

Test I
Answers**Section I**

1. B	7.C	13. B	19. B	25. E
2. A	8.A	14. B	20. B	26. C
3. D	9.A	15. D	21. C	27. E
4. E	10. C	16. C	22. D	
5. C	11. B	17. A	23. C	
6. E	12. A	18. D	24. C	

Section II

1. A	6.C	11. E	16. A	21. D
2. D	7.D	12. A	17. B	22. D
3. B	8.D	13. D	18. E	23. A
4. B	9.A	14. C	19. D	24. D
5. D	10.B	15. B	20. A	25. A

Section III

1. C	6.D	11. B	16. B	21. D
2. D	7.A	12. C	17. C	22. D
3. B	8.D	13. E	18. D	23. B
4. A	9.B	14. D	19. E	24. A
5. C	10.B	15. B	20. A	

Section IV

1. C	6.C	11. D	16. E	21. E
2. E	7.D	12. C	17. B	22. E
3. C	8.C	13. A	18. C	23. E
4. C	9.B	14. A	19. A	24. D
5. E	10.B	15. D	20. C	25. D

Directions:

1. Use the Scoring Worksheet below to compute your raw score.
2. Use the Score Conversion Chart to convert your raw score into the 120–180 scale.

Score Conversion Chart

**For Converting Raw Score to the 120-180
LSAT Scaled Score**

Reported Score	Raw Score	
	Lowest	Highest
180	98	101
179	97	97
178	96	96
177	95	95
176	94	94
175	93	93
174	92	92
173	90	91
172	89	89
171	88	88
170	86	87
169	85	85
168	83	84
167	82	82
166	80	81
165	78	79
164	77	77
163	75	76
162	73	74
161	71	72
160	70	70
159	68	69
158	66	67
157	64	65
156	63	63
155	61	62
154	59	60
153	58	58
152	56	57
151	54	55
150	53	53
149	51	52
148	49	50
147	48	48
146	46	47
145	45	45

Scoring Worksheet	
1. Enter the number of questions you answered correctly in each section.	Number Correct
SECTION I	_____
SECTION II	_____
SECTION III	_____
SECTION IV	_____
2. Enter the sum here: _____	This is your Raw Score

144	43	44
143	42	42
142	40	41
141	39	39
140	37	38
139	36	36
138	35	35
137	33	34
136	32	32
135	31	31
134	29	30
133	28	28
132	27	27
131	26	26
130	25	25
129	24	24
128	23	23
127	22	22
121	$\frac{\quad}{\quad}^*$	$\frac{\quad}{\quad}^*$
120	0	16

* There is no raw score that will produce this scaled score for this form.

Test I
Section I
Solutions

Questions 1–6

1. (A) No. This is too strong—there may be other factors that drive progress in art. The passage merely argues against viewing technology as a threat to art.

(B) Yes. This is the gist of the final paragraph, where the author points out that photography was a boon to painting because it opened new perspectives to viewing the world: “*Since photos can capture the ‘moments’ of a movement, such as a hand partially raised in a gesture of greeting, Impressionist artists were inspired to paint such moments in order to more effectively convey the quality of spontaneous human action.*” Further, “*since photography preempted painting as the means of obtaining portraits, painters had more freedom to vary their subject matter, thus giving rise to the abstract creations characteristic of modern art.*”

(C) No. These sentiments are expressed in the opening lines of paragraph two, but there the author is summarizing the arguments of her detractors. Her opinion is expressed at the end of paragraph two: “*In fact, technology has traditionally assisted our capacity for creative expression and can refine our notions of any given art form.*”

(D) No. Although this is a natural deduction from the passage, it is not the main idea. Rather, the point of the passage is that technology will not negatively affect the way the public responds to art.

(E) No. The historical references are made merely to illustrate the main idea.

