1. List the premise(s) and the conclusion of the following argument. (2 points)
Paris’s Eiffel Tower is three times as tall as the one in Las Vegas. The Luxor Pyramid in Las Vegas is half the size of the original in Egypt. The Statue of Liberty in New York is four times the one in Las Vegas. Thus, every object in Las Vegas is smaller than in other cities.

Premise(s):

Conclusion:

2. Determine whether or not the following passages contain arguments. Circle the correct answer. (3 points)

I like candy. I love chocolate. I hate peanuts. Also, I don’t care for circus acts or water sports. It’s OK if you like that stuff.

A) Argument
B) Not an argument

More damage was done last year from hurricanes than earthquakes. There was $100 million damage last year from hurricanes. There was $70 million damage last year from earthquakes.

A) Argument
B) Not an argument

He was born in 1988. According to the Chinese zodiac, that happens to be a Dragon year. Thus, he is sure to have good fortune all his life.

A) Argument
B) Not an argument
3. For each of the following passages, decide whether it is an argument or an explanation. Circle the correct answer. (3 points)

   Computers will soon be in every home because the cost of buying one goes down dramatically every year.

   A) Argument
   B) Explanation

   There has been an overall decrease in violence among humans worldwide throughout recorded history. Biologically speaking, this is because the genetic characteristics for nonviolence have been selected over time by the species.

   A) Argument
   B) Explanation

   She just ate two plates of nachos. She always gets sick after she eats so much. I bet she gets sick later tonight.

   A) Argument
   B) Explanation

4. Determine whether the following arguments are best classified as being deductive or inductive. (3 points)

   Some horses can run a mile in under 3 minutes. Rachel has a horse. Therefore, Rachel’s horse can run a mile in under 3 minutes.

   A) Deductive
   B) Inductive

   The exam’s range of A scores is 90–100. I got an A on the exam. Therefore, perhaps I got a 95 on the exam.

   A) Deductive
   B) Inductive

   All elements with atomic weights less than 50 are unstable. Q is an element with an atomic weight of 49. Therefore, Q is unstable.

   A) Deductive
   B) Inductive
5. Consider the following argument:

No squares are triangles. No squares are circles. Therefore, no triangles are circles.

Which one of the following correctly expresses the form of the argument? (Let S = squares, T = triangles, and C = circles.) (1 point)

A) No T are S.
   No S are C.
   No T are C.

B) No S are T.
   No C are S.
   No T are C.

C) No S are T.
   No S are C.
   No T are C.

D) No S are T.
   No S are C.
   No C are T.

Which one of the following substitutions shows the argument invalid? (1 point)

A) S = cats, T = motorcycles, and C = mammals.
B) S = motorcycles, T = cats, and C = mammals.
C) S = cats, T = mammals, and C = motorcycles.
D) S = mammals, T = cats, and C = motorcycles.

6. Consider the following argument:

No cars are trucks. All trucks are heavy equipment. Therefore, no cars are heavy equipment.

Which one of the following correctly expresses the form of the argument? (Let C = cars, T = trucks, and H = heavy equipment.) (1 point)

A) No T are C.
   All T are H.
   No C are H.

B) No C are T.
   All H are T.
   No C are H.

C) No C are T.
   All T are H.
   No C are H.
D) No C are T.
   All T are H.
   No H are C.

Which one of the following substitutions shows the argument invalid? (1 point)

A) C = cats, T = dogs, and H = mammals.
B) C = dogs, T = mammals, and H = cats.
C) C = mammals, T = cats, and H = dogs.
D) C = cats, T = mammals, and H = dogs.

7. Determine whether the following inductive arguments are strong or weak. Circle the correct answer. (3 points)

A few horses can run a mile in under two minutes. Evie has a horse. Therefore, Evie’s horse probably can run a mile in under two minutes.

A) Strong
B) Weak

Mary was born on August 12. Mike was born in August, too. There is little chance that Mike was born on the same day as Mary.

A) Strong
B) Weak

Only a few people will be chosen for the Olympic team. Of those receiving phone calls from the selection committee, 20% will make the team. John received a phone call from the selection committee. John will probably make the Olympic team.

A) Strong
B) Weak

8. For each of the following enthymemes, provide the missing premise that will create a valid argument. (2 points)

I am eating a banana; therefore, I am eating a fruit.

