - 3060}{2}$
Or, x = 9180
Hence, the total profit = Rs. 9,180.

36. (1)

Distance travelled by X in 1 hr = 50 km
Distance travelled by Y in $\frac{1}{2}$ hr = 20 km
At 6 : 30, distance between 2 trains = 30 km
Time taken to travel this 30 km
$= \frac{30}{50 + 40} = \frac{1}{3} hr$
$= \frac{1}{3} \times 60 = 20 min.$

37. (4)

Suppose the sum borrowed = Rs. x
Rate of interest = R%
Time = 2 years
∴ $4000 = \frac{x \times R \times 2}{100} \Rightarrow Rx = 200000$ (1)
Now, $x \left(1 + \frac{R}{100} \right)^2 = x + 4200$
⇒ $\frac{xR^2}{10000} + \frac{2RX}{100} = 4200$
⇒ 20R + 4000 = 4200
⇒   R = 10

38. (2)

Let a, b, c, d, the number of students in section A, B, C, D respectively
Then,
$= \frac{45(a+b+c) + 55(a+c+d) + 50(a+b+d) + 60(b+c+d)}{3(a+b+c+d)}$
$= 50 + \frac{5b + 10c + 15d}{3(a+b+c+d)}$
Clearly, a, b, c, d are natural no. put a = b = c = d = 1
Then, required average = $50 + \frac{30}{12} = 50 + 2.5 = 52.5$

39. (4)

Let the speed of train be x Km/h.
As both the persons are walking in the same direction of train.
So, (x – 4.5) × 8.4 = (x – 5.4) × 8.5   (length of train)
⇒ 0.1x = 8.1
⇒ x = 81 Km/h.

40. (3)

M : W : B = 5 : 4 : 2
∴ 4 M = 5W
And 2W = 4B
$\frac{7.5 \times 10}{10} = \frac{15 \times x}{16}$
x = 8 days

41. (3) Required difference
$= [(38 + 42 + 40) - (27 + 28)] \times \frac{1}{100} \times 1200 = 780$

42. (4) Number of reams not wasted by Babu = 132-88=44

43. (2) Reams demanded =1.25×0.36×1200=540
Reams provided =432-72=360
∴Required ratio =3 :2

44. (5) Required percentage
$= \frac{2892 - 2088}{2892} \times 100 \approx 28\%$

45. (2) Required percentage
$= \frac{\frac{95}{100} \times 1200}{\frac{185}{100} \times 100} \times 100 = 51 \frac{13}{37} \%$

46. (3)

3 × 3 + 5 = 14
14 × 4 – 6 = 50
50 × 5 + 7 = 257
257 × 6 – 8 = 1534
1534 × 7 + 9 = 10747

47. (2)

$+5^3, +6^2, +7^3, +8^2 + 9^3 \ldots\ldots$
∴ 1047 + 64 = 1111

48. (4) In this series previous term is added to the next term

∴ 78 + 71 = 149
149 + 78 = 227
227 + 149 = 376
376 + 227 = 603
603 + 376 = 979

49. (5)

×0.5, ×1.5, ×2.5, ×3.5, ×4.5.............
∴ 44 × 1.5 = 66

50. (1)

$(×2 + 3), (×3 + 4), (×4 + 5) ... ...$
129 × 5 + 6 = 651

51. (3)

$x^2 – 13x – 7x + 91 = 0$
x = 7, 13
$y^2 – 19y – 13y + 247 = 0$
y = 13, 19
$x \le y$

52. (1)

$x^2 + 12x + 7x + 84 = 0$
X = –7, –12
$y^2 – 12y – 13y + 156 = 0$
y = 12, 13
$x < y$

53. (2)

$x^2 – 4 = 0$
x = 2, –2
$y^2 + 3y + 3y + 9 = 0$
y = –3, –3
$x > y$

54. (4)

$x^2 – 4x – 3x + 12 = 0$
x = 3, 4
$y^2 + 4y – 3y – 12 = 0$
y = 3, –4
$x \ge y$

55. (1)

$2x^2 + 7x + 4x + 14 = 0$
$x = –2, \dfrac{–7}{2}$
$4y^2 + 6y + 6y + 9 = 0$
$y = \dfrac{–3}{2}$
x < y

56. (5)

Total number of gold bangles sold by store R in June, July and August together = 35% of (87 + 105 + 130)
= 35% of 322 = $\dfrac{35}{100}$ × 322 = 112.7 ≈ 113

57. (3)

Reqd difference
= (121 + 145) – (89 + 133) = 266 – 222 = 44

58. (3)

Reqd average
= $\dfrac{129 + 87 + 165}{3} = \dfrac{381}{3} = 127$

59. (1)

Reqd ratio = $\dfrac{(S+T)August}{(S+T)September}$
= $\dfrac{114 + 129}{220 + 131} = \dfrac{243}{351} = \dfrac{9}{13}$ = 9 : 13

60. (4)

Reqd% increase = $\dfrac{177 - 120}{120} \times 100$
= $\dfrac{57}{120} \times 100 = \dfrac{57 \times 5}{6}$ = 47.5%

61. (3)

23 × 19 × 8 = 3496 ≈ 3500

62. (4)

101 ÷ 9 = 10.22 ≈ 11

63. (3)

81 – 22 = 59 ≈ 60

64. (2)

≈ 110 + 124 = 234 ≈ 233

65. (2)