2. (A) Yes. The opponents of the use of new technology in art value live performances: “*...musicians would be deprived of the opportunity to spontaneously change pieces of music before live audiences. Some even worry that technology will eliminate live performance altogether.*” Furthermore, the author apparently values live performances: “*But these negative views assume ... that we are not committed enough to the artistic enterprise to preserve the live performance.*”

(B) No. This statement is contradicted by the sentence “*But these negative views assume both that technology poses an unprecedented challenge to the arts and that we are not committed enough to the artistic enterprise to preserve the live performance, assumptions that seem unnecessarily cynical.*”

(C) No. The author holds that new technology is a boon, not a challenge, to art.

(D) No. This is the author’s opinion. And since her opponents “*claim that technology subverts the artistic enterprise,*” it is reasonable to assume they believe that technology has subverted art in the past.

(E) No. The point of the passage is that the arts are invigorated by technological innovation, not made vulnerable by it.

3. (A) No. The opponents fear that the loss of live performances will deprive artists of “*the opportunity to spontaneously change pieces of music before live audiences*” and “*abolish the relationship between performer and audience.*” Although increased

knowledge about different performing artists may be beneficial, this would not alleviate the opponents' concerns.

(B) No. This could support the opponents' position. Those people who "*feel comfortable responding spontaneously to artistic performances when they are viewing recordings of those performances at home*" may become less inclined to attend live performances.

(C) No. The opponents fear that the loss of live performances will deprive artists of "*the opportunity to spontaneously change pieces of music before live audiences*" and "*abolish the relationship between performer and audience.*" Although artists may benefit financially if sales of their recordings increase, this would not alleviate the opponents' concerns.

(D) Yes. If recordings and other products of technology attract new people to live performances, then the opponents' concerns that "*technology [may] eliminate live performance altogether*" will prove unfounded.

(E) No. Opponents are concerned that "*The originality of musical performance,... might suffer, as musicians [are] deprived of the ability to spontaneously change pieces of music before live audiences.*" If recordings are less spontaneous than live performances, opponents would presumably conclude that recorded performances are less original and therefore less valuable.

4. (A) No. The example of the Steadicam™ is used to illustrate the statement "*Such new technologies create new ways of seeing and hearing by adding different dimensions to older forms, rather than replacing those forms.*"

(B) No. Although the Steadicam™ may be "*an uncomplicated device,*" this is of less concern to the author than the fact that new technology may offer new ways of viewing and achieving art.

(C) No. The author never mentions that the interaction of art and technology will change attitudes toward technology.

(D) No. Although the author would probably agree with this statement, it is not why the example of the Steadicam™ is introduced.

(E) Yes. The example of the Steadicam™ is used to illustrate the statement "*Such new technologies create new ways of seeing and hearing by adding different dimensions to older forms, rather than replacing those forms.*"

5. (A) No. This is not mentioned in the passage.

(B) No. This is not mentioned in the passage.

(C) Yes. This is a paraphrase of the statement "*Such new technologies create new ways of seeing and hearing by adding different dimensions to older forms, rather than replacing those forms.*"

(D) No. This is not mentioned in the passage.

(E) No. Although modern dance is used to illustrate a benefit of new technology, the passage does not state or imply that modern dance benefits most from new technology.

6. (A) No. The passage is discussing the effects of technology, not the results of artistic experiments.
- (B) No. This knowledge gave rise to a more accurate view of the world, not a more abstract view. *“Impressionist artists like Degas studied the elements of light and movement captured by instantaneous photography and used their new understanding of the way our perceptions distort reality to try to more accurately capture reality in their work.”*
- (C) No. This is too strong. Notice the absolute word “exclusively.”
- (D) No. The passage implies that it was photography that begat abstract art.
- (E) Yes. This is the thrust of the closing line of the passage *“Finally, since photography preempted painting as the means of obtaining portraits, painters had more freedom to vary their subject matter, thus giving rise to the abstract creations characteristic of modern art.”* Abstract art does not rely on the literal depiction of objects.

