99. P, Q and R can paint a house in 40, 60 and 120 days respectively. If P is assisted by Q and R on every fourth day, then find the number of days P requires to complete the painting work.

(a) 32

(b) 42

(c) 64

(d) 63

100. P is 30% more efficient than Q. P can complete a work in 23 days. If P and Q work together, how much time will it take to complete the same work ?

(a) 9

(b) 11

(c) 13

(d) 15

300

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Roll No. .....

LNC–416/BCH–407(A)

B. A. LL. B. (H)/B. B. A. LL. B. (H)/ B. COM. (H) (FOURTH SEMESTER) END SEMESTER EXAMINATION, June/July, 2022

CAREER SKILLS

Time : Three Hours

Maximum Marks : 100

Instructions for candidates :

(i) All questions are compulsory.

(ii) Each question carries 1 mark.

(iii) Use of calculator is not allowed.

(iv) There is no negative marking for incorrect responses.

(v) It is compulsory to mention the set on the OMR.

P. T. O.

7. A vendor sells 60 per cent of apples he had and throws away 15 per cent of the remainder. Next day he sells 50 per cent of the remainder and throws away the rest. What percent of his apples does the vendor throw ?

(a) 17

(b) 23

(c) 77

(d) None of these

8. The number of seats in an auditorium is increased by 25%. The price of a ticket is also increased by 12%. Then the increase in revenue collection will be :

(a) 38%

(b) 40%

(c) 49%

(d) 51%

9. If the diameter of a circle decreases by 10%, what will be the percentage change in the area of the circle ?

(a) 21% decrease

(b) 19% decrease

(c) 10% decrease

(d) 20% decrease

10. If the radius of the base and the height of a right circular cylinder increases by 20% and decreases by 10%, respectively, find the percentage change in the volume of the cylinder ?

(a) 8% increase

(b) 29.6% increase

(c) 44% increase

(d) None of these

11. The salary of a man increased by 20% in the month of August and 5% in the month of September. By what percentage is the salary in October more than that in July of the same year ?

(a) 25%

(b) 15%

(c) 26%

(d) 1%

12. If the height of a cylinder increases by 20% while the radius decreases by 10%, find the percentage change in the total surface area of the cylinder.

(a) 8% increase

(b) 11% decrease

(c) 10% increase

(d) Cannot be determined

13. When a number is divided by 12, it becomes one-fourth of a second number. By how much percent is the first number greater than the second number ?

(a) 150%

(b) 200%

(c) 300%

(d) 400%

14. If A's salary is 20% more than B's salary while C's salary is 20% less than B's salary. By what percentage is C's salary less than A's salary ?

(a) 25%

(b) 33.33%

(c) 20%

(d) 40%

15. A bag contains 50 P, 25 p and 10 p coins in the ratio 5 : 9 : 4, amounting to ₹ 206. Find the number of coins of each type respectively.

(a) 360, 160, 200

(b) 160, 360, 200

(c) 200, 360,160

(d) 200, 160, 300

16. The ratio of the number of boys and girls in a college is 7 : 8. If the percentage increase in the number of boys and girls be 20% and 10% respectively, what will be the new ratio ?

(a) 8 : 9

(b) 17 : 18

(c) 21 : 22

(d) None of the above

17. The salaries A, B, C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries ?

(a) 3 : 3 : 10

(b) 10 : 11 : 20

(c) 23 : 33 : 60

(d) None of the above

18. A, B and C play cricket. A's runs are to B's runs and B's r uns are to C's as 3 : 2. They get altogether 342 runs. How many runs did A make ?

(a) 162

(b) 108

(c) 72

(d) None of the above

19. ₹ 432 is divided amongst three workers A, B and C such that 8 times A's share is equal to 12 times B's share which is equal to 6 times C's share. How much did A get ?

(a) ₹ 192

(b) ₹ 133

(c) ₹ 144

(d) ₹ 128

20. Points A and B are both in the line segment PQ and on the same side of its midpoint. A divides PQ in the ratio 2 : 3, and B divides PQ in the ratio 3 : 4. If AB = 2, then the length of PQ is :

(a) 70

(b) 75

(c) 80

(d) 85

21. In a race of 200 m, A can beat B by 31 m and C by 18 m. In a race of 350 m, C will beat B by :

(a) 20.25 m

(b) 21.5 m

(c) 22.75 m

(d) 25 m

22. In a km race A can beat B by 100 m and B can beat C by 60 m. In the same race A can beat C by :

(a) 144 m

(b) 164 m

(c) 144 m

(d) 154 m

23. Narendra started a business, investing 30000. Six months later, Chandan joined him with 15000. If they make a profit of 10,000 at the end of the year, what should be the share of Narendra ?

