21. EXERCISES FOR CHAPTER 6

Directions for every exercise set:

Using the suggested abbreviations (the capitalized words), translate each of the following into the language of predicate logic.

EXERCISE SET A

1. JAY is a FRESHMAN.
2. KAY is a JUNIOR.
3. JAY and KAY are STUDENTS.
4. JAY is TALLER than KAY.
5. JAY is not SMARTER than KAY.
6. FRAN INTRODUCED JAY to KAY.
7. FRAN did not INTRODUCE KAY to JAY.
8. CHRIS is TALLER than both JAY and KAY.
9. JAY and KAY are MARRIED (to each other).
10. Both JAY and KAY are MARRIED.
11. Neither JAY nor KAY is MARRIED.
12. Although JAY and KAY are both MARRIED, they are not MARRIED to each other.
13. Neither JAY nor KAY is a SENIOR.
14. If JAY is a SOPHOMORE, then so is KAY.
15. If JAY and KAY LIVE off-campus, then neither of them is a FRESHMAN.
16. If neither JAY nor KAY is a FRESHMAN, then both of them are SOPHOMORES.
17. JAY and KAY are not ROOMMATES unless they are MARRIED.
18. JAY or KAY is the STUDENT body president, but not both.
19. JAY and KAY are FRIENDS if and only if they are ROOMMATES.
20. JAY and KAY are neither SIBLINGS nor COUSINS.
EXERCISE SET B

21. Everything is POSSIBLE.
22. Something is POSSIBLE.
23. Nothing is POSSIBLE.
24. Something is not POSSIBLE.
25. Not everything is POSSIBLE.
26. Everything is imPOSSIBLE.
27. Nothing is imPOSSIBLE.
28. Something is imPOSSIBLE.
29. Not everything is imPOSSIBLE.
30. Not a thing can be CHANGED.
31. Everyone is PERFECT.
32. Someone is PERFECT.
33. No one is PERFECT.
34. Someone is not PERFECT.
35. Not everyone is PERFECT.
36. Everyone is imPERFECT.
37. No one is imPERFECT.
38. Someone is imPERFECT.
39. Not everyone is imPERFECT.
40. Not a single person CAME.
EXERCISE SET C

41. Every STUDENT is HAPPY.
42. Some STUDENT is HAPPY.
43. No STUDENT is HAPPY.
44. Some STUDENT is not HAPPY.
45. Not every STUDENT is HAPPY.
46. Every STUDENT is unHAPPY.
47. Some STUDENT is unHAPPY.
48. No STUDENT is unHAPPY.
49. Not every STUDENT is unHAPPY.
50. Not a single STUDENT is HAPPY.
51. All SNAKES HIBERNATE.
52. Some SENATORS are HONEST.
53. No SCOUNDRELS are HONEST.
54. Some SENATORS are not HONEST.
55. Not all SNAKES are HARMFUL.
56. All SKUNKS are unHAPPY.
57. Some SENATORS are unHAPPY.
58. No SCOUNDRELS are unHAPPY.
59. Not all SNAKES are unHAPPY.
60. Not a single SCOUNDREL is HONEST.
EXERCISE SET D

61. No one who is HONEST is a POLITICIAN.
62. No one who isn't COORDINATED is an ATHLETE.
63. Anyone who is ATHLETIC is WELL-ADJUSTED.
64. Everyone who is SENSITIVE is HEALTHY.
65. At least one ATHLETE is not BOORISH.
66. There is at least one POLITICIAN who is HONEST.
67. Everyone who isn't VACATIONING is WORKING.
68. Everything is either MATERIAL or SPIRITUAL.
69. Nothing is both MATERIAL and SPIRITUAL.
70. At least one thing is neither MATERIAL nor SPIRITUAL.