Questions 7–13

7. (A) No. The policy of readjustment *“encouraged the assimilation of Native Americans as individuals into mainstream society.”* A tribal system would not be part of mainstream society.
- (B) No. The policy of readjustment *“encouraged the assimilation of Native Americans as individuals into mainstream society.”* Preserving Native American language would work against assimilation.
- (C) Yes. The policy of readjustment *“encouraged the assimilation of Native Americans as individuals into mainstream society.”*
- (D) No. The policy of readjustment *“encouraged the assimilation of Native Americans as individuals into mainstream society.”*
- (E) No. The policy of readjustment *“encouraged the assimilation of Native Americans as individuals into mainstream society.”*
8. (A) Yes. This is stated in the last paragraph: *“As a result of the 1956 meeting, the Oneida rejected readjustment. Instead, they determined to improve tribal life by lobbying for federal monies for postsecondary education, for the improvement of drainage on tribal lands, and for the building of a convalescent home for tribal members.”*
- (B) No. This is not mentioned in the passage.
- (C) No. This is not mentioned in the passage.
- (D) No. This is not mentioned in the passage.
- (E) No. This is not mentioned in the passage.
9. (A) Yes. As is often the case with reading passages, the first paragraph sets the stage for the discussion to follow. It presents two opposing social policies without indicating a preference.
- (B) No. The first paragraph does present two conflicting positions. However, the rest of the passage recounts an example illustrating the conflict rather than defending one position as better than the other.

(C) No. The first paragraph introduces two policies for Native American relations. These are distinct social policies, not interpretations of a historical conflict. Furthermore, the passage does not compare the policies.

(D) No. There is no analysis nor prediction in the first paragraph. It is merely introducing two competing social movements.

(E) No. The first paragraph merely outlines the relationship between the Bureau of Indian Affairs and the Oneida tribe in the 1940s and 1950s. It does not outline the history of the BIA.

10. (A) No. The passage does not mention any social phenomena other than the readjustment movement.

(B) No. *“...the increased awareness of civil rights in these decades helped reinforce the belief that life on reservations prevented Native Americans from exercising [their Constitutional] rights...”* As this belief grew, the U.S. Government proposed a change in its policies toward Native Americans. However, the passage does not say that this belief influenced the position of the Native American leaders.

(C) Yes. It shows that the “readjustment” policy was probably well meaning: *“Because the increased awareness of civil rights in these decades helped reinforce the belief that life on reservations prevented Native Americans from exercising the rights guaranteed to citizens under the United States Constitution, the readjustment movement advocated the end of the federal government’s involvement in Native American affairs and encouraged the assimilation of Native Americans as individuals into mainstream society.”*

(D) No. This is the second-best choice. The passage does explain the impetus for the readjustment movement, but not necessarily the motives of the BIA bureaucrat. They may have been merely following social trends or they may have been in the vanguard of the movement. We can’t determine from the passage.

(E) No. The final paragraph makes it clear that the author opposes the policy. The author refers to the increased awareness of civil rights in order to set the tone of passage: that the “readjustment” policy was probably well meaning, but wrong.

11. (A) No. The purpose of the readjustment policy was to assimilate Native Americans into mainstream society. That is, to encourage Native Americans to move off the reservations.

(B) Yes. The purpose of the readjustment policy was to assimilate Native Americans into mainstream society.

(C) No. The purpose of the readjustment policy was to assimilate Native Americans into mainstream society. Once assimilated, they would receive no more government services than other assimilated groups.

(D) No. The purpose of the readjustment policy was to assimilate Native Americans into mainstream society and to reduce the Federal Government’s involvement.

(E) No. The passage indicates that proponents of the readjustment policy advocated changing the nature of the Canandaigua Treaty between the Federal Government and the Oneida.

12. (A) Yes. *“The Oneida were then offered a one-time lump-sum payment of \$60,000 in lieu of the \$0.52 annuity guaranteed in perpetuity to each member of the tribe under*

the Canandaigua Treaty.... Finally, the offer of a lump-sum payment was unanimously opposed by the Oneida delegates, who saw that changing the terms of a treaty might jeopardize the many pending land claims based upon the treaty.

