

## RRB NTPC Previous Year Paper 18\_(Solutions)

**S1. Ans.(d);**

**Sol.** In 1929, in order to court arrest, Shaheed Bhagat Singh and Batukeshwar Dutt threw political handouts and smoke bombs at the Delhi Central Legislative Assembly.

**S2. Ans.(c);**

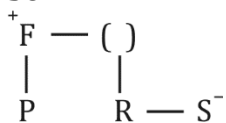
**Sol.** In the Union Budget 2015-16, two new IIMs will be opened in Andhra Pradesh, Jammu & Kashmir states.

**S3. Ans.(a);**

**Sol.** The Clean Development Mechanism is one of the Flexible Mechanisms defined in the Kyoto Protocol that provides for emissions reduction projects which generate Certified Emission Reduction units which may be traded in emissions trading schemes.

**S4. Ans.(b);**

**Sol.**



**S5. Ans.(a);**

**Sol.** Hyderabad is known as The City of Pearls, as once it was the only global centre for trade of large diamonds, emeralds and natural pearls. Many traditional and historical bazaars are located around the city.

**S6. Ans.(a);**

**Sol.**  $\frac{80x}{100} = 45$

$$x = 45 \times \frac{5}{4}$$

Now,  $\frac{120}{100}x = \frac{6}{5} \times 45 \times \frac{5}{4} = \text{Rs. } 67.5$

**S7. Ans.(c);**

**S8. Ans.(c);**

**S9. Ans.(d);**

**Sol.** Value after 5 years

$$= 300,000 \times \left(\frac{19}{20}\right)^5 = \text{Rs. } 232134.28$$

$$\text{Profit} = 17865.71 \Rightarrow \text{Profit \%} = 7.69\%$$

**S10. Ans.(b);**

**Sol.** Zeatin is produced in Roots and transported to Shoots in the xylem where it promotes cell division.

**S11. Ans.(a);**

**Sol.** Face Off is a hockey arcade game that had been released by Namco in 1988 only in Japan.

**S12. Ans.(c);**

**Sol.** Indira Gandhi was not a chief minister before she became the Prime Minister of India.

**S13. Ans.(b);**

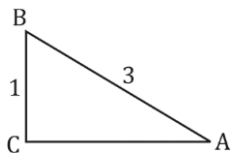
**Sol.** Switzerland "World Happiness Index", 2015 published by the Sustainable Development Solutions Network (SDSN).

**S14. Ans.(d);**

**Sol.** Sultan Mohammed Qutub Shah began the construction of Mecca Masjid in Hyderabad under the guidance of Choudhary Rangaiah and Daroga Mir Faizullah. The construction was completed by Mughal Emperor Aurangzeb in 1694 after 77 years.

**S15. Ans.(c);**

**Sol.**  $\angle C = 90^\circ$



$$\cos B = \frac{BC}{AB} = \frac{1}{3}$$

$$\text{So, } AC = \sqrt{8} = 2\sqrt{2}$$

$$\text{Now, } \sin A = \frac{BC}{AB} = \frac{1}{3}$$

**S16. Ans.(d);**

**Sol.** Internet is the largest network in terms of area

**S17. Ans.(a);**

**Sol.** Dolphins are the most intelligent mammals on earth.

**S18. Ans.(b);**

**Sol.** Option (b) is wrongly matched.

**S19. Ans.(c);**

$$\text{Sol. } x^2 = 25^2 - 15^2$$

$$= (25 + 15)(25 - 15)$$

$$= (40)(10)$$

$$x^2 = 400$$

$$x = 20$$

**S20. Ans.(a);**

**Sol.** 42nd amendment was the only amendment that attempted to change the Basic structure of Constitution. It attempted to reduce the power of the Supreme Court and High Courts to pronounce upon the constitutional validity of laws. It laid down the Fundamental Duties of Indian citizens to the nation. It is also called mini constitution.

**S21. Ans.(d);**

**Sol.** S → 8, I → 3, R → 4, E → 2

N → 7

**S22. Ans.(d);**

**Sol.** Rolling friction is much less than sliding friction.

**S23. Ans.(b);**

**Sol.** In 1676, the Danish astronomer Ole Roemer (1644–1710) became the first person to measure the speed of light. Until that time, scientists assumed that the speed of light was either too fast to measure or infinite.

**S24. Ans.(a);**

**Sol.**  $S = \frac{1800 \times 10 \times 5}{100} = \text{Rs. } 900$

**S25. Ans.(a);**

**Sol.** Indira Gandhi National Centre for the Arts, New Delhi is a premier government-funded arts organization in India.

**S26. Ans.(c);**

**Sol.** By checking options

Option (c) is the required number

**S27. Ans.(c);**

**Sol.** The Indian Independence League (1907) was founded by Taraknath Das in California, USA.

**S28. Ans.(b);**

**Sol.**  $2500 \times \frac{70}{100} \times \frac{x}{100} = 1400$

$\Rightarrow x = \frac{1400}{2500 \times 70} \times 10000 = 0.8$

∴ additional discount is 20%

**S29. Ans.(c);**

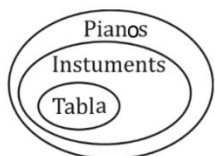
**Sol.** Pankaj Advani won his 13th World Championship title after clinching the World 6-Red Snooker 30 year-old defeated Yan Bingtao of China 6-2.

**S30. Ans.(a);**

**Sol.** Rain has a pH value of between 5.0 and 5.5, which is slightly acidic.

**S31. Ans.(b);**

**Sol.**



I. ✗

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**S32. Ans.(c);**

**Sol.** Malenchenko became the first person to marry in space, on 10 August 2003, when he married Ekaterina Dmitrieva, who was in Texas, while he was 240 miles over New Zealand, on the International Space Station.

**S33. Ans.(a);**

**Sol.** The Angara rocket family is a family of space-launch vehicles being developed by the Moscow-based Khronichev State Research and Production Space Center, Russia.

**S34. Ans.(a);**

**Sol.**  $x^2 + 8x + 12$   
 $= x^2 + 6x + 2x + 12$   
 $= (x + 6)(x + 2)$

**S35. Ans.(b);**

**Sol.**  $\frac{24 \times 14}{x} = 112$   
 $x = 3$

**S36. Ans.(d);**

**Sol.** The International Cricket Council (ICC) is the global governing body of cricket. It was founded as the Imperial Cricket Conference in 1909 by representatives from Australia, England and South Africa. It was renamed as the International Cricket Conference in 1965, and took up its current name in 1989.

**S37. Ans.(c);**

**Sol.** Average =  $\frac{76 + 87 + 83 + 78 + x}{5}$   
 $\frac{324+x}{5} = 76.2$   
 $x = 57$

**S38. Ans.(c);**

**Sol.** Let base be  $x$   
 $x^2 + (x + 4)^2 = (x + 8)^2$   
 On solving  $x = 12$   
 Hypotenuse =  $x + 8 = 20$  cm

**39. Ans.(b);**

**Sol.**  $33 \text{ SP} = 33 \text{ CP} + 11 \text{ CP}$   
 $\Rightarrow 33 \text{ SP} = 44 \text{ CP}$   
 $\Rightarrow \frac{\text{SP}}{\text{CP}} = \frac{4}{3}$   
 Profit % =  $\frac{1}{3} \times 100\% = 33\frac{1}{3}\%$

**S40. Ans.(b);**

**Sol.** Difference =  $31.36 - 24.23 = 7.13$

**S41. Ans.(a);**

**Sol.** Required value =  $\frac{31.36}{5.7} \times 2 = 11$  million

**S42. Ans.(d);**

**Sol.** Growth is highest in 1996

i.e.  $\frac{24.23 - 10.22}{10.22} \times 100\% = 137\%$

**S43. Ans.(a);**

**Sol.** Ratio of radius of incircle to circumcircle is always 1 : 2.

**S44. Ans.(c);**

**Sol.** STRING → TSIRGN  
 123456 → 214365  
 RANDOM → ARDNMO  
 123456 → 214365

**S45. Ans.(b);**

**Sol.** Let the number be  $x, x + 1, x + 2, x + 3, x + 4$

$$(x + 4)(x) - (x + 3)(x + 1) = ?$$

$$\Rightarrow x^2 + 4x - x^2 - 4x - 3$$

$$\Rightarrow -3$$

**S46. Ans.(b);**

**Sol.** Group of Monuments at Mahabalipuram one of the "UNESCO World Heritage Site" Founded by the Pallava Kings is in Kancheepuram district of Tamil Nadu.

**S47. Ans.(a);**

**Sol.**  $24^2 + 7^2 = 25^2$

So,  $? = 7$

**S48. Ans.(c);**

**Sol.** T → 5, O → 2, W → 1, E → 7, L → 9

**S49. Ans.(a);**

**Sol.**  $\sqrt{0.0144} = 0.12$

**S50. Ans.(b);**

**Sol.** Sum of square =  $\frac{n(n+1)(2n+1)}{6}$

Put  $n = 9$

Sum = 285

**S51. Ans.(d);**

**Sol.** The atmosphere of Venus is made up almost completely of carbon dioxide. It also includes small doses of nitrogen and clouds of sulfuric acid.

**S52. Ans.(a);**

**Sol.** Microscope was invented by Aaton Van Leewen Hock.

**S53. Ans.(d);**

**Sol.** Distance by policeman =  $40 \times 4 = 160$  km

Speed of thief =  $\frac{160}{4 + 4} = 20$  kmph

**S54. Ans.(a);**

**Sol.** 2 mm → 500 km

3.6 mm →  $\frac{3.6}{2} \times 500 = 900$  kms

**S55. Ans.(a);**

**Sol.** First is differ from rest of three.

**S56. Ans.(d);**

**Sol.** Electroconvulsive therapy (ECT) often referred to as shock treatment, is a psychiatric treatment in which seizures are electrically induced in patients to provide relief from psychiatric illnesses.

**S57. Ans.(d);**

**Sol.** LCM =  $3^{14}$

**S58. Ans.(d);**

**Sol.** + symbol is not available inn 4<sup>th</sup> image.

**S59. Ans.(c);**

**Sol.** The average normal body temperature is generally accepted as 98.6°F (37°C).

**S60. Ans.(a);**

**Sol.**  $x - \sqrt{x} = 20$

From options  $x = 25$

$\sqrt{x} = 5$

**S61. Ans.(a);**

**Sol.** Union Finance Minister Piyush Goyal in his interim budget 2019 has proposed that individuals with taxable income up to Rs 5 lakh will get full tax rebate under section 87A of the Income Tax Act.

**S62. Ans.(d);**

**Sol.** Control rods are used in nuclear reactors to control the fission rate of uranium and plutonium. They are composed of chemical elements such as boron, silver, indium and cadmium that are capable of absorbing many neutrons without themselves fissioning.

**S63. Ans.(b);**

**Sol.**  $3 \times 4 + 3 = 15$

$7 \times 5 + 3 = 38$

$3 \times 5 + 3 = 18$

**S64. Ans.(b);**

**Sol.** Speed upstream =  $x$

Speed downstream =  $2x$

Speed of boat =  $\frac{x+2x}{2} = \frac{3x}{2}$

Speed of stream =  $\frac{2x-x}{2} = \frac{x}{2}$

So,  $\frac{3}{2}x \rightarrow 4 \text{ km/hr}$

$\frac{x}{2} \rightarrow \frac{4}{3} \text{ km/hr}$  or 1.3 km/hr

**S65. Ans.(c);**

**Sol.**  $11^2 - 1^2 = 120$

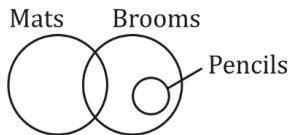
$7^2 - 2^2 = 45$

Similarly,

$5^2 - 3^2 = 16$

**S66. Ans.(b);**

**Sol.**



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**S67. Ans.(d);**

**Sol.**

**S68. Ans.(d);**

**Sol.** Smallest such prime no. = 11

Largest such prime no. = 97

Difference = 9288

**S69. Ans.(d);**

**Sol.** Total weight of students =  $30 \times 25 = 750$

Total weight including teacher =  $31 \times 27 = 837$

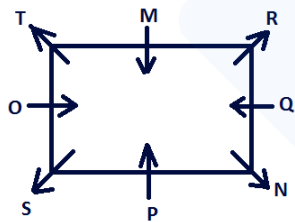
Weight of teacher =  $837 - 750 = 87$  kg.

**S70. Ans.(d);**

**Sol.** Great Red Spot on Jupiter. The Great Red Spot is a persistent anticyclonic storm on the planet Jupiter, 22 degrees south of the equator, which has lasted at least 340 years. The storm is large enough to be visible through Earth-based telescopes. It was probably first observed by Cassini, who described it around 1665.

**S71. Ans.(b);**

**Sol.**

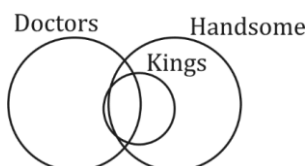


**S72. Ans.(d);**

**S73. Ans.(c);**

**S74. Ans.(d);**

**Sol.**



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**S75. Ans.(a);**

**Sol.** Winner of 2015 “United Nations Champions of the Earth” award in the category Policy Leadership is Sheikh Hasina.

**S76. Ans.(b);**

**Sol.**

$$\begin{array}{r}
 \text{Mu (5)} \\
 \text{Sa (4)} \\
 \text{Ma + Mu + Sa (2)}
 \end{array}
 \begin{array}{c}
 \diagdown \\
 \text{---} \\
 \diagup
 \end{array}
 20
 \begin{array}{c}
 \diagup \\
 \text{---} \\
 \diagdown
 \end{array}
 \begin{array}{l}
 4 \\
 5 \\
 10
 \end{array}$$

Efficiency of Manish =  $10 - (4 + 5) = 1$

Time to do work =  $\frac{20}{1} = 20$  hours

**S77. Ans.(a);**

**Sol.** KV Kamath, is the chief of the New Development Bank of BRICS countries, he has served as the Chairman of Infosys Limited, the second-largest Indian IT services company, and as the Non-Executive Chairman of ICICI Bank, India's largest private bank.

