WRITE YOUR NAME ON THE BACK OF THIS EXAM, NOT ON THE FRONT.

The first ten questions are worth 4 points each. The last 6 questions are essay format and are worth 10 points each. Use your time wisely. For the multiple choice questions, indicate your answer in the space provided.

A. Identifying Statements. Determine whether the following are statements, commands, questions, or none of these three.

C   1. “Is the normal curve really so normal?”
   (a) statement (b) command (c) question (d) none of the above

A   2. “[Galileo] used a telescope to focus, magnify, and study radiation reaching Earth from the heavens...”
   (a) statement (b) command (c) question (d) none of the above

B. Classifying Parts of Arguments. Consider the following passage and choose the best response to the following questions.

Background: AFDC is Aid to Families with Dependent Children, often called “welfare.”

“Did AFDC help or hurt the poor? Conservative critics charge that rather than reducing child poverty, AFDC actually made the problem worse... [T]hey claim that this form of welfare weaken families, because for years after the program began, public assistance regulations provided benefits to poor mothers only if no husband lived in the home. As conservatives see it, AFDC operated as an economic incentive to have children outside of marriage, and they blame it for the rapid rise in out-of-wedlock births among poor people. To conservatives, the connection between being poor and not being married is clear: Fewer than one in ten married-couple families were poor, and more than nine out of ten AFDC families were headed by an unmarried woman.”

B   3. The sentence in bold in the above passage is best characterized as
   (a) conclusion (b) premise (c) neither premise nor conclusion

C   4. The italicized sentence in the above passage is best characterized as
   (a) conclusion (b) premise (c) neither premise nor conclusion
C. Recognizing Argument Forms. Determine the form of the following arguments.

(a) All E1 have F1
(b) All G1 are G2
(c) If S1, then S2

All E2 are E1
All G3 are G2
S1

Tf, All E2 have F1
Tf, All G3 are G1
Tf, S2

(d) Either S1 or S2
(e) Many E1 have F1
(f) None of the above.

S1
E2 is an E1
Tf, Not S2
Tf, E2 has F1

B 5. Everything that is a mammal is a vertebrate. Fish are also vertebrates. So we know that all fish are mammals.

C 6. Ellen is not in her office and if she is not in her office, then she is having lunch at Joel’s. I bet we will find her at Joel’s.

D. Distinguishing Arguments from Non-arguments. Determine whether the following passages contain: an argument, an assertion, a question, a command, an explanation, or something other than these five options.

E 7. “When a [young plant] breaks out of the seed coat, it immediately faces a crucial problem: Which way is up? The roots must burrow downward, while the shoot must grow upward to find the light. Let’s look at the growth of a shoot as it first emerges from the seed, buried underground. Auxin is synthesized in shoot tips, moves down the shaft of the stem, and stimulates cell elongation. If the stem is not exactly vertical, organelles in the cells of the stem detect the direction of gravity and cause auxin to accumulate on the stem’s lower side. Therefore, the lower cells elongate rapidly, forcing the stem to bend upward.”


(a) argument (b) assertion (c) question (d) command (e) explanation (f) other
A 8. “[W]orking on the Long Island Rail Road is about as close as it gets to an earthly paradise. Finicky union rules make daily wages swell like Vegas jackpots. Career employees await a sweet afterlife of easy money and free golf: the contract lets you retire at 50, and if you add up pension and disability benefits, you can make more than your old salary while playing for free, as a disabled person, at the Sunken Meadow golf course.

Did we mention disability — a catastrophic rate of injury unmatched in American industry? *The Times* found that every year since 2000, 93 percent to 97 percent of retiring career L.I.R.R. employees applied for and received disability payments. That’s more like the casualty rate for invading islands in the Pacific in World War II, not pushing paper or making diesel connections at Jamaica [a New York train station].

It’s early yet for audit results — or indictments — but everything points to the usual causes on an epic scale: greed and fraud. [...] It’s staggering how many healthy employees develop serious disabilities the moment they retire from a railroad with one of the best safety records in the industry. The only plausible answer is that huge numbers of them are lying, with the help of lax rules, pliant doctors and administrative rubber stamps.”


