

BC - 401 / XBI - 401 / XBS - 401 / MBH - 405 / PBH - 404 / BBA - 406 / BOV - 405 / BCH - 407 / ESE - 401

Roll No.

End Semester (Even) Examination, June 2024

Course: BCA / B.Sc (IT) / B.Sc (CS) / B.Sc (H) Maths / B.Sc (H) Physics / BBA / B.Voc in Accounting and Finance / B.Com (H) / BA (H) English

Subject: Career Skills

Semester - 4th

Time: 3:00 Hours

MM: 100

1. This question paper has 100 questions. Attempt all questions.
2. Each question carries equal marks.
3. It is compulsory to write the SET on the OMR.
4. Use of calculator is not allowed.
5. There is no negative marking for incorrect response.

Q1. If $a : b$ is $3 : 4$ and $b : c$ is $5 : 6$, find the ratio $a : b : c$.

- a. 15:20:24 b. 15:18:24 c. 5:4:8 d. None of these

Q2. The income of A, B, and C are in the ratio 3:4:7. Their incomes are changed such that the new income of A is increased by 40%, 20% increased for B and 20% decreased for C. Find the new ratio of their new incomes.

- a. 7:8:9 b. 6:7:9 c. 12:40:23 d. 21:24:28

Q3. A man has 10p, 25p and 50p coins in the ratio of 5:2:1 respectively. If the total money is Rs.120, find the number of 25p coins with him?

- a. 140 b. 135 c. 123 d. 160

Q4. The ratio of the monthly income of A and B is 7:6 and the ratio of their expenditure is 11:9. If each saves Rs.800, then the expense of B is:

- a. 1,000 b. 2,400 c. 1,800 d. 2,200

Q5. The speeds of P, Q and R are in the ratio of 6:4:12, what is the ratio of time taken by each one of them for the same distance?

- a. 5:3:2 b. 3:2:1 c. 1:2:4 d. 2:3:1

Q6. The price of a bike is decreased by 20%. As a result of which the sale increased by 40%. What will be the effect on the total revenue of the shop?

- a. 12% Loss b. 12% Profit c. 20% Profit d. 20% Loss

Q7. The sum of present age of son and father is 100 yrs. 5 years ago, the ratio of their ages was 5:13. Find the present age of the son

- a. 15 b. 20 c. 25 d. 30

Q8. The length and breadth of a rectangle are increased by 20% and 30%. The area of the resulting rectangle exceeds the area of the original rectangle by:

- a. 50% b. 65% c. 56% d. 156%

Q9. In an examination, full mark is 500, A gets 25% more than B, B gets 40% more than C and C gets 60% more than D. If A got 420, find the marks scored by D.

- a. 160 b. 150 c. 180 d. 230

Q10. Find the digit at the unit's place $43^{1260} \times 38^{492}$.

- a. 2 b. 4 c. 8 d. 6

Q11. S is the smallest 3 digit number which gives remainders of 3 and 1 when divided by 6 and 7 respectively. Find the sum of the digits of S?

- a. 5 b. 6 c. 7 d. 8

SET - A

BC - 401 / XBI - 401 / XBS - 401 / MBH - 405 / PBH - 404 / BBA - 406 / BOV - 405 / BCH - 407 / ESE - 401

Q12. A certain sum of money becomes 2 times itself in 4 years at compound interest. In how many years will it become 8 times its original value?
 a. 16 b. 8 c. 12 d. 10

Q13. A person purchased a product from a shop for Rs. 3200, marked up the price by 15% and sold it to a customer at a discount of 5%. Find the overall percentage profit or loss?
 a. 10 profit b. 20 profit c. 5 loss d. 9.25 profit

Q14. If $a : b$ is $3 : 4$, find the ratio $(7a - 4b) : (3a + b)$.
 a. $16/15$ b. $5/13$ c. $-5/13$ d. $-16/15$

Q15. Two friends separated by a certain distance start walking towards each other. When they meet one of them has walked 20 meters more than the other. If the ratio of the distances that each has covered is $2 : 3$, find the distance that originally separated them.
 a. 20 b. 40 c. 60 d. 100

Q16. Divide 2220 in the ratio $1/4 : 1/5 : 1/6$.
 a. 900, 720, 600
 b. 600, 720, 900
 c. 592, 740, 888
 d. 888, 740, 592