(a) 6000

(b) 8000

(c) 7200

(d) 3600

24. A and B started a business jointly. A's investment was thrice the investment of B and the period of his investment was two times the period of investment of B. If B received ₹ 4,000 as profit, then their total profit is :

(a) 22000

(b) 28000

(c) 32000

(d) 36000

25. A rabbit takes three steps for every four steps of a deer, and four steps of the rabbit is equal to five steps of the deer. What is the ratio of their speeds ?

(a) 3 : 5

(b) 15 : 16

(c) 5 : 3

(d) 16 : 15

26. The ratio of the number of boys and girls in a class of 40 students is 5 : 3. Out of this, seven boys leave the class and an equal number of girls join. What is the new ratio of the number of boys to the number of girls in the class ?

(a) 9 : 11

(b) 9 : 8

(c) 6 : 5

(d) 25 : 22

27. If $a : b = 2 : 3$, $b : c = 4 : 5$ and $c : d = 3 : 2$, find the value of $a : d$:

(a) 4 : 5

(b) 5 : 4

(c) 2 : 5

(d) 5 : 3

28. A cat pursues a hare and takes three leaps for every five leaps of the hare. Also, four leaps of cat are equal to three leaps of the hare. Compare the speeds of the cat to the hare.

(a) 20 : 9

(b) 12 : 15

(c) 9 : 20

(d) 15 : 11

29. Driving at three-fourth of my normal speed I reach my destination 10 min late. What is the total time taken for the journey today ?

(a) 40 min.

(b) 30 min.

(c) 50 min.

(d) 20 min.

30. A man travelled for 6 h by scooter 2 h at 20 km/h, 2 h at 30 km/h and 2 h at 40 km/h. What is the average speed for the journey ?

(a) 30 km/h

(b) 27.69 km/h

(c) 33.33 km/h

(d) 32.5 km/h

31. A man on a motorcycle can see a person 50 m away walking towards him from the opposite side. After 5 s, the two people meet. If the speed of the motorcycle is 27 km/h, what is the speed at which the other man is walking ?

(a) 9 m/s

(b) 10 m/s

(c) 7.5 m/s

(d) 2.5 m/s

32. I travel from point A to point B, half the distance at 40 km/h and the other half at 60 km/h. What is my average speed for the journey ?

(a) 50 km/h

(b) 45 km/h

(c) 48 km/h

(d) 52 km/h

33. The speed of a boat in still water is 25 km/h and the speed of the stream is 4 km/h. If the boat travels a distance of 84 km while going upstream, find the distance covered by the boat in the same time while going downstream.

(a) 29 km

(b) 116 km

(c) 168 km

(d) 140 km

34. Starting from my office, I reach the house 20 min late if I walk at 3 k/m. Instead, if I walk at 4 k/m, I reach the house 15 min. early. How far is my house from my office ?

(a) 4 km

(b) 5 km

(c) 7 km

(d) 6 km

35. The speed of a bus during the second hour of its journey is twice that in the first hour. Also, its speed during the third hour is two-third the sum of its speeds in the first two hours. Had the bus travelled for three hours at the speed of the first hour, it would have travelled 120 km less. Find the average speed of the bus for the first three hours.

(a) 60 kmph

(b) 70 kmph

(c) 80 kmph

(d) 100 kmph

36. P and Q walk from A to B, a distance of 27 km at 5 km/h and 7 km/h respectively. Q reaches B and immediately turns back meeting P at T. What is the distance from A to T ?

(a) 25 km

(b) 22.5 km

(c) 24 km

(d) 20 km

37. A Tiger is running at 60 km/h crosses a deer travelling in opposite direction at 48 km/h. The Tiger has to travel for further 5 min. before it can find a gap in the median where he can take a U-turn and start chasing the deer. After how much time after the Tiger crosses the deer does he catch him ?

