Quantitative Aptitude for RRB NTPC

Q1. A person has a chemical of Rs. 25 per litre. In what ratio should water be mixed with chemical, by selling the mixture at Rs. 20 per litre he may get profit of 25%
(a) 14 : 9
(b) 16 : 9
(c) 9 : 14
(d) 9 : 16

Q2. 7 kg of tea costing Rs. 280 per kg is mixed with 9 kg of tea costing Rs. 240 per kg. The average price per kg of the mixed tea is
(a) Rs. 255.80
(b) Rs. 257.50
(c) Rs. 267.20
(d) Rs. 267.50

Q3. In what ratio must a mixture of 30% alcohol strength be mixed with that of 50% alcohol strength so as to get a mixture of 45% alcohol strength
(a) 1 : 2
(b) 1 : 3
(c) 2 : 1
(d) 3 : 1

Q4. In a 729 litres mixture of milk and water, the ratio of milk to water is 7 : 2. To get a new mixture containing milk and water in the ratio 7 : 3, the amount of water to be added is
(a) 81 litres
(b) 71 litres
(c) 56 litres
(d) 50 litres

Q5. In an alloy, zinc and copper are in the ratio 1 : 2. In the second alloy, the same elements are in the ratio 2 : 3. If these two alloy be mixed to form a new alloy in which two elements are in the ratio 5 : 8, the ratio of these two alloys in the new alloys is
(a) 3 : 10
(b) 3 : 7
(c) 10 : 3
(d) 7 : 3

Q6. A jar contained a mixture of two liquids A and B in the ratio 4 : 1. When 10 litres of the mixture was taken out and 10 litres of liquid B was poured into the jar. This ratio became 2 : 3. The quantity of liquid A contained in the jar initially

(a) 4 litres
(b) 8 litres
(c) 16 litres
(d) 40 litres

Q7. In a mixture of 75 litres, the ratio of milk to water is 2 : 1. The amount of water to be further added to the mixture so as to make the ratio of the milk to water 1 : 2 will be

(a) 45 litres
(b) 60 litres
(c) 75 litres
(d) 40 litres

Q8. A and B are two alloys of gold and copper prepared by mixing metals in the ratio 5 : 3 and 5 : 11 respectively. Equal quantities of these alloys are melted to form a third alloy C. The ratio of gold and copper in the alloy C is

(a) 25 : 13
(b) 33 : 15
(c) 15 : 17
(d) 17 : 15

Q9. Two types of alloy posses gold and silver in the ratio of 7 : 22 and 21 : 37. In what ratio should these alloys be mixed so as to have a new alloy in which gold and silver would exist in the ratio 25 : 62?

(a) 13 : 8
(b) 8 : 13
(c) 13 : 12
(d) 6 : 9

Q10. If the simple interest on a certain sum of money for 15 months at 7½% per annum exceeds the simple interest on the same sum for 8 months at 12½% per annum by Rs. 32.50, then the sum of money (in Rs.) is:

(a) 312
(b) 312.50
(c) 3120
(d) 3120.50

Q11. 10 kg of wheat priced at Rs. 8 mixed with 15 kg of wheat priced at Rs. 10. What is average price of whole mixture?

(a) Rs. 9.5 kg
(b) Rs. 9.2 kg
(c) Rs. 7.5 kg
(d) Rs. 8.5 kg

Q12. 40 litres of a mixture of milk and water contains 10% of water, the water to be added, to make the water content 20% in the new mixture. Find how many litres water will be added?
(a) 6 litres
(b) 6.5 litres
(c) 5.5 litres
(d) 5 litres

Q13. A sugar solution of 3 litre contain 60% sugar. One litre of water is added to this solution. Then the percentage of sugar in the new solution is:
(a) 30
(b) 45
(c) 50
(d) 60

Q14. In what ratio must a grocer mix tea at Rs. 60 per kg, and Rs. 65 per kg, so that by selling the mixture at Rs. 68.20 per kg, he may gain 10%.
(a) 3 : 2
(b) 3 : 4
(c) 3 : 5
(d) 4 : 5