Q17. Six years ago, the ratio of the ages of a husband and his wife was $6 : 5$. Six years hence, their ages will be in the ratio $10 : 9$. What is the ratio of their present ages?
 a. $7 : 6$ b. $8 : 7$ c. $9 : 10$ d. $18 : 15$

Q18. A starts a business with Rs.3,500 and after 5 months, B joins A. At the end of the year, the profit is divided between A and B in the ratio $2 : 3$. What amount did B invest in the business?
 a. 2800 b. 2700 c. 1800 d. 9000

Q19. Three partners shared the profit in a business in the ratio $5 : 7 : 8$. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments?
 a. $5 : 4 : 4$ b. $20 : 49 : 56$ c. $784 : 320 : 245$ d. $19 : 15 : 15$

Q20. y varies directly as the square of x . When $x = 4$, $y = 2$. What is the value of y when $x = 3/2$?
 a. $9/32$ b. $3/4$ c. $16/3$ d. $128/9$

Q21. The income of A and B is in the ratio $4:5$ and their expenditure is in the ratio $3:4$. If A saves $2/3$ of his income, what is the ratio of their savings?
 a. $24:25$ b. $25:24$ c. $24:29$ d. None of these

Q22. The ratio of boys and girls in a class is $25:4$. Had there 5 more students in the class, with 7 boys more, the ratio would have been $22:3$. What is the total number of students in the class?
 a. 155 b. 165 c. 290 d. 145

Q23. Rohit scored 50% of the maximum marks in an exam and yet failed by 12 marks. Had he scored 10% more than what he scored, he would have just got passing marks. Find the maximum marks of the exam.
 a. 240 b. 300 c. 250 d. None of these

Q24. When 1 kg of goods is kept on an electronic weighing scale, the scale shows a reading of 950 gms. Find the percentage error in the measurement.
 a. 11.11% b. 5.55% c. 5% d. 5.26%

Q25. To pass an exam of 250 marks, a candidate should obtain 40% marks. Raj scores 10% more than the passing marks. Find the percent of marks scored by Raj.
 a. 44% b. 50% c. 54% d. 60%

BC - 401 / XBI - 401 / XBS - 401 / MBH - 405 / PBH - 404 / BBA - 406 / BOV - 405 / BCH - 407 / ESE - 401

Q26. A milk man mixes water equal to 20 % of the milk he has. Water now accounts for what percentage of the mixture?
a. 16.66 % b. 20 % c. 25 % d. 22.22 %

Q27. If the length of a rectangle increases by 9.09%, by what percent should the breadth of the rectangle decrease to maintain the area of the rectangle?
a. 8.33% b. 9.09% c. 10% d. Depends on actual length and breadth.

Q28. In spite of an increase in prices by 20%, Gopal managed to let his expenditures increase by just 10%. Find the percentage change in the quantity consumed.
a. 10.2% b. 10% c. 9.09% d. 8.33%

Q29. While preparing the price tag, instead of increasing the prices by 12.5%, a shopkeeper absent mindedly decreased the prices by 12.5%. Find the percentage difference in the price on the tag compared to what should have been the price tag.
a. 25% b. 22.22% c. 6.25% d. 28.56%

Q30. Since the prices of mangoes increased by 6.66%, the wholesaler was able to purchase 18 mangoes less in his budget of Rs 864. What is the increased price of each mangoes?
a. Rs. 1.5 b. Rs. 2.5 c. Rs. 3 d. Rs. 3.2

Q31. If the price of the entrance ticket of a circus is decreased by 6.25%, by what percent should the number of viewers increase so as to earn as much as that earned before the decrease in price?
a. 5% b. 6.66% c. 6.25% d. Depends on actual price

Q32. Find 87.5% of 144 + 37.5% of 72.
a. 143 b. 133 c. 153 d. None of these

Q33. Mohan spends 40 % of his income on rent, 20 % on food, 10 % on entertainment and saves the rest. Find his savings as a percentage of his expenditure.
a. 30 % b. 33.33 % c. 37.5 % d. 42.85 %

