

RRB NTPC Previous Year Paper 13_(Solutions)**1. Ans.(d);****Sol.** Jack Dorsey, Noah Glass, Biz Stone, Evan Williams founded Twitter.**2. Ans.(a);****Sol.** A is true but R is false.**3. Ans.(d);****Sol.**

$$\text{CP } 5 \times 4 = 16$$

$$\text{SP } 4 \times 5 = 25$$

$$\therefore \text{Profit \%} = \frac{25-16}{16} \times 100$$

$$= \frac{9}{16} \times 100 = 56.25\%$$

4. Ans.(b);**Sol.** Madhya Pradesh**5. Ans.(b);****Sol.** Butter is made from milk.

Book is made from paper.

6. Ans.(b);**Sol.** The astronomical unit (AU) is a unit of length, roughly the distance from Earth to the Sun. However, that distance varies as Earth orbits the Sun, from a maximum (aphelion) to a minimum (perihelion) and back again once a year.**7. Ans.(b);****Sol.** Deposition is the process by which, in sub-freezing air, water vapor changes directly to ice without first becoming a liquid.**8. Ans.(a);****Sol.** Nagpur is the newly proposed AIIMS to be setup in Maharashtra.**9. Ans.(a);****Sol.** Bacillus Calmette–Guérin (BCG) vaccine is a vaccine primarily used against tuberculosis (TB).**10. Ans.(b);****Sol.** 5:35 :: 7:77

$$5^2 + 5(5 - 3) = 35 \text{ \& } 7^2 + 7(7 - 3) = 77$$

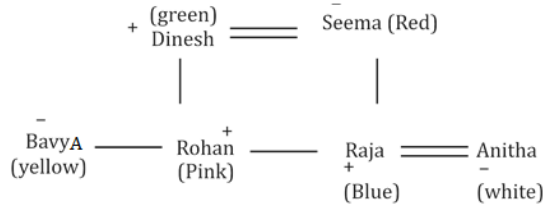
11. Ans.(a);

Sol. Both 1 and 2 are not correct.

12. Ans.(c);

Sol. Both A and R are true and R is the correct explanation of A.

13-15;



13. Ans.(c);

Sol. Dinesh - Seema

14. Ans.(a);

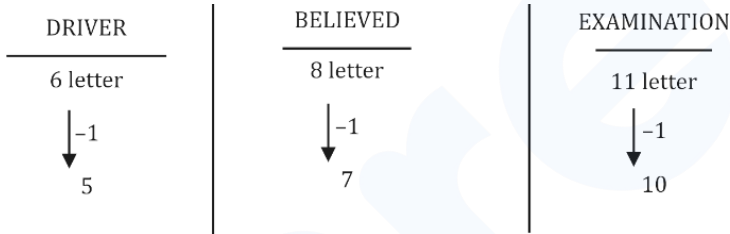
Sol. White

15. Ans.(b);

Sol. Rohan is the son of Seema.

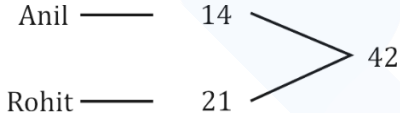
16. Ans.(b);

Sol.



17. Ans.(b);

Sol.



Amount of work done by both = $42 - (2 \times 3) = 36$

\therefore Total number of days it took to complete the whole work = $\frac{36}{5} + 3 = \frac{51}{5}$ days.

18. Ans.(b);

Sol.

- A. DISEASE
- B. HEALTH
- C. ILLNESS
- D. SICKNESS

Except B; rest three are in negative sense.

19. Ans.(c);

Sol. A:B = 3:4

B:C = 6:5

A:B:C = 18:24:20

A:B:C = 9:12:10

\therefore A: (A+C) = 9:19

20. Ans.(a);

Sol. $11x+7x=90$

$$18x=90$$

$$X=5$$

$$\therefore \text{Smaller angle} = 7 \times 5 = 35^\circ$$

21. Ans.(a);

Sol. TCP/IP stands for Transmission Control Protocol/Internet Protocol, which is a set of networking protocols that allows two or more computers to communicate.

22. Ans.(a);

Sol.

salt	water		
5×3	95×3	=	285
3×5	97×5	=	485

$\left. \begin{array}{l} 285 \\ 485 \end{array} \right\} 200$

Ans. $(15+285)=300\% = 30$ litre

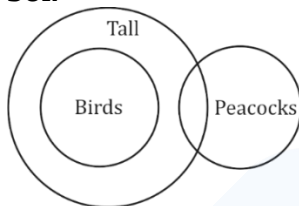
$$200\% = \frac{30}{300} \times 200 = 20 \text{ litre}$$

23. Ans.(d);

Sol. -1 series.

24. Ans.(d);

Sol.



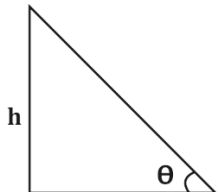
I. \times

II. \checkmark

Only conclusion II follows.

25. Ans.(c);

Sol.



$$\therefore \tan \theta = \frac{h}{\sqrt{3}h} = \frac{1}{\sqrt{3}}$$

$$\theta = \boxed{30^\circ}$$

26. Ans.(c);

Sol. It is the cultural capital of Tamil Nadu and the administrative headquarters of Madurai District, the third largest city in Tamil Nadu and 25th most populated city in India. Located on the banks of River Vaigai.

27. Ans.(a);

Sol. engineering is practiced by engineer and medicine is practiced by doctor.
 Doctor gives medicine.

28. Ans.(b);

Sol. Morarji Desai was awarded Bharat Ratna in 1991.

29. Ans.(c);

Sol. The human body contains many salts, of which sodium chloride (AKA common table salt) is the major one, making up around 0.4 per cent of the body's weight at a concentration pretty well equivalent to that in seawater.

30. Ans.(a);

Sol. The name of Temasek was changed to Singapura.

31. Ans.(b);

$$\frac{15}{1} = \frac{\text{---}}{\text{---}} = \frac{180^\circ}{12}$$

$$\therefore \text{largest angle} = 8 \times 12 = 96^\circ$$

32. Ans.(a);

Sol. Charon, also known as Pluto I, is the largest of the five known natural satellites of the dwarf planet Pluto.

33. Ans.(c);

Sol. +4 series

34. Ans.(b);

$$\begin{aligned} \text{Sol. } & (4211)^{102} \times (361)^{52} \\ & = (1)^{102} \times (1)^{52} \\ & = 1 \rightarrow \text{unit digit} \end{aligned}$$

35. Ans.(a);

Sol. LCM of 15, 18, 27 and 30 = 270

$$\therefore \frac{270}{60} = 4 \text{ min } 30 \text{ sec}$$

\therefore Time when they again change simultaneously

$$= 6:10:00 + 0:04:30$$

$$= 6:14:30 \text{ hours.}$$

36. Ans.(c);

Sol. Coefficient Variation = $\frac{\text{Standard deviation}}{\text{Mean}}$

$$CV\% = \frac{7}{21} \times 100 = 33.33\%$$

37. Ans.(b);

Sol. Michael Schumacher is a retired German racing driver who raced in Formula One for Jordan Grand Prix, Benetton and Ferrari, where he spent most of his career, as well as for Mercedes upon his return to the sport.

38. Ans.(c);

Sol. All are currency except coin.

39. Ans.(b);

Sol. Mercury is used in traditional thermometers which is highly toxic in nature.

40. Ans.(c);

Sol. Machu Picchu was built by the ancient Incas.

41. Ans.(c);

Sol. Aam Aadmi Party founded In 2 October 2012 .

42. Ans.(b);

Sol. A spoon which look bent is an example of Refraction of light.

43. Ans.(c);

Sol. Henri Becquerel that discovered radioactivity.