(a) argument  (b) assertion  (c) question  (d) command  (e) explanation  (f) other

E. Assuming Premises. Assume that each of the sentences below is offered as a premise in an argument. Indicate whether or not it would be appropriate to assume the premise and, if it would be appropriate to assume it, why.

(a) – This premise may not be assumed.
(b) – This premise may be assumed because it is an uncontroversial empirical statement.
(c) – This premise may be assumed because it is an uncontroversial definition.
(d) – This premise may be assumed because it is stated by an appropriate expert.

D 9. “Most flowering plants are day-neutral, that is, they flower as soon as they have sufficiently grown and developed, regardless of the length of the day.” Assume that this statement was made by Teresa Audesirk, author of *Biology: Life on Earth*, 7th ed., Pearson Prentice-Hall.

A 10. Most college students oppose laws that ban homosexual relationships.
F. Definitions. Consider the following definitions. (10 points each)
i. Indicate the method of definition.
ii. Indicate the type of definition.
iii. Evaluate the definition using the five factors discussed in this course.
   **Be sure to explicitly discuss each of the five factors in each case.

11. An ABCD data switch is a small box that lets you hook up to four devices from one PC serial or parallel port on your computer. [from whatisit.com]

   i. A or C Method: (a) genus/species   (b) operational   (c) functional   (d) none of these.
   ii. D Type:     (a) ostensive          (b) enumerative   (c) dictionary
                  (d) technical     (e) none of these

   iii. Evaluation:
   This definition does not have any ambiguity problems. There are some vagueness problems because the word “small” is vague. The word “device” is also somewhat vague. The extension is good, neither too broad nor too narrow. The intension of this definition is good because it picks out the central features of the word being defined. There is no persuasion here. Overall, this is a pretty good definition.

12. Rheumatoid arthritis is mainly characterized by inflammation of the lining, or synovium, of the joints. [from the web pages of The Arthritis Foundation]

   i. B Method:     (a) genus/species   (b) operational   (c) functional   (d) none of these.
   ii. C Type:      (a) ostensive        (b) enumerative   (c) dictionary
                    (d) technical     (e) none of these

   iii. Evaluation:
   There is no ambiguity here and no vagueness either. The extension is not good because the definition is too broad. Other diseases besides arthritis can cause inflammation of the lining of the joints. Like most operational definitions, this one has poor intension. The definition picks out a symptom of the disease, not its underlying cause. There is no persuasion here. Overall, this is not a very good definition. It has the problems often found in operational definitions.
G. Argument Evaluation. Consider the following standardized arguments. Evaluate them using the true premises and good form tests. (10 points each)

13. Background: The following passage is about a fossil of an amphibian from the Triassic period (245-208 million years ago). Amphibians are cold-blooded creatures and so they must draw from the environment the heat needed to live.

(1) A fossil of a giant salamander-like amphibian from about 245 million years ago was found in the Antarctic very near the South Pole.
(2) All amphibians are cold-blooded.
(3) Cold-blooded creatures need a relatively mild climate in which to live.
Therefore,
(4) Weather conditions were relatively mild at that time (at least during some part of the year) in the Antarctic.
(5) If weather conditions were relatively mild near the South Pole, then the Earth's climate must have been remarkably balmy. (Unstated premise)
Therefore,
(6) The Earth's climate during much of the Triassic era was "remarkably balmy."
[Standardized from an article in the web pages of Agence France-Presse, April 3, 2007.]

There are two arguments here. So the true premises and good form test must each be done twice.