Q34. Anand has won 80 % of the games he has played so far in the tournament. His goal is to win 90 % of all the games he has to play in the tournament. If he has already played 15 out of the total 50 games that he has to play, what is the maximum number of games he can afford to lose in the remaining games and yet meet his goal?
a. 0 b. 1 c. 2 d. 3

Q35. If the cost price is 25 % less than the selling price, find the profit percentage.
a. 25 % b. 27.27 % c. 20 % d. 33.33 %

Q36. An article sold at Rs. 423 results in a loss of 10 %. What should be the selling price to result in a profit of 10 %?
a. Rs. 443 b. Rs. 500 c. Rs. 507.6 d. Rs. 517

Q37. A manufacturer sells to the wholesaler at a profit of 20%. The wholesaler sells to the dealer at a profit of 12.5%. The dealer sells to a retailer at a profit of 10% and the retailer to the customer at a profit of 6.66%. If the cost of manufacturing the product for the manufacturer was Rs. 625, find the price paid by the customer.
a. 990 b. 1000 c. 900 d. 850

Q38. By selling 12 articles, Naveen managed to make a profit equal to the selling price of 3 articles. Find the profit or loss percentage.
a. 22.22% b. 33.33 % c. 20% d. 30%

Q39. A person buys 12 oranges in a rupee. How many should he sell in a rupee so that he earns a profit of 20%.
a. 14 b. 8 c. 9 d. 10

BC - 401 / XBI - 401 / XBS - 401 / MBH - 405 / PBH - 404 / BBA - 406 / BOV - 405 / BCH - 407 / ESE - 401

Q69. A motorboat went down the river for 14 km and then up the river for 9 km. It took a total of 5 hours for the entire journey. Find the speed of the river flow if the speed of the boat in still water is 5 kmph.

- a. 1 kmph b. 1.5 kmph c. 2 kmph d. 2.5 kmph

Q70. A boat takes a total of 6 hours to row 8 kms downstream and to return back to the starting point. If speed of the boat is 3 kmph, for how much time was the boat moving downstream?

- a. 1 hr b. 2 hr c. 3 hr d. 4 hr

Q71. A car travels the first one-third of a certain distance with a speed of 10 kmph, the next one-third of the distance with a speed of 20 kmph and the last one-third distance at 60 kmph. Find the average speed of the car for the whole journey.

- a. 18 kmph b. 20 kmph c. 25 kmph d. 30 kmph

Q72. A man covers equal distances at a speed of 30 kmph and 60 kmph. Find his average speed.

- a. 40kmph b. 45 kmph c. 50 kmph d. data inadequate

Q73. A tank, which usually takes 5 hours to be filled, takes 6 hours to fill because of a leak. Find the time in which the leak can empty the tank if it is filled and the inlet pipe is shut.

- a. 30hrs b. 27.5hrs c. 25hrs d. 22.5hrs

Q74. Three taps A, B and C can fill a tank individually in 10 hrs, 20 hrs and 25 hrs respectively. At first all the taps are opened simultaneously. After 2 hours tap C is closed and after further 2 hours tap B is also closed. Tap A is kept open till the tank gets completely filled. What fraction of the tank is filled by tap A?

- a. $\frac{2}{11}$ b. $\frac{9}{11}$ c. $\frac{18}{25}$ d. $\frac{7}{25}$

Q75. A and B can complete a work working individually in 60 days and 40 days respectively. Both start working simultaneously on the work simultaneously, but 4 days before the work is scheduled to get over, B leaves. Find the total number of days taken for the work to be completed.

- a. 24 b. 25 c. 26.4 d. 28.2

Q76. A is thrice as efficient as B and hence takes 12 days less to complete a work as compared to B. Find the number of days in which they can complete the work while working together?

- a. 3 b. 4.5 c. 6 d. 6.5

Q77. A and B can finish a work in 10 days when working together. B and C working together can finish the same work in 12 days and A and C working together can finish the work in 15 days. In how many days will the work get over if all three A, B and C work together?

- a. 5 b. 6 c. 8 d. 4

Q78. If 4 boys or 3 men can complete a piece of work in 10 days how many days will it take for 4 men and 3 boys to finish the work?

- a. 4.8 days b. 5 c. 6 d. None of these

Q79. 20 Men can do a piece of work in 25 days. How many men are needed to complete the same work in 50 days?