(B) No. It granted them certain rights and privileges: *“The Oneida were then offered a one-time lump-sum payment of \$60,000 in lieu of the \$0.52 annuity guaranteed in perpetuity to each member of the tribe under the Canandaigua Treaty.... Finally, the offer of a lump-sum payment was unanimously opposed by the Oneida delegates, who saw that changing the terms of a treaty might jeopardize the many pending land claims based upon the treaty.”*

(C) No. Presumably, the Oneida already had such an agreement with the Federal Government as specified by the Treaty. The Government hoped to change the provisions of the Treaty.

(D) No. Recognition of independent status is not mentioned in the passage.

(E) No. They saw it as valuable and relevant: *“the offer of a lump-sum payment was unanimously opposed by the Oneida delegates, who saw that changing the terms of a treaty might jeopardize the many pending land claims based upon the treaty.”*

13. (A) No. In rejecting the scholarship, the student did not retain benefits that had already been granted by the university. However, in rejecting readjustment, the Oneida tribe still retained the benefits that had already been granted by the Canandaigua Treaty.

(B) Yes. The company offered a bonus to the employee if he would retire (in lieu of his regular salary), but acceptance of the offer might harm his position in his pending worker’s compensation suit. Similarly, *“The Oneida were then offered a one-time lump-sum payment of \$60,000 in lieu of the \$0.52 annuity guaranteed in perpetuity to each member of the tribe under the Canandaigua Treaty.... The offer of a lump-sum payment was unanimously opposed by the Oneida delegates, who saw that changing the terms of a treaty might jeopardize the many pending land claims based upon the treaty.”*

(C) No. The teenager still received payment. However, the Oneida tribe forfeited the \$60,000.

(D) No. The customer received proportionate compensation for the \$500. However, the Oneida tribe forfeited the \$60,000 without any other compensation.

(E) No. This is a good answer; but choice (B) more closely parallels the passage.

Questions 14–20

14. (A) No. The passage argues against the claim that literacy gave rise to democratic institutions in ancient Greece, but does not state that the traditions and conventions of a society give rise to democratic institutions.

(B) Yes. The main idea of the passage is summed up in the closing line: *“Athens, insofar as it functioned as a democracy, did so not because of widespread literacy, but because the elite had chosen to accept democratic institutions.”*

(C) No. The passage does imply that the medieval Church guarded access to the Latin Bible by discouraging its translation into everyday language. However, this is not the main idea of the passage. The passage argues against Goody’s claim that literacy contributed to the rise of democratic institutions in ancient Greece.

(D) No. Though this may be true, it is not mentioned in the passage.

(E) No. This is not mentioned in the passage.

15. (A) No. In fact, the author implies that knowing a society's literacy rate does not help determine its degree of political advancement: "Direct observation of contemporary societies at the threshold of widespread literacy has not assisted our understanding of how such literacy altered ancient Greek society, in particular its political culture."

(B) No. This is too strong. From the passage, we can only say that literate people do not necessarily have access to politically important documents and books. The passage does not discuss how literacy may assist people in other areas of life—for example, business and health.

(C) No. The passage never discusses the rate of increase or decrease in literacy.

(D) Yes. This follows from the second sentence: "The discovery of what Goody has called the 'enabling effects' of literacy in contemporary societies tends to seduce the observer into confusing often rudimentary knowledge of how to read with popular access to important books and documents; this confusion is then projected onto ancient societies."

(E) No. In fact, the passage states that "in Athens the juries were representative of a broad spectrum of the population, and these juries, drawn from diverse social classes, both interpreted what they had heard and determined matters of fact."

16. (A) No. The passage indicates that contemporary societies, like ancient societies, depend heavily on the knowledge of experts: "People today also rely heavily on a truly knowledgeable minority for information and its interpretation."

(B) No. The passage does not state or imply that contemporary popular literature often contains specious information.

(C) Yes. "Granted, people today also rely heavily on a truly knowledgeable minority for information and its interpretation, often transmitted orally. Yet this is still fundamentally different from an ancient society in which there was no 'popular literature,' i.e., no newspapers, magazines, or other media that dealt with sociopolitical issues.... When fundamental documents are accessible for study only to an elite, the rest of the society is subject to the elite's interpretation of the rules of behavior, including right political behavior."