First Argument: (1), (2), (3) Tf, (4)
True Premises Test
(1) This premises may be assumed as an uncontroversial empirical statement. It is the report of someone’s observations. However, it is not completely uncontroversial because there are those who deny that fossils are millions of years old. If someone who held that view were in the audience of the argument, this would be a problem.
(2) The background information indicates that this is true.
(3) The background information indicates that this is true.
The first argument does well on the true premises test.
Good Form Test
If (1)-(3) are assumed to be true, they provide good grounds for thinking that (4) is true.
Overall, the first arguments is a pretty good argument

Second argument (4), (5), Tf, (6)
True Premises Test
(4) is a demonstrated premise and the first argument is a pretty good argument so this is a pretty good premise.
(5) This is a fairly uncontroversial empirical statement however, it is not as good as (1) above because it is possible that the climate patterns were very different 245 million years ago or that the Earth had turned on its axis so that what is now at the South Pole was then at the equator.
This argument does ok on the true premises test.
Good Form Test
If (4) and (5) are assumed to be true, they provide good support for (6).
Overall, this is a pretty good argument, not quite as good as the first.
14. Background: The following passage comes from an address of Martin Luther King, Jr., in which he spoke to other clergymen about the war in Vietnam.

(1) The Vietnam war was drawing away resources needed to help the poor in America.
Therefore,
(2) The Vietnam war ought to be criticized.


True Premises Test
This premise is too controversial to be assumed. It might be that the Vietnam war did not draw resources from programs to help the poor but rather from other domestic programs. However, it is not obviously false. It is likely that some of the resources used to fight the war were drawn from programs to help the poor.

Good Form Test
The form of this argument is not very good. (1) provides one reason for (2) but (1) does not support (2) very well because the Vietnam war might have been having other good effects, such as greater freedom for people in Vietnam.

Overall, this is a fairly weak (but not horrible) argument.
H. Argument Standardization. For each of the following passages:

i. indicate whether it is an argument, an explanation, a description, or none of these. Explain your answer.
ii. if it is an argument, standardize it. Do not forget about the possibility of linked arguments, unstated premises/conclusions, and premises/conclusions not in declarative form. (10 points each)

Note: “The New World” refers to North and South American. “The Old World” refers to Europe.
Charlemagne was King of the Francs from 768 to 814 A.D.

15. “The turkey is certainly one of the most beautiful gifts that the New World has given to the Old. People who like to pretend that they know more than others sometimes say that turkeys were known to the Romans and that one was served to Charlemagne. In opposition to this idea, one may note the following: the original name of the bird was “rooster of India” and the New World used to be called “the West Indies,” the shape of a turkey is obviously foreign, and American is the only place where one finds wild turkeys (they do not exist in Africa).”
[Jean Anthelme Brillat-Savarin, La Physiologie du Goût [The Physiology of Taste], Gabriel de Gonet, 1848, pp. 53-54, freely translated by George Rainbolt.]

(1) The original name of the turkey was “rooster of India.
(2) The New World used to be called “the West Indies.”
(3) The shape of a turkey is obviously foreign.
(4) The New World is the only place where one finds wild turkeys.

Therefore,
(5) The turkey came from the New World.

(5)’ The turkey was unknown to the Romans and Charlemagne did not eat one.
In this case, we have one set of premises for two conclusions. I accepted either one.

16. “The study was undertaken to investigate the effect of sesame oil in hypertensive patients... Thirty-two male and 18 female patients aged 35 to 60 years old were supplied sesame oil...and instructed to use it as the only edible oil for 45 days. Blood pressure, anthropometry, lipid profile, lipid peroxidation, and enzymic and non-enzymic antioxidants were measured at baseline and after 45 days of sesame oil substitution. Substitution of sesame oil brought down systolic and diastolic blood pressure to normal. The same patients were asked to withdraw sesame oil consumption for another 45 days, and the measurements were repeated at the end of withdrawal period. Withdrawal of sesame oil substitution brought back the initial blood pressure values. [...] The results suggested that sesame oil as edible oil lowered blood pressure, decreased lipid peroxidation, and increased antioxidant status in hypertensive patients.”

(1) Fifty people with high blood pressure used sesame oil as their only edible oil for 45 days and their blood pressure returned to normal.
(2) These fifty people then stopped eating sesame oil and their blood pressure went back up.

Therefore,
(3) Sesame oil lowered the blood pressure of these people.

(3)’ Sesame oil lowers blood pressure in people.
I accepted either conclusion.