44. Ans.(b);

Sol. Its bill is longer than rest of its body.

45. Ans.(a);

Sol. Let actual speed= x km/hr

2 hours 20 minutes and 24 seconds= 8424 sec

$$\text{A.T.Q} \Rightarrow \frac{10}{9} \times x = \frac{39}{8424}$$

$$X = \frac{39}{8424} \times \frac{9}{10} \times 60 \times 60$$

$$X = 15 \text{ km/hr}$$

46. Ans.(c);

Sol. The doctrine of lapse was an annexation policy purportedly devised by Lord Dalhousie, who was the Governor General for the East India Company in India between 1848 and 1856.

47. Ans.(b);

Sol.

	Sonam	father
Present age	$x+8$	$3x+8$
After 8 years	$x+16$	$3x+16$

$$\text{A.T.Q} \Rightarrow x+16 = \frac{3x+16}{2}$$

$$\Rightarrow x=16$$

\therefore Present age of Sonam's father

$$= 3x+8 = 48+8 = 56 \text{ years}$$

48. Ans.(a);

Sol. Let M.P= 100

\therefore after discount of $15\% = 85$ (S.P)

$\therefore 120\% = 85$

$$100\% = \frac{85}{120} \times 100 \text{ (C.P)}$$

$$\therefore \text{ratio of } \frac{C.P}{M.P} = \frac{85/120}{100} \times 100 = \frac{17}{24}$$

49. Ans.(b);

Sol. Vienna rank 1st in the 18th Mercer Quality of Life study for the best city to live in.

50. Ans.(c);

Sol. One of these battles was fought between the British and the Khalsa army near the banks of River Jhelum in a region known as Chillianwala, which is around 25 kilometres from Sarai Alamgir. The battle of Chillianwala was fought on January 13, 1849 and continued for several days.

51. Ans.(a);

Sol. $28 \div 7 \times 8 - 6 + 4$

$$\Rightarrow 28 \div 7 \times 8 - 6 + 4$$

$$\Rightarrow 4 \times 8 - 6 + 4$$

$$\Rightarrow 32 - 6 + 4$$

$$\Rightarrow 36 - 6$$

$$\Rightarrow 30$$

52. Ans.(c);

Sol. $27 > 81 \div 9 < 6$

$$\Rightarrow 27 + 81 \div 9 - 6$$

$$\Rightarrow 27 + 9 - 6$$

$$\Rightarrow 36 - 6$$

$$\Rightarrow 30$$

53. Ans.(b);

Sol. $15 - 2 \div 900 + 90 \times 100$

$$\Rightarrow 15 \times 2 + 900 \div 90 - 100$$

$$\Rightarrow 30 + 10 - 100$$

$$\Rightarrow 40 - 100$$

$$\Rightarrow -60$$

54. Ans.(b);

Sol. Total distance = $60 \times (31 - 1) = 1800$ m

$$\therefore \text{Speed} = \frac{1800}{60} \times \frac{18}{5} = 108 \text{ km / hr.}$$

55. Ans.(a);

Sol. The Dilwara Jain temples in Mount Abu built by Vimal Shah in the year 1031 A.D. The interiors of all these temples are covered with delicate carvings.

56. Ans.(a);

Sol. Padukone became the first Indian to win the men's singles title at the prestigious All England Championships in 1980.

57. Ans.(b);

Sol. Asif Kapadia won the Academy award for documentary 'Amy' IN 2016

58. Ans.(a);

Sol. Income after deducting for taxes is called Disposable Income .

59. Ans.(b);

Sol. The Cray-1 was a supercomputer designed, manufactured and marketed by Cray Research. Announced in 1975, the first Cray-1 system was installed at Los Alamos National Laboratory in 1976. Eventually, over 100 Cray-1's were sold, making it one of the most successful supercomputers in history.