(D) No. The passage does not discuss how people become members of the governing elite.

(E) No. The passage does not state or imply that a certain level of educational achievement is attainable only by a contemporary elite.

17. (A) Yes. "True, in Athens the juries were representative of a broad spectrum of the population, and these juries, drawn from diverse social classes, both interpreted what they had heard and determined matters of fact."

(B) No. "Even in Greek courts the juries heard only the relevant statutes read out during the proceedings, as they heard verbal testimony, and they then rendered their verdict on the spot, without the benefit of any discussion among themselves."

(C) No. "True, in Athens the juries were representative of a broad spectrum of the population, and these juries, drawn from diverse social classes, both interpreted what they had heard and determined matters of fact."

(D) No. *“True, in Athens the juries were representative of a broad spectrum of the population, and these juries, drawn from diverse social classes, both interpreted what they had heard and determined matters of fact. However, they were guided solely by the speeches prepared for the parties by professional pleaders and by the quotations of laws or decrees within the speeches, rather than by their own access to any kind of document or book.”*

(E) No. *“Even in Greek courts the juries heard only the relevant statutes read out during the proceedings, as they heard verbal testimony, and they then rendered their verdict on the spot, without the benefit of any discussion among themselves.”*

18. (A) No. The author implies that others, such as Goody, have mistakenly labeled ancient Greek society the “law-giver” merely because it had a set of written laws. But, according to the author, this was not enough to break the power monopoly of the old aristocracy. People must also control interpretation of the laws. This is illustrated by the following sentence *“But the application and efficacy of all law codes depend on their interpretation by magistrates and courts, and unless the right of interpretation is ‘democratized,’ the mere existence of written laws changes little.”*

(B) No. The author implies that others, such as Goody, have mistakenly labeled ancient Greek society the “law-giver” merely because it had a set of written laws. But according to the author this was not enough to break the power monopoly of the old aristocracy. People must also control interpretation of the laws. This is illustrated by the following sentence *“But the application and efficacy of all law codes depend on their interpretation by magistrates and courts, and unless the right of interpretation is ‘democratized,’ the mere existence of written laws changes little.”*

(C) No. The author implies that others, such as Goody, have mistakenly labeled ancient Greek society the “law-giver” merely because it had a set of written laws. But according to the author this was not enough to break the power monopoly of the old aristocracy. People must also control interpretation of the laws. This is illustrated by the following sentence *“But the application and efficacy of all law codes depend on their interpretation by magistrates and courts, and unless the right of interpretation is ‘democratized,’ the mere existence of written laws changes little.”*

(D) Yes. The author implies that others, such as Goody, have mistakenly labeled ancient Greek society the “law-giver” merely because it had a set of written laws. But according to the author this was not enough to break the power monopoly of the old aristocracy. People must also control interpretation of the laws. This is illustrated by the following sentence *“But the application and efficacy of all law codes depend on their interpretation by magistrates and courts, and unless the right of interpretation is ‘democratized,’ the mere existence of written laws changes little.”*

(E) No. The myth the author refers to is the modern interpretation that sees the early written code of law as the catalyst for democracy in Athens.

19. (A) No. Although both the Latin Bible and the early law codes were inaccessible to most members of the societies, the authority of these documents was not due to their inaccessibility.

(B) Yes. The Latin Bible is referred to as a “closed book” because only the elite who studied Latin were able to read it. Similarly, the legal documents in ancient Greek society were read only by the elite.

(C) No. Like ancient law codes, the Latin Bible was inaccessible to most people. However, the passage does not discuss the similarities in the misinterpretations of these types of documents.

(D) No. Although this answer-choice may be true, the analogy is drawn between the Latin Bible and an early law code in order to illustrate how an influential document can be inaccessible to most people.

(E) No. The passage does state that the Latin Bible was inaccessible because it was not written in the common language. However, the passage does not state that ancient law codes were not written in the common language.