Missing premise:

My uncle is an atheist; so, my uncle is a humanist.

Missing premise:
9. Identify the informal fallacy in each of the following passages. Circle the correct answer. (4 points)

You had better get straight A's this year. If you don't, I will take away your car and your allowance.

A) Appeal to pity  
B) Appeal to fear or force  
C) Appeal to ignorance  
D) Missing the point  
E) Appeal to an unqualified authority

She's the best candidate for the job. I know this, because no one is better qualified.

A) Begging the question  
B) Complex question  
C) Biased sample  
D) Division  
E) Hasty generalization

You tell me to wear a seat belt when I drive because it will protect me in case I get in an accident. I never saw you wear one when you drive, so why should I wear one?

A) Ad hominem abusive  
B) Tu quoque  
C) Appeal to the people  
D) Appeal to pity  
E) Appeal to fear or force

My biology teacher said that bungee jumping is perfectly safe. Therefore, it must be true.

A) Appeal to pity  
B) Appeal to fear or force  
C) Appeal to ignorance  
D) Missing the point  
E) Appeal to an unqualified authority
10. Analyze each categorical proposition by doing the following: (a) Identify the **subject term**; (b) identify the **predicate term**; (c) identify the type of categorical proposition (A-proposition; E-proposition; I-proposition; O-proposition).

**Categorical proposition 1:** *All senior citizens are people eligible for discount coffee.* (3 points)

a) The subject term is:

b) The predicate term is:

c) The type of categorical proposition is an:

**Categorical proposition 2:** *Some high schools are excellent places to learn.* (3 points)

a) The subject term is:

b) The predicate term is:

c) The type of categorical proposition is an:

11. Draw a Venn diagram that represents each of the following categorical propositions. Make sure to label all parts of the diagram.

*Some motorcycles are loud vehicles.* (Let S = motorcycles, P = loud vehicles) (1 point)

Venn Diagram:

*No reality shows are entertaining programs.* (Let S = reality shows, P = entertaining programs) (1 point)

Venn Diagram:

*All astrological signs are superstitions.* (Let S = astrological signs, P = superstitions) (1 point)

Venn Diagram:
Some best-selling novels are tragedies. (Let $S = \text{best-selling novels}, P = \text{tragedies}$) (1 point)

Venn Diagram:

12. What is the converse of the proposition “Some fashion experts are frauds”? (1 point)

   Answer:

13. What is the obverse of the proposition “Some fashion experts are frauds”? (1 point)

   Answer:

14. What is the contrapositive of the proposition “Some fashion experts are frauds”? (1 point)

   Answer:

15. Use your understanding of the Traditional Square of Opposition to determine the correct answer.

   What is the contradictory of “No herbal tea drinks are caffeine-free liquids”? (1 point)

   Answer:

   What is the contrary of “All bingo games are fun and exciting activities”? (1 point)

   Answer:

   What is the subcontrary of “Some designer jeans are clothes made in the USA”? (1 point)

   Answer:

16. For each of the following questions, you will be told the truth value of one of the four types of categorical propositions. From this information you are to determine the truth value of another categorical proposition using the Traditional square of opposition. Circle the correct answer. (3 points)
If it is true that “Some asteroids are dangerous missiles,” then the statement “No asteroids are dangerous missiles” is:

A) True
B) False
C) Undetermined

If it is false that “Some asteroids are dangerous missiles,” then the statement “No asteroids are dangerous missiles” is:

A) True
B) False
C) Undetermined

If it is false that “Some truck drivers are courteous people,” then the statement “All truck drivers are courteous people” is:

A) True
B) False
C) Undetermined

17. Draw Venn diagrams for the following immediate arguments to determine whether they are valid or invalid using the Traditional interpretation. Circle the correct answer. (3 points)

i) All S are P.
All P are S.

Venn Diagram:

A) Valid
B) Invalid

ii) All S are P.
All S are P.

Venn Diagram:
A) Valid
B) Invalid

iii) All S are P.
No S are P.

Venn Diagram:

A) Valid
B) Invalid

18. What is the standard-form categorical proposition translation of each of the following ordinary language statements? (4 points)

A few students are volunteers.

Translation:

Not all commercials are useless things.

Translation:

If a test isn’t challenging, then it isn’t legitimate.

Translation:

Whoever leaves the show early will have their money refunded.

Translation: