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**Roll No. ....**

**XBC-401/XBI-401/**

**MBH-405/PBH-404/**

**BBA-406/BOV-405/**

**BCH-407/ESE-401(A)**

**B. C. A. / B. SC. (IT) /B. SC. (H) MATHS. /**

**B. SC. (H) PHYSICS/ B. B. A. /**

**B. VOC. IN ACCOUNTING AND FINANCE /**

**B. COM. (H) /B. A. (H) ENGLISH**

**(FOURTH SEMESTER) MID SEMESTER**

**EXAMINATION, March, 2024**

**CAREER SKILLS**

**Time : 1½ Hours**

**Maximum Marks : 50**

**Note : (i) This question paper has 50 questions.**

**Attempt all questions. Each question  
carries equal marks.**

**P. T. O.**

(2) XBC-401/...../ESE-401(A)

- (ii) It is compulsory to write the SET on the OMR.
- (iii) Use of a calculator is not allowed.
- (iv) There is no negative marking.

**Set-A**

1. If the length of a rectangle increases by 20% while the breadth decreases by 20%, what is the percentage change in the area of the rectangle ?
  - (a) 4% increase
  - (b) No change
  - (c) Cannot be determined
  - (d) 4% decrease
2. If the price of sugar increases by 20%, by what percentage should the consumption be reduced so that overall expenditure is same as earlier ?
  - (a) 20%
  - (b) 16.66%
  - (c) None of these
  - (d) 25%

(3) XBC-401/...../ESE-401(A)

3. The number of seats in a theatre is increased by 20%. The price of a ticket is decreased by 10%. What is the percentage change in the total collection per show ?
  - (a) 8% decrease
  - (b) 10% decrease
  - (c) 8% increase
  - (d) 32% increase
4. In an exam, a candidate got 35% marks and failed by 12 marks. If he had got 48% marks instead, he would have got 14 marks more than the passing marks. Find the passing marks :
  - (a) 82
  - (b) 96
  - (c) None of these
  - (d) 200

**P. T. O.**

(4) XBC-401/...../ESE-401(A)

5. If A got 8.33% more votes than B in an election, by what percentage is B's votes less than that received by A ?
- (a) 8.33%  
(b) 7.71%  
(c) 10%  
(d) 9.09%
6. I sold an item at a discount of 20%. If the % mark up is 30%, find the overall profit % :
- (a) 10%  
(b) 4%  
(c) No profit, no loss  
(d) 14%
7. The weighing balance of a dealer shows 700 grams instead of 1 kg. Find the profit or loss % :
- (a) 14.28% profit  
(b) 30% loss  
(c) None of these  
(d) 42.84% profit

(5) XBC-401/...../ESE-401(A)

8. A shopkeeper sells at 20% mark up and uses a weight of 800 grams instead of 1 kg. Find the profit or loss % :
- (a) 50%  
(b) 45%  
(c) 35%  
(d) 40%
9. A man sold an item at a loss of 20%. As the cost price of the inputs increased by 30%, the selling price was increased by 30%. Find the new profit or loss % :
- (a) 56% profit  
(b) 4% profit  
(c) 10% profit  
(d) 20% loss
10. 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) 30% profit  
(b) 20% profit  
(c) Cannot be determined  
(d) 17% profit

P. T. O.

(6) XBC-401/...../ESE-401(A)

11. Two parties contest in an election where all the eligible people vote. If the winner gets 60% of the total votes and wins by 150 votes, find the number of votes polled in favour of losing party:-

(a) 750

(b) 300

(c) 500

(d) 450

12. A person travelled from A to B covering 23% of the total distance by bus, 50% of the remaining by train and the rest of the 231 km by taxi. Find the total distance between A and B :

(a) 462 km

(b) 574 km

(c) 856 km

(d) 231 km

(7) XBC-401/...../ESE-401(A)

13. The side of a square was decreased by  $y\%$  and hence the area was decreased by 11.64%. Find the value of  $y$  :

(a) 5.82

(b) 6

(c) 6.2

(d) 5.5

14. Two items are sold for ₹ 200 each, one at a profit of 15% and the other at a loss of 15%. What is the overall profit or loss % ?