**S78. Ans.(c);**

**Sol.** Isoelectronic have the same numbers of electrons or the same electronic structure .

**S79. Ans.(a);**

**Sol.** Analog Computer system do not require any storage device.

**S80. Ans.(c);**

**Sol.** The process of fertilization involves a sperm fusing with an ovum. The sperm plasma, then fuses with the egg's plasma membrane, the sperm head disconnects from its flagellum and the egg travels down the Fallopian tube to reach the uterus.

**S81. Ans.(d);**

**Sol.**

$$\begin{array}{cccccc}
 \text{T} & \text{O} & \text{G} & \text{G} & \text{L} & \text{E} \\
 \swarrow & \searrow & \swarrow & \searrow & \swarrow & \searrow \\
 \text{O} & \text{T} & \text{G} & \text{G} & \text{E} & \text{L}
 \end{array}$$

$$\begin{array}{cccccc}
 \text{K} & \text{E} & \text{P} & \text{L} & \text{E} & \text{R} \\
 \swarrow & \searrow & \swarrow & \searrow & \swarrow & \searrow \\
 \text{E} & \text{K} & \text{L} & \text{P} & \text{R} & \text{E}
 \end{array}$$

**S82. Ans.(d);**

**Sol.**

**S83. Ans.(b);**

**Sol.** The monsoon of South Asia is among several geographically distributed global monsoons. South West Monsoon generates in Indian Ocean.

**S84. Ans.(c);**

**Sol.** Sodium is the most electropositive and Chlorine is most electronegative element of the third period of modern periodic table.



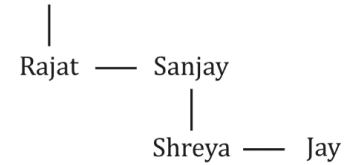
**S85. Ans.(c);**

**Sol.**  $\frac{22}{x} = \frac{x}{88} \Rightarrow x^2 = 22 \times 88$   
 $x = 44$

**S86. Ans.(a);**

**Sol.**

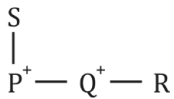
Manish



Rajat is uncle of Jay

**S87. Ans.(d);**

**Sol.**



**S88. Ans.(d);**

**Sol.** 7

**S89. Ans.(b);**

**Sol.** 9

**S90. Ans.(c);**

**Sol.** 1

**S91. Ans.(b);**

**Sol.** The Parliament of Pakistan is the federal and supreme legislative body of Pakistan. It is a bicameral federal legislature that consists of the Senate as the upper house and the National Assembly, as the lower house. The local name given to the parliament of Pakistan is Majlis-e-Shoora.

**S92. Ans.(c);**

**Sol.** Maharashtra is the state of India that has the largest number of Cotton textile mills. Maharashtra is a state in the western region of India. It is third-largest state of India by area and second-most populous state of India.

**S93. Ans.(b);**

**Sol.** For max. area, let it be a square

$$4a = 100$$

$$a = 25$$

$$a^2 = 625 \text{ m}^2$$

**S94. Ans.(c);**

**Sol.** Mainframe computers or mainframes are computers used primarily by large organizations for critical applications; bulk data processing, such as census, industry and consumer statistics, enterprise resource planning. It is also known as Big iron.

**S95. Ans.(c);**

**Sol.**  $\frac{90}{100}A = \frac{30}{100}B$

$$\Rightarrow \frac{A}{B} = \frac{1}{3}$$

$$\frac{B}{A} \times 100\% = \frac{3}{1} \times 100\% = 300\%$$

**S96. Ans.(d);****Sol.** 7/8**S97. Ans.(b);**

**Sol.**  $\sin 60 = \frac{\sqrt{3}}{2}$

**S98. Ans.(d);**

**Sol.** Somatostatin, also known as growth hormone-inhibiting hormone or by several other names, is a peptide hormone that regulates the endocrine system and affects neurotransmission and cell proliferation.

**S99. Ans.(b);**

**Sol.**  $A + B = 23$  units

$C = 28 - 23 = 5$  units

So, 28 units  $\rightarrow$  Rs. 784

5 units  $\rightarrow \frac{5}{28} \times 784$

$=$  Rs. 140

**S100. Ans.(a);****Sol.** Required value = 0.064