60. Ans.(b);

Sol. $a-4, a-2, a, a+2, a+4$

A.T.Q $\Rightarrow 5a = 40 \times 5$

$a=40$

\therefore Smallest Number = $40-4=36$

61. Ans.(b);

Sol. Supercomputer PARAM 8000 (made by the Centre for Development of Advanced Computing (C-DAC)) was launched on July 1, 1991 is considered India's first supercomputer. It was indigenously built in 1991 by C-DAC and was replicated and installed at ICAD Moscow in 1991 under Russian collaboration.

62. Ans.(c);

Sol. $P = \frac{P \times R \times 10}{100}$

$R=10\%$

$\therefore SI = \frac{p \times 10 \times 20}{100} = 2p$

\therefore Total amount = $2p+p=3p$

63. Ans.(d);

Sol. If $a+b+c = 0$

Then $a^3+b^3+c^3 = 3abc$

$\therefore (3ac-3ac) = 0$

64. Ans.(a);

Sol.

$49 : 81 :: 100 : 144$

$$\begin{array}{cc} 7^2 & 9^2 & 10^2 & 12^2 \\ \frown & & \frown & \\ +2 & & +2 & \end{array}$$

65. Ans.(c); Ans. $(x+y)^2 - xy = 0$

$x^2+y^2+2xy-xy=0$

$x^2+y^2+xy=0$

Now $(x^3-y^3) / (x-y)$

$= \frac{(x-y)(x^2+y^2+xy)}{(x-y)}$

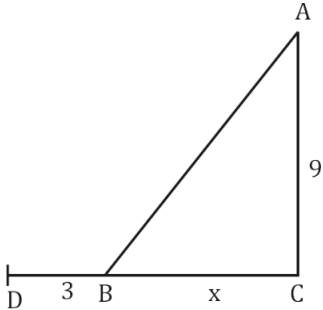
$= (x^2+y^2+xy) = 0$

66. Ans.(b);

Sol. Rest three are specialized.

67. Ans.(b);

Sol.



$$(3 + x) = AB = \sqrt{9^2 + x^2}$$

$$(3 + x)^2 = (9^2 + x^2)$$

$$9 + x^2 + 6x = 9^2 + x^2$$

$$9 + 6x = 81$$

$$6x = 72$$

$$x = 12$$

$$\therefore \text{Length of the ladder} = x + 3 = 15\text{m}$$

68. Ans.(b);

Sol. The name homeopathy, coined by its originator Samuel Hahnemann, is derived from the Greek words for 'similar suffering' referring to the 'like cures like' principle of healing.

69. Ans.(a);

$$\text{Sol. } \frac{410}{(480 + 410 + 390 + 380 + 440)} \times 100 = 19.5 \%$$

70. Ans.(c);

$$\text{Sol. } \frac{495 - 420}{420} \times 100 \text{ [For manufacture N]}$$

$$= \frac{75}{420} \times 100 = 17.85\%$$

71. Ans.(a);

$$\text{Sol. } L, 2009 = 520$$

72. Ans.(d);

$$\text{Sol. } 3 + 5 - 2 = 4$$

$$\Rightarrow 5 - 3 + 2 = 4$$

$$\Rightarrow 7 - 3 = 4$$

$$\Rightarrow 4 = 4$$

73. Ans.(b);

Sol. Chittorgarh was the capital of Sisodia clans of Rajputs of Mewar.

74. Ans.(d);

Sol. Breast Stroke, Crawl, Butterfly, Freestyle, Back Stroke are related to Swimming.

75. Ans.(a);

Sol.



\therefore efficiency of Atul = $8-5=3$

\therefore No of days taken by Atul = $\frac{40}{3}$ days.

76. Ans.(c);

Sol.

77. Ans.(b);

Sol. Dividend = $(x+2)(4x-5)+12$
 $=4x^2-5x+8x-10+12=4x^2+3x+2$

78. Ans.(c);

Sol. Karikala was a Tamil Chola king who ruled southern India. He is attributed to the conquest of the whole of India up to the Himalayas and the construction of the flood banks of the river Kaveri. He is recognised as the greatest of the Early Cholas.