(a) 25 min

(b) 45 min

(c) 50 min

(d) 52 min

38. A passenger train covers the distance between stations X and Y, 50 minutes faster than a goods train. Find this distance if the average speed of the passenger train is 60 kmph and that of goods train is 20 kmph.

(a) 20 kms

(b) 25 krns

(c) 45 kms

(d) 40 kms

39. A train traveling at 100 kmph overtakes a motorbike traveling at 64 kmph in 40 seconds. What is the length of the train in meters ?

(a) 1777 meters

(b) 1822 meters

(c) 400 meters

(d) 800 meters

40. Two trains of equal length, running with the speeds of 60 and 40 kmph, take 50 seconds to cross each other while they are running in the same direction. What time will they take to cross each other if they are running in opposite directions ?

(a) 10 sec

(b) 9 sec

(c) 8 sec

(d) 7 sec

41. A train running at 36 km/hour passes another train completely in 12 sec, which is half of its length, running in the opposite direction at 54 km/hour. If it also passes a railway platform in 1.5 minutes, what is the length of the platform ?

(a) 700 m

(b) 860 m

(c) 900 m

(d) 1000 m

42. A train leaves Delhi at 7 am and reaches Agra at 11 am. Another train leaves Agra at 9 am and reaches Delhi at 2 pm. At what time will the two trains meet ?

(a) 9 : 30 am

(b) 9 : 56 am

(c) 10 : 06 am

(d) 10 : 09 am

43. The speed of a motor boat itself is 20 km/h and the rate of flow of the river is 4 km/h. Moving with the stream the boat went 120 km. What distance will the boat cover the same time going against the stream ?

(a) 80 km

(b) 180 km

(c) 60 km

(d) 100 km

44. A trader buys oranges at 7 for a rupee and sells them at 40% profit. How many oranges does he sell for a rupee ?

(a) 6

(b) 5

(c) 7

(d) 8

45. On selling mangoes at 36 for a rupee, a shopkeeper loses 10%. How many mangoes should he sell for a rupee in order to gain 8% ?

(a) 28

(b) 27

(c) 31

(d) 30

46. The profit earned by selling an article for ₹ 1,000 is double the loss incurred by selling it for ₹ 400. What is the CP of the article ?

(a) ₹ 600

(b) ₹ 500

(c) ₹ 750

(d) ₹ 650

47. If the CP of six items is equal to the SP of seven items, what is the profit or loss % ?

(a) Loss, 14.28%

(b) Loss, 9.09%

(c) Loss, 7.14%

(d) None of the above

48. The CP of 120 grams is same as the SP of 150 grams. Find the profit or loss %.

(a) 25% loss

(b) 20% loss

(c) 12.5% loss

(d) 22.5% Loss

49. I sold an item at a discount of 20%. If the % mark-up is 30%, find the overall profit %.

(a) 4%

(b) 10%

(c) 14%

(d) No profit, no loss

50. An item purchased for ₹ 350 is marked up at 30% of the cost price. If it is sold at a discount of 10%, find the profit % earned.

(a) 20% profit

(b) 30% profit

(c) 17% profit

(d) None of the above

51. A person bought 60 items from the market. 20% of the total items were rotten. The rest were sold at 30% profit each. Find the overall profit or loss %.

(a) 4% profit

(b) 10% profit

(c) 4% loss

(d) 12% profit

52. Goods are purchased for ₹ 450 and one-third is sold at a loss of 10%. At what profit per cent should the remainder be sold so as to gain 20% on the whole transaction ?

(a) 35%

(b) 52%

(c) 47%

(d) 37%

53. A shopkeeper sells at 20% mark-up and uses a weight of 800 g instead of 1 kg. Find the profit or loss %.

(a) 45%

(b) 50%

(c) 40%

(d) 35%

54. "Two items are sold for ₹ 1,200 each, one at 20% profit and the other at 25% loss. Find the profit or loss in rupee terms.

(a) ₹ 200 loss

(b) ₹ 300 profit

(c) ₹ 200 profit

(d) ₹ 100 profit

55. A milkman mixes water to 125 L of milk to make it 130 L and sells it at a mark-up of 10%. Find the profit or loss %.

(a) 14% profit

(b) 14.4% profit

(c) 10% profit

(d) 4% loss

56. A man sells an article at 7% loss. Had he sold it for ₹ 72 more he could have gained 5%. What is the cost price of the article ?

