

Practice Problems

I. Multiple-choice

1. X is a sufficient condition for Y so long as...
 - a. It is absolutely impossible to have Y without X
 - b. Sometimes having Y is enough to get X
 - c. X absolutely guarantees Y
2. The statement, "If X, then Y", provides a _____ condition for X.
 - a. Necessary
 - b. Logical
 - c. Sufficient
 - d. Both necessary and sufficient
3. "If X is disposed to drink beer, then X wants beer." In the preceding quotation, it is *maintained* that being disposed to drink beer is...
 - a. A necessary condition for wanting beer
 - b. A sufficient condition for wanting beer
 - c. Both a necessary and sufficient condition for wanting beer
4. In basketball, getting the ball through the hoop (without breaking the rules, etc.) is a _____ condition for scoring a point.
 - a. Sufficient
 - b. Both necessary and sufficient
 - c. Necessary
5. The statement, "If X, then Y", provides a _____ condition for Y.
 - a. Both necessary and sufficient
 - b. Necessary
 - c. Deductive
 - d. Sufficient
6. A is a necessary for B so long as...
 - a. A absolutely guarantees B
 - b. B absolutely guarantees A
 - c. It is absolutely impossible to have B without A

- d. It is absolutely impossible to have A without B
7. The statement, “X if and only if Y”, provides...
- Only a necessary condition for X
 - Only a sufficient condition for X
 - A set of necessary and sufficient conditions for X
 - Only a sufficient condition for Y
 - Only a necessary condition for Y
8. The statement, “X =df Y”, provides...
- Only a necessary condition for X
 - A set of necessary and sufficient conditions for X
 - Only a necessary condition for Y
 - Only a sufficient condition for X
 - Only a sufficient condition for Y
9. Y is a sufficient condition for X so long as...
- It is absolutely impossible to have X without Y
 - Sometimes having X is enough to get Y
 - Y absolutely guarantees X
10. “Being able to pass the Turing Test is a **SUFFICIENT CONDITION** for a machine being intelligent.” Which of the following is the *most legitimate objection* to the previous quotation?
- Some intelligent machines might fail the Turing Test simply because they are able to perform complex mathematical calculations, thus definitively indicating to judges that they are machines rather than human beings
 - Some overqualified judges might fail an obviously intelligent entity, such as a human being or an extraterrestrial
 - A highly complex chat bot might trick the best and worst of judges, despite being a mere “bag of tricks,” totally lacking in intelligence
11. A job ad says, “Qualified candidates for this job must speak fluent Latin.” This means that...
- Speaking fluent Latin is a sufficient condition for getting the job
 - We can deduce that the job is either in classics or in theology

- c. Speaking fluent Latin is a necessary condition for getting the job
12. “X if and only if Y” is equivalent to...
- a. Y is a necessary condition for X
 - b. If X, then Y AND if Y, then X
 - c. Y is a sufficient condition for X
13. “If a machine passes the Turing Test, then it is intelligent.” In the preceding quotation, it is *maintained* that passing the Turing Test is...
- a. A necessary condition for being intelligent
 - b. A sufficient condition for being intelligent
 - c. Both a necessary and sufficient condition for being intelligent
14. A certain college requires all students to have physical education credits to graduate. For this college, physical education is...
- a. Both a necessary and sufficient condition for graduating
 - b. A sufficient condition for graduating
 - c. A necessary condition for graduating
 - d. Only recommended for graduating
15. “If X is in pain, then X is disposed to scream.” In the preceding quotation, it is *maintained* that being disposed to scream is...
- a. A necessary condition for being in pain
 - b. A sufficient condition for being in pain
 - c. Both a necessary and sufficient condition for being in pain
16. Being male is what sort of condition for being a bachelor?
- a. A necessary condition
 - b. A sufficient condition
 - c. Both a necessary and sufficient condition
17. “The mind can cause the body to move only if the mind is physical. So, if the mind is immaterial, it can’t cause the body to move.” In the preceding quotation, it is *maintained* that being physical is...
- a. A sufficient condition to cause the body to move
 - b. A necessary condition to cause the body to move
 - c. Both a necessary and sufficient condition to cause the body to move