79. Ans.(c);

Sol. The mass per unit volume of a substance is called density (density = mass/volume).

80. Ans.(c);

Sol. The New Development Bank (NDB), formerly referred to as the BRICS Development Bank, is a multilateral development bank established by the BRICS states (Brazil, Russia, India, China and South Africa).

81. Ans.(a);

Sol. M	A	C	H	I	N	E
13	1	3	8	9	14	5
+6	+6	+6	+6	+6	+6	+6
19	7	9	14	15	20	11

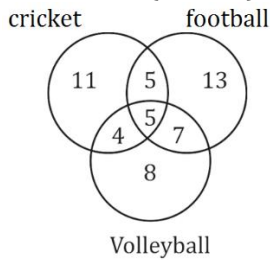
D	A	N	G	E	R
4	1	14	7	5	18
+6	+6	+6	+6	+6	+6
10	7	20	13	11	24

82. Ans.(c);

Sol. $S.I = \frac{800 \times 3 \times 9}{100 \times 2}$
 $\therefore \frac{800 \times 3 \times 9}{100 \times 2} = \frac{p \times 9 \times 8}{100}$
 $p=150$

83. Ans.(c);

Sol. Membership of lok sabha is not a qualification to become a vice president of india.

Solutions (84-86):**84. Ans.(d);**

Sol. Students play exactly two games = $5+4+7=16$

85. Ans.(c);

Sol. Number of students who do not play any one of the games
 $= 60 - (11+5+5+4+7+13+8) = 60-53 = 7$

86. Ans.(a);

Sol. Students play cricket only = 11

87. Ans.(b);

Sol. Moon is a satellite.

Earth is a planet.

88. Ans.(b);

Sol. Gas cylinder = x

\therefore stove = $(4500-x)$

$$\frac{125x}{100} + \frac{80}{100}(4500 - x) - 4500 = \frac{4}{100} \times 4500$$

$$\frac{9x}{20} + 3600 - 4500 = 180$$

$$X=2400$$

\therefore Price of gas cylinder = 2400

89. Ans.(c);


Sol. The name "Earth" is derived from both English and German words.

90. Ans.(b);

Sol. The best source of vitamin A is liver in animal products. Other good sources include sweet potatoes, carrots, dark leafy greens, eggs, tomatoes and fortified milk.

91. Ans.(c);

Sol.

$$\frac{35}{100} = \frac{7}{20} \frac{\text{increase in price}}{27}$$


$$\therefore \text{Reduction in consumption} = \frac{7}{27} \times 100$$

$$\approx 26\%$$

92. Ans.(a);

Sol. Mean of two new observation

$$= \frac{12 \times 14 + 10 \times 13}{2} = \frac{38}{2} = 19$$

93. Ans.(b);

Sol. Variance = (Standard deviation)²

$$= (6.5)^2$$

$$= 42.25$$

94. Ans.(c);

Sol. Burrow, Den, Roof, Nest

Except Roof; rest three are places where birds and animals live.

95. Ans.(b);

Sol. 10 natural numbers are there between 15 and 85 which are divisible by 7.

96. Ans.(b);

Sol. Frederick Winslow Taylor who developed Scientific Management.

97. Ans.(c);

Sol. The ABO blood types were discovered by Karl Landsteiner in 1901, for which he received the Nobel Prize in Physiology or Medicine in 1930.

98. Ans.(a);

$$\text{Sol. } \frac{5.168 \times 4453 \times 3.194}{67.999 \times 4224.017} = 0.2$$

99. Ans.(b);

$$\text{Sol. other number} = \frac{19 \times 665}{95} = 133$$

100. Ans.(d);

Sol. The Sundarbans is the largest mangrove forest in the world, located in the Ganges River delta in Bangladesh and West Bengal, India.