Quant Mega Quiz for SSC Tier-1

Q1. A person has some amount with him. 25% of it is stolen in a bus, 10% is lost through a hole in the pocket, 50% of remainder is spent on food. He then purchases a book worth Rs. 26 from the remainder. He walks back home because all his money is over. What was the initial amount?
(a) Rs. 160
(b) Rs. 1,230
(c) Rs. 90
(d) Rs. 80

Q2. A businessman's earning increases by 25% in one year but decreases by 4% in the next. After 5 years his total earnings would be Rs. 72,000. What is the present earning?
(a) Rs. 10,000
(b) Rs. 80,000
(c) Rs. 40,000
(d) Rs. 54,000

Q3. A shopkeeper has certain number of eggs of which 5% are found to be broken. He sells 93% of the remainder and still has 266 eggs left. How many eggs did he originally have?
(a) 3800
(b) 4000
(c) 4200
(d) None of these

Q4. In a group of 20 singers and 40 dancers, 20% of the singers are less than 25 years old and 40% of the entire group are under 25 years. What percentage of dancers are under 25 years?
(a) 20%
(b) 40%
(c) 50%
(d) 60%

Q5. A invested 125% as much money as B. C invested 80% as much money as B. The total of all the three is 61,000. How much did C invest?
(a) 25000
(b) 16000
(c) 20000
(d) 45000

Q6. In a company, there are 75% skilled workers and remaining ones are unskilled. 80% of skilled workers and 20% of unskilled workers are permanent. If number of temporary workers is 126, then what is the number of total workers?

(a) 480

(b) 510

(c) 360

(d) 377

Q7. There are four friends. The average score in unit test of the first three is 15 and that of the last three is 16. If the score of the last friend is 19, then first friend's score is what percent of average of the last three?

(a) $66\frac{2}{3}\%$

(b) 300%

(c) 100%

(d) None of these

Q8. When the price of an audio system was reduced by 20%, the sale increased by 80%. What was the net effect on the sale?

(a) 44% increase
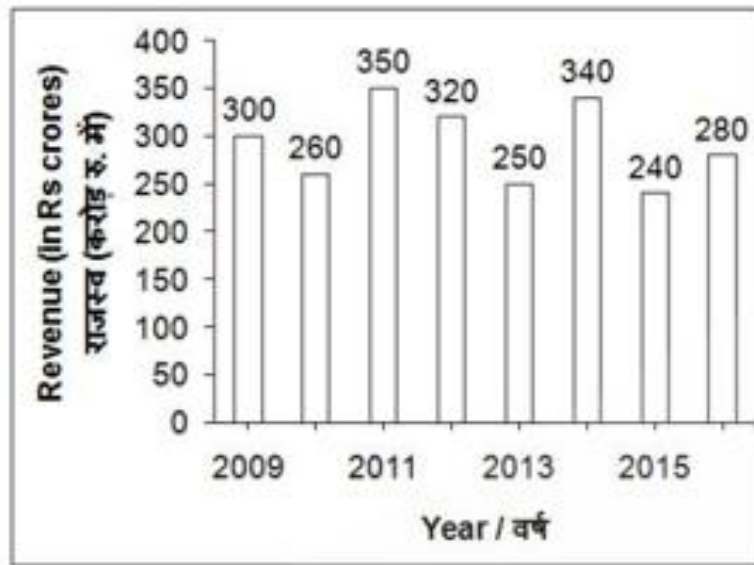
(b) 44% decrease

(c) 66% increase

(d) 60% increase

Q9. If two numbers are respectively 20% and 50% of a third number, what is the percentage of the first number to the second?

(a) 10

(b) 20

(c) 30

(d) 40

Q10. If the compound interest on a certain sum for 2 years at 4% p.a. is Rs. 102, the simple interest at the same rate of interest for two years would be:

(a) Rs. 200

(b) Rs. 50

(c) Rs. 150

(d) Rs. 100

Directions (11-14): The bar graph given below represents the revenue of a firm for 8 years. All the revenue figures have been shown in terms of Rs. Crores.