(a) 5% loss

(b) 2.25% loss

(c) None of these

(d) 2.25% profit

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

(a) 20% loss

(b) 25% loss

(c) 22.5% loss

(d) 12.5% loss

P. T. O.



(8) XBC-401/...../ESE-401(A)

16. What is the remainder when 7492 is divided by 11 ?

- (a) 9
- (b) 10
- (c) 1
- (d) 7

17. If  $486a$  is completely divisible by 4, then what could be the possible value of  $a$  ?

- (a) 8
- (b) Cannot be determined
- (c) 0
- (d) 4

18. If  $7463c$  is completely divisible by 8, what is the value of  $c$  ?

- (a) 2
- (b) 3
- (c) 0
- (d) 1

(9) XBC-401/...../ESE-401(A)

19. Find the largest three-digit number which when divided by 6 and 5 gives respective remainders of 5 and 3 respectively :

- (a) 953
- (b) 980
- (c) 113
- (d) 983

20. Find the digit at the unit's place of the number :

$$-47^{278} * 38^{900} - 62^{177}$$

- (a) 0
- (b) 2
- (c) 4
- (d) 6

21. Find the total number of factors of 72 :

- (a) 8
- (b) 6
- (c) 12
- (d) 10

P. T. O.

(10) XBC-401/...../ESE-401(A)

22. Find the last digit of  $23^{729} * 78^{900}$  :

- (a) 0
- (b) 8
- (c) 7
- (d) 3

23. How many numbers from 1 to 400 are divisible by both 3 and 7 but not by 42 ?

- (a) 18
- (b) 9
- (c) 10
- (d) 20

24. How many numbers exist from 1 to 100 such that on division by both 3 and 8, the remainder is 2 in each case ?

- (a) 3
- (b) 6
- (c) 4
- (d) 5

(11) XBC-401/...../ESE-401(A)

25. A number when divided by 57 gives the remainder as 29. Find the remainder when the same number is divided by 19 :

- (a) 10
- (b) 12
- (c) 5
- (d) 0

26. A milkman mixes 20 L of water to 100 L of milk and sells the mixture at the CP of milk.

What is the profit % ?

- (a) 33.33%
- (b) 16.66%
- (c) 20%
- (d) 25%

27. Out of 60 things 30 were sold at 20% profit and the remaining at 20% loss. What is the overall profit or loss % ?

- (a) 3.33% loss
- (b) 6.66% loss
- (c) 3.33% profit
- (d) 20% profit

P. T. O.

( 12 ) XBC-401/...../ESE-401(A)

28. A boy purchased 80 oranges from the market. After reaching home, he found that 20 of them were rotten. The remaining oranges were sold at a profit of 50% each. Find the overall profit or loss % :

- (a) 12.5% loss
- (b) 12.5% profit
- (c) 10% loss
- (d) 37.5% profit

29. An item is sold for ₹.240 at a loss of 20%. At what price it needs to be sold in order to make a profit of 20% ?

- (a) ₹ 260
- (b) ₹ 360
- (c) ₹ 300
- (d) ₹ 288

( 13 ) XBC-401/...../ESE-401(A)

30. In front of a shop a sign said, "sale of 30% discount + 40% discount". What is the effective discount being offered ?

- (a) 35% discount
- (b) None of these
- (c) 58% discount
- (d) 70% discount

31. What is the remainder when  $257 * 733 * 917$  is divided by 3 ?

- (a) None of these
- (b) 2
- (c) 1
- (d) 0

32. Find the number of even factors of 3150 :

- (a) None of these
- (b) 36
- (c) 24
- (d) 18

P. T. O.

(14) XBC-401/...../ESE-401(A)

33. If A got 40% marks more than B in the exam, by what percentage is B's marks less than that of A ?

- (a) 40%
- (b) 9.09%
- (c) 7.14%
- (d) 28.56%

34. What is 20% of 30% of 300 ?

- (a) None of these
- (b) 18
- (c) 25
- (d) 20

35. By what percentage is 60% of 1750 more than 45% of the same number ?

- (a) None of these
- (b) 25%
- (c) 33.33%
- (d) 15%

(15) XBC-401/...../ESE-401(A)