18. Having some money is a _____ for having \$5.
- Necessary condition
 - Sufficient condition
 - Both a necessary and sufficient condition
19. X is a necessary condition for Y so long as...
- X absolutely guarantees Y.
 - Y absolutely guarantees X
 - It is absolutely impossible to have Y without X
 - It is absolutely impossible to have X without Y
20. "Being able to pass the Turing Test is a **NECESSARY CONDITION** for someone being intelligent." Which of the following is the *most legitimate objection* to the previous quotation?
- Certain machines can pass the Turing Test, despite clearly lacking intelligence
 - Some overqualified judges might fail an obviously intelligent entity, such as a human being or an extraterrestrial
 - Some gullible and indiscriminating judges might pass an obviously unintelligent machine
21. Having four sides is a _____ condition for a figure to be a square.
- Necessary
 - Sufficient
 - Both necessary and sufficient
22. "X is disposed to drink beer only if X wants beer." In the preceding quotation, it is *maintained* that wanting beer is...
- A necessary condition for being disposed to drink beer
 - A sufficient condition for being disposed to drink beer
 - Both a necessary and sufficient condition for being disposed to drink beer
23. "X is intelligent =df X can pass the Turing Test." In the preceding quotation, it is *maintained* that the possibility of passing the Turing Test is...
- A necessary condition for being intelligent
 - A sufficient condition for being intelligent
 - Both a necessary and sufficient condition for being intelligent

24. “Moral worth rests on an entity having the capacity for reason. Thus, animals lack moral worth since they can’t reason.” In the preceding quotation, it is *maintained* that a capacity for reason is...
- A sufficient condition for having moral worth
 - A necessary condition for having moral worth
 - Only evidence of having moral worth
 - Both a necessary and sufficient condition for having moral worth
25. The statement, “X only if Y”, provides a _____ condition for X.
- Necessary
 - Logical
 - Both necessary and sufficient
 - Sufficient
26. “A machine is intelligent if and only if it can pass the Turing Test.” In the preceding quotation, it is *maintained* that the possibility of passing the Turing Test is...
- A sufficient condition for being intelligent
 - Both a necessary and sufficient condition for being intelligent
 - A necessary condition for being intelligent
27. “A machine is intelligent only if it can pass the Turing Test.” In the preceding quotation, it is *maintained* that the possibility of passing the Turing Test is...
- A necessary condition for being intelligent
 - A sufficient condition for being intelligent
 - Both a necessary and sufficient condition for being intelligent
28. “It is a **NECESSARY CONDITION** on Sam wanting a beer that: IF Sam were offered a beer, THEN Sam would drink it.” Which of the following is the *most legitimate objection* to the previous quotation?
- It is possible that Sam is overly sensitive to peer pressure. So, even though he hates drinking beer, he always accepts offers to drink, because he believes people won’t like him otherwise.
 - It is possible that Sam has an acetaldehyde dehydrogenase deficiency. So, shortly after drinking beer, he experiences terrible side-effects. Sam loves the initial buzz, and he enjoys the taste, but he avoids beer due to the side-effects.

- c. It is possible that Sam lives in a geographical location where non-alcoholic beverages are prone to contamination with a deadly bacterium. So, even though he hates beer and would prefer to drink water, he drinks beer as the only viable alternative.
29. Taking each exam is a _____ condition for getting an A in the course.
- a. Necessary
 - b. Sufficient
 - c. Sufficient

II. True or false

30. In chess, checkmating your opponent is a sufficient condition for winning the game.
- a. True
 - b. False
31. Taking each exam is a sufficient condition for getting an A in the course.
- a. True
 - b. False
32. Getting 100%'s on each exam, attending every class, and paying attention in class is a sufficient condition for getting an A in the course.
- a. True
 - b. False
33. Getting 100%'s on each exam, attending every class, and paying attention in class is a necessary condition for getting an A in the course.
- a. True
 - b. False
34. In basketball, getting the ball through the hoop (without breaking the rules, etc.) is a sufficient condition for scoring a point.
- a. True
 - b. False
35. Taking each exam is a necessary condition for getting an A in the course.
- a. True
 - b. False

Continue to the following page for answers...

Answers

1. c
2. a
3. b
4. a
5. d
6. c
7. c
8. b
9. c
10. c
11. c
12. b
13. b
14. c
15. a
16. a
17. b
18. a
19. c
20. b
21. a
22. a
23. c
24. b
25. a
26. b
27. a
28. b
29. a
30. True
31. False
32. True
33. False
34. True
35. True