(a) ₹ 522

(b) ₹ 622

(c) ₹ 722

(d) ₹ 600

57. A man sold an article at 10% profit. Had it been sold for ₹ 50 more, he would have gained 15%. Cost Price of the article is :

(a) 1000

(b) 1100

(c) 1050

(d) 1200

58. A lent ₹ 600 to B for 2 years and ₹ 150 to C for 4 years and received all together from both ₹ 90 as simple interest. The total interest is :

(a) 4%

(b) 5%

(c) 10%

(d) 12%

59. A sum of ₹ 2,540 is lent out into two parts, one at 12% and another one at $12\frac{1}{2}\%$. If the total annual income is ₹ 311.60, the money lent at 12% is :

(a) ₹ 1,180

(b) ₹ 1,360

(c) ₹ 1,240

(d) ₹ 1,340

60. At a certain rate of simple interest, a certain sum doubles itself in 10 years. It will triple itself in :

(a) 15 years

(b) 20 years

(c) 30 years

(d) 12 years

61. A sum of money will be double itself in 6 years at simple interest with yearly rate of :

(a) 10%

(b) $16\frac{2}{3}\%$

(c) 8%

(d) 16%

62. A certain sum of money at simple interest amounts to ₹ 1,260 in 2 years and to ₹ 1,350 in 5 years. The rate % per annum is :

(a) 2.5%

(b) 3.75%

(c) 5%

(d) 7.5%

63. ₹ 800 amounts to ₹ 920 in 3 years at simple interest. If the interest rate is increased by 3%, it would amount to how much ?

(a) ₹ 1,056

(b) ₹ 1,112

(c) ₹ 1,182

(d) ₹ 992

64. If a certain sum of money becomes four times itself in eight years at SI, in how many years will it become 28 times itself ?

(a) 56 years

(b) 50 years

(c) 72 years

(d) 80 years

65. Find the difference between Compounded Interest and Simple Interest on ₹ 1,000 for 3 years at 10% p. a., if interest is compounded annually.

(a) 11

(b) 21

(c) 31

(d) 17

66. The difference in C. I. and S.I. for 2 years on a sum of money is ₹ 160. If the S.I. for 2 years be ₹ 2,880, the rate per cent is :

(a) 5 and 5/9%

(b) 12.5%

(c) 11 and 1/9%

(d) 9%

67. The difference between the compound interest and simple interest on a certain sum at 5% per annum for 2 years is ₹ 1.50. The sum is :

(a) ₹ 600

(b) ₹ 500

(c) ₹ 400

(d) ₹ 300

68. The difference between simple interest and the compound interest on ₹ 600 for 1 year at 10% per annum, reckoned half-yearly is :

(a) Nil

(b) ₹ 6.60

(c) ₹ 4.40

(d) ₹ 1.50

69. On a sum of money, the simple interest for 2 years is ₹ 320, while the compound interest is ₹ 340, the rate of interest being the same in both the cases. The rate of interest is :

(a) 15%

(b) 14.25%

(c) 12.5%

(d) 10.5%

70. ₹ 1,600 at 10% per annum compound interest compounded half-yearly amount to ₹ 1,944.81 in :

(a) 2 years

(b) 3 years

(c) $1\frac{1}{2}$ years

(d) $2\frac{1}{2}$ years

71. A certain sum of money becomes three times itself in seven years at C. I. In 21 years, the same amount will become how many times of its original value ?

(a) 9 times

(b) 10 times

(c) 27 times

(d) 15 times

72. Zero (0) is a :

(a) positive integer

(b) negative integer

(c) neither positive nor negative integer

(d) None of the above

73. Which of the following is not a prime number ?

(a) 137

(b) 181

(c) 173

(d) 183

74. Find the total number of factors of 72.

(a) 12

(b) 8

(c) 10

(d) 6

75. Two numbers are in the ratio 5 : 8 and their H. C. F. is 4. Find the numbers.

(a) 25 and 40

(b) 20 and 32

(c) 30 and 48

(d) 15 and 24

76. The sum of two numbers is 136 and their HCF is 17. The numbers of pairs of such numbers satisfying the given condition is :

(a) 2

(b) 4

(c) 6

(d) 8

77. The LCM of two numbers is 105 and their HCF is 7. If one of the numbers is 21, find the difference between the two numbers.

