Critical Thinking & Reasoning Assessment (Selected Questions – Corrected Q19)

Q1. If all efficient systems are automated, and some automated systems are unreliable, which of the following must be true?

    A. All unreliable systems are efficient

    B. Some efficient systems may be unreliable

    C. No efficient systems are unreliable

    D. All automated systems are efficient

    Answer: B

Q2. All research proposals require approval. Some proposals that require approval are rejected. Which conclusion follows?

    A. All rejected proposals are research proposals

    B. Some research proposals are rejected

    C. No rejected proposals are research proposals

    Answer: B

Q3. If A implies B, and B implies not C, what can be said about A and C?

    A. A implies C

    B. A implies not C

    C. C implies A

    D. A and C are unrelated

    Answer: B

Q4. The first four statements below are true. Which conclusion must also be true?
1. No cats are reptiles.
2. All reptiles are cold-blooded.
3. Some mammals are cats.
4. All mammals are warm-blooded.

    A. Some warm-blooded animals are not reptiles

    B. Some cats are reptiles

    C. Some cold-blooded animals are mammals

    D. No warm-blooded animals are mammals

Answer: A

Q5. The company must increase prices, otherwise profits will fall. Which assumption underlies this argument?

    A. Price increases always reduce demand

    B. Costs are expected to rise or stay constant

    C. Profit margins are independent of costs

    D. The company has no competitors

Answer: B

Q6. Students who study in groups perform better, so studying alone is ineffective. The hidden assumption is:

    A. Group study causes better performance

    B. Solo studying has no benefits

    C. All successful students study in groups

    D. Studying alone cannot improve performance

Answer: A

Q8. Online education should replace classroom learning because it's cheaper. Which of the following most weakens this argument?

    A. Students prefer the flexibility of online learning

    B. Some subjects require hands-on practice

    C. Internet access is widespread

    D. Online learning platforms are growing quickly

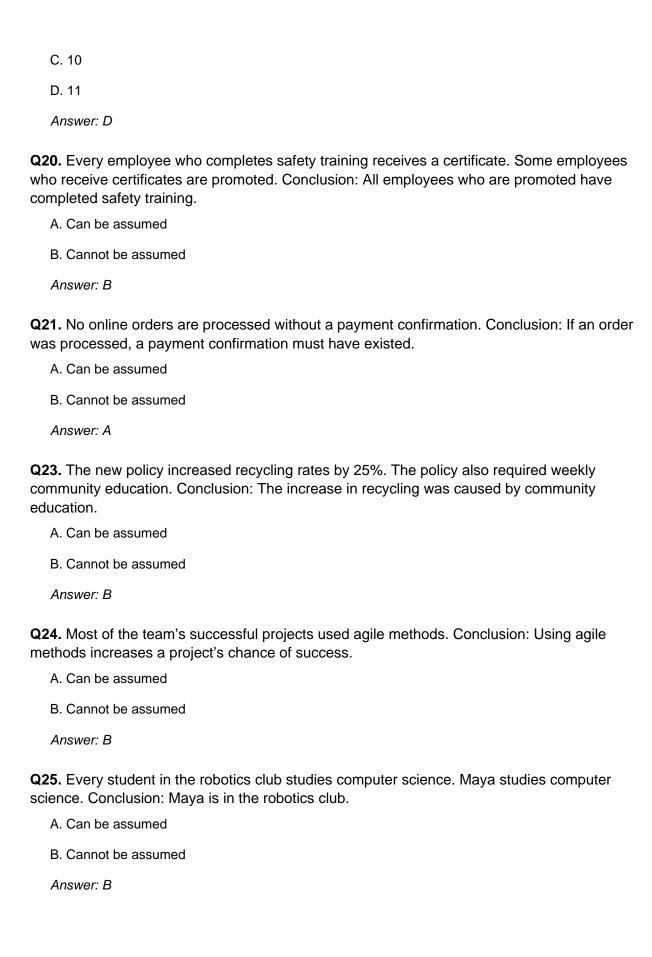*Answer: B*

Q9. The town should build more bike lanes to reduce air pollution. Which, if true, strengthens the argument most?

    A. Many residents already own bicycles

    B. Air pollution is mainly caused by car traffic

    C. Bike lanes would require cutting trees

    D. Residents dislike biking in bad weather

Answer: B

Q11. A company's revenue grew by 20% while expenses grew by 30%. What can be concluded about its profit?

  A. Profit must have increased

  B. Profit must have decreased

  C. Profit stayed constant

  D. Cannot be determined without actual values

  Answer: D

Q12. A survey shows 70% of customers rate service as "good," 20% as "average," and 10% as "poor." If the company wants at least 80% "good," what should they focus on?

  A. Converting "poor" customers first

  B. Converting "average" customers first

  C. Expanding total customers

  D. None of the above

  Answer: B

Q13. A study found that people who drink green tea live longer. Which conclusion is most logically valid?

  A. Green tea causes longer life

  B. Long-lived people prefer green tea

  C. There is a correlation between green tea drinking and longevity

  D. Green tea has no health effect

  Answer: C

Q14. A bat and a ball cost $1.10. The bat costs $1 more than the ball. How much does the ball cost?

  A. $0.05

  B. $0.10

  C. $1.00

  D. $0.15

  Answer: A

Q15. It takes 5 machines 5 minutes to make 5 widgets. How long would 100 machines take to make 100 widgets?

  A. 100 minutes

B. 5 minutes

C. 20 minutes

D. 10 minutes

Answer: B

Q16. In a lake, a patch of lily pads doubles in size every day. If it takes 48 days to cover the whole lake, how long to cover half?

A. 24 days

B. 47 days

C. 46 days

D. 40 days

Answer: B

Q17. Three employees — A, B, and C — are interviewed.
A: "B will be hired."
B: "I won't be hired."
C: "Either A or B will be hired."
Only one of them is telling the truth. Who gets hired?

A. A

B. B

C. C

Answer: C

Q18. A box contains 100 marbles: 60 red, 30 blue, and 10 green. Without replacement, what is the probability the first two drawn are both red?

A. 0.36

B. 0.59

C. 0.354

D. 0.6 × 0.6 = 0.36

Answer: C

Q19. A farmer has goats and chickens. There are 22 heads and 66 legs. How many goats are there?

A. 6

B. 8

C. 10

D. 11

Answer: D

Q20. Every employee who completes safety training receives a certificate. Some employees who receive certificates are promoted. Conclusion: All employees who are promoted have completed safety training.

A. Can be assumed

B. Cannot be assumed

Answer: B

Q21. No online orders are processed without a payment confirmation. Conclusion: If an order was processed, a payment confirmation must have existed.

A. Can be assumed

B. Cannot be assumed

Answer: A

Q23. The new policy increased recycling rates by 25%. The policy also required weekly community education. Conclusion: The increase in recycling was caused by community education.

A. Can be assumed

B. Cannot be assumed

Answer: B

Q24. Most of the team's successful projects used agile methods. Conclusion: Using agile methods increases a project's chance of success.

A. Can be assumed

B. Cannot be assumed

Answer: B

Q25. Every student in the robotics club studies computer science. Maya studies computer science. Conclusion: Maya is in the robotics club.

A. Can be assumed

B. Cannot be assumed

Answer: B

Q26. All the apartments facing the park have higher rents than those facing the street. Conclusion: Some street-facing apartments have lower rents than park-facing apartments.

    A. Can be assumed

    B. Cannot be assumed

    Answer: A

Q27. Whenever it rains, the outdoor market closes. Conclusion: If the outdoor market is closed, it must be raining.

    A. Can be assumed

    B. Cannot be assumed

    Answer: B