Q11. What is the total value of revenue of the firm (in crores Rs) in years 2010, 2011 and 2012?
(a) 910
(b) 930
(c) 950
(d) 1020

Q12. By what percentage has the revenue of the firm decreased in 2010 with respect to the last year?
(a) 15.38
(b) 14.44
(c) 11.11
(d) 13.33

Q13. In how many years, the revenue of the firm is less than the average revenue for these 8 years?
(a) 3
(b) 4
(c) 5
(d) 6

Q14. In which year the firm has shown maximum percentage increase in its revenue with respect to the previous year?
(a) 2011
(b) 2014
(c) 2016
(d) All are equal

Q15. If a man rows at the rate of 5 kmph in still water and his rate against the current is 3.5 kmph, then the man's rate along the current is:
(a) 4.25 kmph
(b) 6 kmph
(c) 6.5 kmph
(d) 8.5 kmph

Q16. Speed of a boat in standing water is 9 kmph and the speed of the stream is 1.5 kmph. A man rows to a place at a distance of 105 km and comes back to the starting point. The total time taken by him is:
(a) 16 hours
(b) 18 hours
(c) 20 hours
(d) 24 hours

Q17. The speed of a boat in still water is 15 km/hr and the rate of current is 3 km/hr. The distance travelled downstream in 12 minutes is:
(a) 1.2 km
(b) 1.8 km
(c) 2.4 km
(d) 3.6 km

Q18. A boat which sails at 10 km/h in still water starts chasing, from 10 km behind, another one which sails at 4 km/h in the upstream direction. After how long will it catch up if the stream is flowing at 2 km/h:
(a) 4 h
(b) 2.5 h
(c) 2 h
(d) 3.5 h

Q19. If a boat goes upstream at a speed of 24 km/hr and comes back the same distance at 40 km/hr. What is the average speed (in km/hr) for the total journey.
(a) 32
(b) 30
(c) 31
(d) 33

Q20. What is the length of the longest rod that can be placed in a room which is 3 metres long, 4 metres broad and 5 metres high?
(a) 5
(b) 12
(c) 5√2
(d) 6√2

Q21. If $\frac{\cos\alpha}{\sin\beta} = n$ and $\frac{\cos\alpha}{\cos\beta} = m$, then the value of $\cos^2\beta$ is?

(a) $\frac{m^2}{m^2+n^2}$

(b) $\frac{n^2}{m^2+n^2}$

(c) $\frac{1}{m^2+n^2}$

(d) 0

Q22. What is the simplified value of

$(2 + 1)(2^2 + 1)(2^4 + 1)(2^8 + 1)?$

(a) $2^8 - 1$

(b) $2^{16} - 1$

(c) $2^{32} - 1$

(d) $2^{64} - 1$

Q23. At Dehradun Public School $\frac{1}{9}$ students were absent in an exam and only $\frac{19}{24}$ of those who **appeared for the exam passed it. Now we know that 500 students failed in the exam. Total number of students registered for the exam:**

(a) 2000

(b) 2400

(c) 2700

(d) 3000

Q24. Avinash and Varsha fired 45 shots each. Total 66 bullets hit the target and the remaining bullets missed it. How many times does the Avinash hit the target if it is known that the number of hits per one miss shown by the Avinash is twice that of Varsha ?

(a) 30

(b) 36

(c) 40

(d) 35

Q25. An article having marked price Rs 1800 is sold for Rs 1476. What is the discount percentage?

(a) 14

(b) 15

(c) 16

(d) 18

Q26. The ratio of two numbers is 5 : 11. If both numbers are increased by 10, the ratio becomes 7 : 13. What is the sum of the two numbers?

(a) 80

(b) 32

(c) 48

(d) 160

Q27. The total surface area of a hemisphere is 462 cm². Find its diameter (in cm).

(a) 7

(b) 2 8

(c) 21

(d) 14

Q28. Selling price of an article is Rs 2397 and discount offered is 15%. What is the marked price (in Rs)?

(a) 2756.5

(b) 2856.6

(c) 2740

(d) 2820

Q29. If $3\sqrt{2} + \sqrt{18} + \sqrt{50} = 15.55$, then what is the value of $\sqrt{32} + \sqrt{72}$?

(a) 13.22

(b) 10.83

(c) 14.13

(d) 16.54

Q30. What is the value of $(\sin 60° - 2/\sqrt{3})$?

(a) $-1/2\sqrt{3}$

(b) $-1/2$

(c) $1/\sqrt{3}$

(d) $(1-2\sqrt{3})/2$