36. Find the largest three-digit number which gives a remainder of 2 when divided by 3, 4 and 5 :

- (a) None of these
- (b) 992
- (c) 962
- (d) 902

37. A number when divided by 15 gives a remainder of 11. Find the remainder when twice the number is divided by 3 :

- (a) Cannot be determined
- (b) 2
- (c) 1
- (d) 0

38. Find the largest number that will divide 240, 282 and 303 to give the same remainder each case :

- (a) 14
- (b) 7
- (c) 21
- (d) 4

P. T. O.



(16) XBC-401/...../ESE-401(A)

39. What is the HCF of  $\frac{2}{3}$ ,  $\frac{4}{8}$  and  $\frac{4}{5}$  ?

- (a)  $\frac{2}{35}$
- (b)  $\frac{1}{60}$
- (c)  $\frac{1}{120}$
- (d)  $\frac{1}{30}$

40. A number when divided by 5 and 3 leaves remainders of 3 and 1, respectively. Find the smallest such 3 digit number :

- (a) None of these
- (b) 118
- (c) 103
- (d) 101

41. A merchant sells an item at a profit of 20%. If he had purchased it at 20% less and sold it for ₹ 50 more, his profit would have been 60%. Find the cost price of the item :

- (a) ₹ 675
- (b) ₹ 600
- (c) ₹ 575
- (d) ₹ 625

(17) XBC-401/...../ESE-401(A)

42. The MP of an item is ₹ 250. This item is sold at a discount of 20%. If the CP of the item is ₹ 175, find the profit :

- (a) ₹ 15
- (b) ₹ 25
- (c) ₹ 40
- (d) ₹ 50

43. Two things are sold for ₹ 1,800 each, the first one at a profit of 20% and the second at a loss of 10%. Find the overall profit or loss % :

- (a) 2.85% profit
- (b) 5.7% profit
- (c) 8% profit
- (d) 10% profit

44. Two items were sold for ₹ 4,800 each, one at a profit of  $q\%$  and the other at a loss of  $q\%$ . If the overall loss is 4%, find the difference in the cost price of the two items :

- (a) ₹ 2,000

P. T. O.

(18) XBC-401/...../ESE-401(A)

- (b) ₹ 2,840
- (c) ₹ 3,000
- (d) ₹ 3,840

45. How much water must be mixed with 96 L of milk to make a profit of 16.66% by selling the mixture at cost price ?

- (a) 20 L
- (b) 24 L
- (c) 18 L
- (d) 16 L

46. A spider climbed 62.5% of the height of the pole in 1 hour and in the next hour it covered 12.5% of the remaining height. If the height of the pole is 192 m, then the distance climbed in the second hour is :

- (a) 9 m
- (b) 8 m
- (c) 7 m
- (d) 5 m

(19) XBC-401/...../ESE-401(A)

47. A fruit seller purchased 610 mangoes from the market. If 50 mangoes were rotten and 25% of the remain got sold, find the number of mangoes left :

- (a) 525
- (b) 475
- (c) 420
- (d) 140

48. 1100 boys and 700 girls appear for a test. If 42% boys and 30% girls pass the test, find the percentage of students who failed in the test :

- (a) 20%
- (b) 64%
- (c) 62.66%
- (d) 28%

49. Mohan spends 40% of his income on rent, 20% on food, 10% on entertainment and saves the rest. If he saves a net amount of ₹ 4,380, find his income :

- (a) ₹ 29,200

P. T. O.

(b) ₹ 1,46,000

(c) ₹ 14,600

(d) ₹ 21,900

50. In an election, 20% of the eligible voters did not vote. Out of the remaining, 10% votes were declared invalid. If there were two contestants and the winner got 60% of the valid votes and won by 144 votes, find the number of eligible voters in the election :

(a) 900

(b) 720

(c) 500

(d) 1,000