20. (A) No. The passage is criticizing attempts to compare the effects of literacy on modern societies to its effects on ancient societies. This is indicated by the opening sentence: *“Direct observation of contemporary societies at the threshold of widespread literacy has not assisted our understanding of how such literacy altered ancient Greek society, in particular its political culture.”*

(B) Yes. The passage is criticizing attempts to compare the effects of literacy on modern societies to its effects on ancient societies. This is indicated by the opening sentence: *“Direct observation of contemporary societies at the threshold of widespread literacy has not assisted our understanding of how such literacy altered ancient Greek society, in particular its political culture.”*

(C) No. The passage is criticizing attempts to compare the effects of literacy on modern societies to its effects on ancient societies. This is indicated by the opening sentence: *“Direct observation of contemporary societies at the threshold of widespread literacy has not assisted our understanding of how such literacy altered ancient Greek society, in particular its political culture.”* The passage is not concerned with understanding the relationship between ancient and modern societies but with the problem of using modern societies to understand an ancient society.

(D) No. The passage is criticizing attempts to compare the effects of literacy on modern societies to its effects on ancient societies. This is indicated by the opening sentence: *“Direct observation of contemporary societies at the threshold of widespread literacy has not assisted our understanding of how such literacy altered ancient Greek society, in particular its political culture.”* The passage is not so directed toward developing a method to understand ancient societies as it is toward criticizing one particular method.

(E) No. The passage is criticizing attempts to compare the effects of literacy on modern societies to its effects on ancient societies. This is indicated by the opening sentence: *“Direct observation of contemporary societies at the threshold of widespread literacy has not assisted our understanding of how such literacy altered ancient Greek society, in particular its political culture.”* Though it may be true that ancient societies are difficult to understand, the passage is a critique of one particular method used to understand the effects of literacy on these societies.

Questions 21–27

21. (A) No. The passage does imply the colonials thought they shared a common political vocabulary with the English: *“Steeped as they were in the English political language, these colonials failed to observe that their experience in America had given the*

words a significance quite different from that accepted by the English with whom they debated; in fact, they claimed that they were more loyal to the English political tradition than were the English in England.” However, there is no indication in the passage that the English thought they shared a common political vocabulary with the colonials.

(B) No. Although the passage points out that they shared many political institutions, the main point of the passage is that they viewed the institutions differently.

(C) Yes. This is summed up by the sentence, *“To the English the word ‘constitution’ meant the whole body of law and legal custom formulated since the beginning of the kingdom, whereas to these colonials a constitution was a specific written document, enumerating specific powers.”*

(D) No. The passage does not state that Colonial attitudes toward English institutions were hostile.

(E) No. In fact, seventeenth-century English legal development diverged from colonial attitudes toward constitutions. *“English legal development from the early seventeenth century had been moving steadily toward the absolute power of Parliament,”* while *“the citizens of these colonies ...[did not] concede that their own assemblies possessed such wide powers.”*

22. (A) No. *“In both England and these colonies, only property holders could vote.”*

(B) No. *“Moreover, each of these colonies enjoyed a representative assembly, which was consciously modeled, in powers and practices, after the English Parliament.”*

(C) No. *“By the middle of the eighteenth century, all of these colonies except four were headed by Royal Governors appointed by the King and perceived as bearing a relation to the people of the colony similar to that of the King to the English people.”*

(D) Yes. This problem is best solved by elimination:

Choice (A) is supported by the passage: *“In both England and these colonies, only property holders could vote.”*

Choice (B) is supported by the passage: *“Moreover, each of these colonies enjoyed a representative assembly, which was consciously modeled, in powers and practices, after the English Parliament.”*

Choice (C) is supported by the passage: *“By the middle of the eighteenth century, all of these colonies except four were headed by Royal Governors appointed by the King and perceived as bearing a relation to the people of the colony similar to that of the King to the English people.”*

Choice (E) is supported by the passage: *“By the middle of the eighteenth century, all of these colonies except four were headed by Royal Governors appointed by the King and perceived as bearing a relation to the people of the colony similar to that of the King to the English people.”*

Hence, by process of elimination, the answer is (D).