- a. 10 b. 15 c. 8 d. 12

Q80. A is twice as good as B, if together they can complete a piece of work in 4 days. In how many days can B alone complete the same work?

- a. 9 b. 12 c. 15 d. 18

Q81. Tap A can fill a tank in 12 minutes and another leakage B can empty the tank in 6 minutes. If the tank is already full and both A & B are opened. the tank will be

- a. Filled in 8 minutes b. Emptied in 8 minutes
c. Filled in 12 minutes d. Emptied in 12 minutes

BC - 401 / XBI - 401 / XBS - 401 / MBH - 405 / PBH - 404 / BBA - 406 / BOV - 405 / BCH - 407 / ESE - 401

Q82. A school arranged for a camp and made provision for food to be consumed by 150 people in 25 days. After 5 days, few more members joined because of which the food finished in a total time of 20 days. How many members joined the group in between the camp?

- a. 50 b. 25 c. 75 d. None of These

Q83. If 8 Men can do a work in 12 days and 12 Women can do the same work in 8 days, find the total time taken by 8 Men and 12 Women to do the work together?

- a. 5 days b. 4.8 days c. 2.4 days d. 7.2 days

Q84. If 6 Men and 14 women can do a job in 12 days, in how many days can 9 men and 21 Women do the same job?

- a. 10 days b. 8 days c. 15 days d. 9 days

Q85. If 15 Men working for 9 hours can finish a work in 32 days, in how many days can 27 Men working at 12 hours do a work which is 1.5 times as great as the first one?

- a. 15 days b. 24 days c. 27 days d. 20 days

Q86. A alone can do a work in 12 days, B in 16 days and C in 20 days. They work in such a manner that A and B work on the first day, B and C work on the 2nd day, A and C work on the 3rd day, A and B work on the 4th day and so on. In how many days will the work get finished?

- a. 4 and $17/27$ days b. 9 days
c. 8 and $1/8$ days d. 7 and $17/27$ days

Q87. A, B and C can do a work in 12, 15 and 20 days respectively. They undertook a project for Rs. 60,000. What will be the difference in the shares of A and C?

- a. 6000 b. 10000 c. 9000 d. 5000

Q88. The largest 4 digit number exactly divisible by 88 is:

- a. 9944 b. 9768 c. 9988 d. 8888

Q89. If the number $481*673$ is completely divisible by 9, then the smallest whole number in place of * will be:

- a. 2 b. 5 c. 6 d. 7

Q90. How many natural numbers are there between 23 and 100 which are exactly divisible by 6?

- a. 8 b. 11 c. 12 d. 13

Q91. What is the unit digit of $357^{59} \times 59^{357}$?

- a. 1 b. 3 c. 7 d. 5

Q92. If the unit digit of $(12345k)^{76}$ is 1, then the value of k can be:

- a. 1 b. 3 c. 7 d. All

Q93. Find the number of factors of $2^4 \times 3^4 \times 7^2$ that are even.

- a. 20 b. 25 c. 60 d. 50

Q94. Find the total number of factors of 2160.

- a. 26 b. 40 c. 48 d. 68

Q95. N on dividing 50, 75 and 125 leaves a remainder of 2, 3 and 5 respectively. What is the largest value that N can take?

- a. 24 b. 12 c. 18 d. 10

Q96. Find the HCF of $3/5$, $6/5$ and $18/7$ is

- a. $1/35$ b. $2/15$ c. $3/7$ d. $3/35$

Q97. How many distinct values can x assume if $28357x4$ is divisible by 8?

- a. 2 b. 3 c. 4 d. 5

SET – A

BC - 401 / XBI – 401 / XBS – 401 / MBH – 405 / PBH - 404 / BBA – 406 / BOV – 405 / BCH – 407 / ESE – 401

Q98. How many pairs of numbers exist such that HCF 6 and LCM is 216?

- a. 1 b. 2 c. 3 d. 0

Q99. A number when divided by 15, gives a remainder of 11. Find the remainder when twice the number is divided by 3?

- a. 0 b. 1 c. 2 d. Cannot be determined

Q100. Find the largest three-digit number that will give a remainder of 4 when divided by 5, 6, 8?

- a. 960 b. 996 c. 964 d. 984