Q15. A barrel contains a mixture of wine and water in the ratio 3 : 1. How much fraction of the mixture must be drawn off and substituted by water so that the ratio of wine and water in the resultant mixture in the barrel becomes 1 : 1?
(a) 1/4
(b) 1/3
(c) 2/3
(d) 1

Q16. 12500 students appeared in an exam. 50% of the boys and 70% of the girls cleared the examination. If the total percent of students qualifying is 60%, how many girls appeared in the exam?
(a) 6500
(b) 6200
(c) 5500
(d) 6250

Q17. There are 81 litres pure milk in a container. One-third of milk is replaced by water in the container. Again one-third of mixture is extracted and equal amount of water is added. What is the ratio of milk to water in the new mixture?
(a) 1 : 2
(b) 1 : 1
(c) 2 : 1
(d) 4 : 5

Q18. In 80 litres mixture of milk and water the ratio of amount of milk to that of amount of water is 7 : 3. In order to make this ratio 2 : 1 how many litres of water should be added?

(a) 5

(b) 6

(c) 8

(d) 4

Q19. Vessels A and B contain mixture of milk and water in the ratio 4 : 5 and 5 : 1 respectively. In what ratio should quantities of mixture be taken from A and B to from a mixture in which milk to water is in the ratio 5 : 4?

(a) 2 : 5

(b) 4 : 3

(c) 5 : 2

(d) 2 : 3

Q20. The milk and water in a mixture are in the ratio 7 : 5. When 15 litres of water are added to it. The ratio of milk and water in the new mixture becomes 7 : 8. The total quantity of water in the new mixture is

(a) 35 litres

(b) 40 litres

(c) 60 litres

(d) 96 litres

Q21. The ratio of the quantities of sugar, in which sugar costing Rs. 20 per kg. and Rs. 15 per kg. should be mixed so that here will be neither loss nor gain on selling the mixed sugar at the rate of Rs. 16 per kg. is—

(a) 2 : 1

(b) 2 : 1

(c) 4 : 1

(d) 1 : 4

Q22. In one glass, milk and water are mixed in the ratio 3 : 5 and in another glass they are mixed in the ratio 6 : 1. In what ratio should the content of the two glasses be mixed together so that the new mixture contains milk and water in the ratio 1 : 1?

(a) 20 : 7

(b) 8 : 3

(c) 27 : 4

(d) 25 : 9

Q23. A mixture of 40 litres of milk and water contains 10% of water. How much water must be added to make the water 20% in the new mixture?
(a) 10 litres
(b) 7 litres
(c) 5 litres
(d) 3 litres

Q24. A mixture contains wine and water in the ratio 3 : 2 and another mixture contains them in the ratio 4 : 5. How many litres of the latter mixture must be mixed with 3 litres of the former mixture so that the resultant mixture may contain equal quantities of wine and water?
(a) 1(2/3) L
(b) 5(2/5) L
(c) 4(1/2) L
(d) 3(3/4) L

Q25. The simple interest on Rs. 7,300 from 11 May, 1987 to 10 September, 1987 (both days included) at 5% per annum is
(a) Rs. 123
(b) Rs. 103
(c) Rs. 200
(d) Rs. 223

Q26. A person borrows Rs. 5,000 for 2 years at 4% per annum simple interest. He immediately lends it to another person at 6¼% per annum simple interest for 2 years. His gain in this transaction is:
(a) Rs. 112.50
(b) Rs. 450
(c) Rs. 225
(d) Rs. 150

Q27. A certain sum of money becomes three times of itself in 20 years at simple interest. In how many years does it become double of itself at the same rate of simple interest?
(a) 8 years
(b) 10 years
(c) 12 years
(d) 14 years

Q28. A certain amount of money at r% compounded annually after two and three years becomes Rs. 1440 and Rs. 1728 respectively. r% is
(a) 5
(b) 10
(c) 15
(d) 20

Q29. The compound interest on a certain sum for two successive years are Rs. 225 and Rs. 238.50. The rate of interest per annum is:

(a) 7½%
(b) 5%
(c) 10%
(d) 6%

Q30. Sita deposited Rs. 5,000 at 10% simple interest for 2 years. How much more money will Sita have in her account at the end of two years. If it is compounded semiannually.

(a) Rs. 50
(b) Rs. 40
(c) Rs. 77.50
(d) Rs. 85.50