≈ 1956 + 8.25 + 7.28 ≈ 1970

(66 – 70)
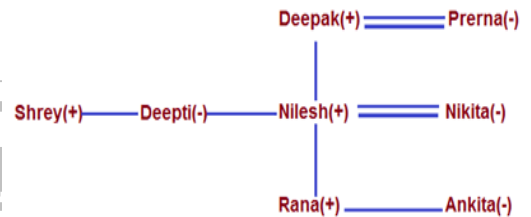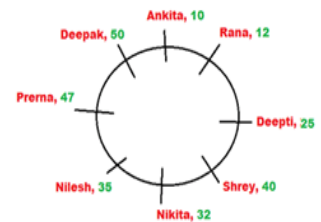
66. (2) Three
67. (2) Rana
68. (5) Daughter-in-law
69. (2) Shrey, Deepti
70. (1) Rana
71. (4) Physics and Hindi must be taught on immediate periods of the same day, so option (1) is ruled out. Either Chemistry or English must be the last subject, so options (2) and (3) are ruled out.
Sanskrit and Hindi cannot be taught on the same day, so option (5) is ruled out.
Option (4) is correct because it satisfies all the conditions.
72. (5) None of the given option is true for any day's routine.
73. (1) If Physics is taught in third period, then Hindi must be taught in fourth period. Either Chemistry or English should be taught in fifth period. So, Economics cannot be taught in second period because from II no period will be vacant for Biology.
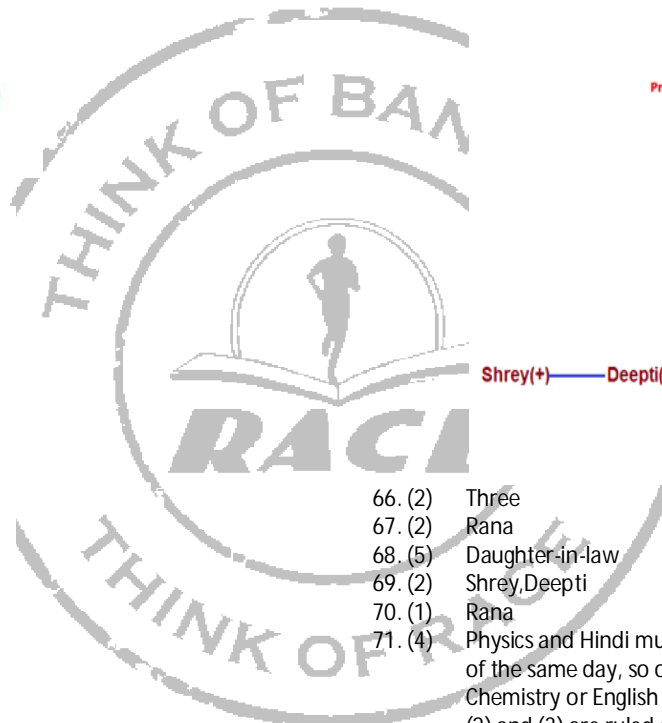**74. (2)** If Physics and History are taught on the first day, then Hindi must be taught on that day. Either Chemistry or English should be taught in last period. One place is vacant which can be filled only by Biology.
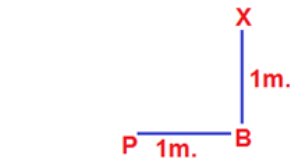**75. (2)** Option (2) is correct because four subjects cannot be repeated on the next day.

(76 – 80)

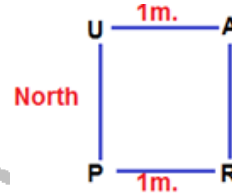| Grandparents	Sameer (Eng.) (Red)	Nivedita (Teacher) (Orange)
Parents	Nitish (CA) Green	Shilpi (White) Architect
Children	Aman (Principal) (Black)	Chhavi (Blue) Doctor

76. (4)   Sameer
77. (5)   None of these
78. (2)   Nivedita – Sameer and Nitish – Shilpi
79. (2)   Three
80. (5)   None of these
81. (4)

    I. J > R (False)   **II.** E ≤ J (False)

82. (4)

    I. U > E (False)   **II.** T = K (False)

83. (5)

    I. G ≤ I (True)   **II.** B ≥ S (True)

84. (2)

    I. A > I (False)   **II.** K ≥ A (True)

85. (2)

    I. C < S (False)   **II.** V > H (True)
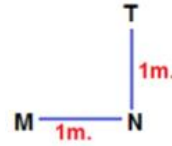
(86 – 90):

Floor	Friends	Shoes	Celebrity
8			
7	L	Puma	Modi
6	P	Reebok	Obama
5	O	Bata	Sonia
4			
3	N	Lee cooper	Nitish
2	K	Nike	Rahul
1	M	Adidas	Akhilesh

86. (1)   P lives immediately above the one who likes Bata
87. (5)   N, K
88. (3)   4, 8
89. (1)   P – Puma
90. (2)   Three

(91 – 95)

Person	Institute	specialization	Qualification
Shruti	F	Operation	B-Tech
Ananya	E	HR	BBM
Urvashi	D	IT	BCA
Apsara	B	General Management	B-com
Komal	A/C	Finance/Marketing	Bsc/CA
Geetika	A/C	Finance/Marketing	Bsc/CA

91. (4)   Can't be determined
92. (5)   Either A or C
93. (2)   Can't be determined
94. (5)   None of these
95. (5)   None of these

(96 – 97)
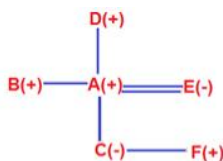
96. (4)   E
97. (4)   B is Brother-in-law of E
98. (4)   South-West

99. (2)   North-East

100. (3)   North