

Practice Question Bank

Employability Skills (BCA-DS-313)

UNIT-1 & 2

NUMERICAL & QUANTITATIVE APTITUDE & LOGICAL REASONING

1. A train 120 meters long is running at a speed of 60 km/h. In what time will it pass a platform 180 meters long?
2. If a person earns ₹2500 and spends 80% of it, what is his saving? Also, find the percentage of savings.
3. The sum of the first 10 terms of an arithmetic progression is 145. If the first term is 5, find the common difference.
4. How many 3-digit numbers can be formed using the digits 1 to 9 such that repetition of digits is not allowed?
5. The HCF and LCM of two numbers are 12 and 180 respectively. If one of the numbers is 36, find the other.
6. Two pipes can fill a tank in 12 hours and 15 hours respectively. If both are opened together, how long will it take to fill the tank?
7. A car covers the first half of a journey at 60 km/h and the second half at 90 km/h. What is the average speed for the entire journey?
8. A can do a piece of work in 18 days and B in 24 days. How many days will they take together to complete the work?
9. A man buys an item for ₹1200 and sells it for ₹1500. Find his profit percentage.
10. Find the probability of drawing an ace from a well-shuffled deck of 52 cards.
11. If a train moves at 45 km/h for 2 hours and 30 minutes, how far will it travel?
12. The ratio of boys to girls in a class is 3:2. If there are 45 students in the class, how many are girls?
13. Find the LCM of 18, 24, and 36.
14. A sum of ₹5000 is invested at 10% per annum for 2 years. Find the simple interest.
15. If 5 men can complete a work in 12 days, how many days will 10 men take?
- 16)** A and B together can complete a work in 10 days. A alone can complete it in 15 days. In how many days can B alone complete it?
- 17)** A car travels 180 km at 60 km/h. How much time will it take to reach the destination?
- 18)** A, B, and C can do a work in 20, 30, and 60 days respectively. How long will it take to complete the work if all work together?

- 19)** A password consists of 3 letters followed by 2 digits. How many such passwords can be formed if:
- Repetition is allowed
 - Repetition is not allowed
- 20)** From a group of 6 men and 5 women, how many committees of 4 can be formed containing exactly 2 women?
- 21)** Find the total number of 4-digit numbers that can be formed using the digits 2, 3, 4, 5, 6 (no digit repeated).
- 22)** A dice is rolled twice. Find the probability that the sum is:
- 7
 - Even
 - Greater than 9
- 23)** A bag contains 3 white balls and 2 black balls. Two balls are drawn at random. What is the probability that both are white?
- 24)** A box contains 10 bulbs out of which 3 are defective. Two bulbs are selected at random. Find the probability that at least one is defective.
- 25)** Find the missing number in the letter series: AZ, BY, CX, DW, __
- 26)** Solve:
- If ALL MEN ARE MORTAL and RAM IS A MAN, then conclude using syllogism.
 - In a family of 6 members A, B, C, D, E, and F – A is the father of C. B is the mother of C. D is the brother of A. E is the sister of C. F is the daughter of B. Who is E's uncle?
- 27)** What day of the week was 1st January 2022 if 1st January 2021 was a Friday?
- 28)** Draw a truth table for:
- $(P \wedge Q) \vee R$
 - $(P \vee \neg Q) \wedge R$
- 29)** A cube has all its faces painted. It is then cut into 64 smaller cubes of equal size. How many small cubes will have:
- Exactly one face painted
 - Exactly two faces painted
 - No face painted
- 30)** Solve the logical sequence:
- 3, 9, 27, ?, 243
 - 1, 4, 9, 16, ?
- 32)** Define Set Theory and solve:
If $A = \{1, 2, 3, 4, 5\}$, $B = \{3, 4, 6, 7\}$, find $A \cup B$, $A \cap B$, and $A - B$.
- 33)** Solve:
If $2x + 3 = 5x - 6$, find x.
- 34)** If the speed of a boat in still water is 15 km/h and the speed of the stream is 3 km/h, find the time taken to go 36 km downstream and return upstream.
35. Find the next number in the series: 6, 11, 21, 36, 56, __?
2. In a certain code, "SMART" is written as "TRBNU". How will "BRAIN" be written in the same code?
36. If today is Tuesday, what day of the week will it be after 100 days?

37. Statements: All actors are dancers. All dancers are singers. Conclusions: (i) All actors are singers. (ii) All singers are actors. Which conclusion(s) follow?

38. Five friends are sitting in a row. R is to the left of S but right of T. Q is to the right of S. Who is sitting at the extreme right?

39. A cube has all its faces painted. It is cut into 64 smaller cubes. How many cubes will have only one face painted?

40. What is the angle between the hour and minute hands at 3:15?

41. In a family of 6 – A is the father of C. B is the mother of C. D is the brother of A. E is the sister of C. F is the daughter of B. Who is E's uncle?

42. Identify the odd one out: Circle, Square, Triangle, Cylinder.

43. What comes next in the sequence? 121, 144, 169, __

5. Choose the correct sentence:

- A) She don't like coffee.
- B) She doesn't likes coffee.
- C) She doesn't like coffee.
- D) She isn't likes coffee.