(a) 35

(b) 14

(c) 5

(d) 21

78. Find the value of |A–B| if 32A4873B is divisible by 72.

(a) 0

(b) 1

(c) 2

(d) 3

79. What is the value of M and N respectively if M39048458N is divisible by 8 and 11, where M and N are single digit integers ?

(a) 7, 8

(b) 8, 6

(c) 6, 4

(d) 5, 4

80. Find the remainder when $1201 \times 1203 \times 1205 \times 1207$ is divided by 6.

(a) 15

(b) 2

(c) 13

(d) 3

81. Find the remainder when 2^{31} is divided by 5.

(a) 4

(b) 5

(c) 3

(d) 7

82. How many zero's are there at the end of 100 !

(a) 24

(b) 97

(c) 73

(d) 44

83. Find the unit place of $47^{23} - 23^{47}$.

(a) 6

(b) 0

(c) 2

(d) 4

84. What is the unit place digit in $24^{13} \times 13^4 \times 21^{16}$?

(a) 4

(b) 3

(c) 7

(d) 5

85. The unit digit in $(2^{24} \times 3^{15} \times 4^{11})$ is Z :

(a) 4

(b) 6

(c) 8

(d) 9

86. When Abhinav and Bipul work alone, they can complete a piece of work in 25 days and 30 days respectively. On day 1, Bipul started the work and Abhinav joined B from day 3 onwards. After how many days will the work be completed ?

(a) 13

(b) 11

(c) 15

(d) 16

87. A can complete a project in 20 days and B can complete the same project in 30 days. If A and B start working on the project together and A quits 10 days before the project is completed, in how many days will the project be completed ?

(a) 18

(b) 27

(c) 26.67

(d) 16

88. There are 12 pipes attached to a tank. Some of them are fill pipes and some are drain pipes. Each of the fill pipes can fill the tank in 12 hours, while each of the drain pipes will take 24 hours to drain a full tank completely. If all the pipes are kept open when the tank was empty, it takes 2 hours for the tank to

overflow. How many of these pipes are drain pipes ?

(a) 6

(b) 11

(c) 4

(d) 7

89. A and B can do a work in 60 clays, B and C in 90 days and A and C in 120 days. In how many days can A do the work alone ?

(a) 72 days

(b) 100 days

(c) 150 days

(d) 144 days

90. A is able to do a work in 15 days and B in 20 days. In how many days will they be able to do the work together ?

(a) 35 days

(b) 20 days

(c) 17.5 days

(d) 8.57 days

91. A can do 3/4th of a work in 36 clays. Working at half his normal efficiency, In how many clays can A finish the work alone ?

(a) 8 days

(b) 96 days

(c) 72 days

(d) None of these

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

(a) 6000

(b) 10000

(c) 9000

(d) 5000

93. If 15 men or 25 women can do a job in 18 days working 8 h/day, then in how many days can 20 men and 40 women do the same job working 9 h per day ?

(a) 6 days

(b) 5 days

(c) 60/11 days

(d) 56/11 days

94. A is twice as good as B and together they can finish a work in 14 days. In how many days can A alone do it ?

(a) 11 days

(b) 28 days

(c) 21 days

(d) 42 days

95. Twenty women can do a work in 16 days. 16 men can complete the same work in 15 days. What is the ratio between the capacity a man and a woman ?

(a) 3 : 1

(b) 4 : 3

(c) 5 : 3

(d) Data insufficient

96. If 24 men and 40 women can do a work in 36 days, in how many days can 18 men and 30 women do the same work ?

(a) 27 days

(b) 36 days

(c) 48 days

(d) Cannot be determined

97. If 24 carpenters can make 12 stools in 8 days working for 6 h every day, how many stools can 12 carpenters make in 6 days working for 8 h every day ?

(a) 24

(b) 6

(c) 12

(d) 10

98. A and B can do a work in 72 days, B and C can do it in 120 days, A and C can do it in 90 days. In how many days all the three together can do the work ?

(a) 80 days

(b) 100 days

(c) 60 days

(d) 150 days