(E) No. *“By the middle of the eighteenth century, all of these colonies except four were headed by Royal Governors appointed by the King and perceived as bearing a relation to the people of the colony similar to that of the King to the English people.”*

23. (A) No. The passage implies that the Parliament existed before the seventeenth century but was less powerful then.

(B) No. This is not stated or implied by the passage.

(C) Yes. *“For example, English legal development from the early seventeenth century had been moving steadily toward the absolute power of Parliament. The most unmistakable sign of this tendency was the legal assertion that the King was subject to the law.”*

(D) No. Just the opposite is implied. Since Parliament became more powerful in the seventeenth and eighteenth centuries, it would have then been better able to institute legal reforms.

(E) No. This is not stated or implied by the passage.

24. (A) No. This contradicts the passage: *“By the eighteenth century the English had accepted the idea that the parliamentary representatives of the people were omnipotent.”*

(B) No. This is not stated in the passage.

(C) Yes. *“Together with this resolute denial of the absolute right of kings went the assertion that Parliament was unlimited in its power: it could change even the Constitution by its ordinary acts of legislation.”*

(D) No. This is not stated in the passage.

(E) No. This is not stated in the passage.

25. (A) No. They were unaware that they gave different values to political terms than did the English: *“Steeped as they were in the English political language, these colonials failed to observe that their experience in America had given the words a significance quite different from that accepted by the English with whom they debated ...”*

(B) No. Although the colonials did not look upon the English Parliament with “fond eyes,” this does not necessarily imply that the English were staunch supports of the Parliament. Indeed, the passage implies that the Parliament increased its power due to internal struggles, not through the support of the masses. The masses may have supported a more powerful Parliament, but we cannot determine that from the passage.

(C) No. They did not realize that their experience in America was not an “English experience”: *“Steeped as they were in the English political language, these colonials failed to observe that their experience in America had given the words a significance quite different from that accepted by the English with whom they debated....”*

(D) No. They did, in fact, adopt English political institutions.

(E) Yes. *“Steeped as they were in the English political language, these colonials failed to observe that their experience in America had given the words a significance quite different from that accepted by the English with whom they debated; in fact, they claimed that they were more loyal to the English political tradition than were the English in England.”*

26. (A) No. *“To the English the word ‘constitution’ meant the whole body of law and legal custom formulated since the beginning of the kingdom, whereas to [the] colonials a constitution was a specific written document....This distinction in meaning can be traced to the fact that the foundations of government in the various colonies were written*

charters granted by the Crown.” Presumably then, the foundation of government in the English Kingdom was not the written body of law and legal custom.

(B) No. This choice is too narrow. The English viewed the English Constitution as the total of all customs and laws. *“To the English the word “constitution” meant the whole body [corpus] of law and legal custom formulated since the beginning of the kingdom, whereas to these colonials a constitution was a specific written document, enumerating specific powers.”*

(C) Yes. *“To the English the word “constitution” meant the whole body [corpus] of law and legal custom formulated since the beginning of the kingdom, whereas to these colonials a constitution was a specific written document, enumerating specific powers.”*

(D) No. Although the constitution was alterable by Parliament, there is no mention that royal authority (i.e., the King) could alter it.

(E) No. This is not mentioned in the passage.

27. (A) No. Whatever misunderstandings existed occurred in the seventeenth and eighteenth centuries, *“the colonials failed to observe that their experience in America had given the words a significance quite different from that accepted by the English.”* The passage does not mention any current misunderstandings.

(B) No. The way England treated the colonies is not discussed much in the passage.

(C) No. There is no mention of an ongoing debate in the passage.

(D) No. This is too broad. Although the passage does discuss differences between the English and the American colonies, it does not mention American independence.

(E) Yes. The passage discusses the conflicting interpretations of their common language and common institutional structures.

Test I
Section II
Solutions

1. (A) Yes. The problem with the argument is that as much as 49 percent of crimes involving handguns could result in fatalities yet still be less than a majority. Similarly, the problem with this answer-choice is that as many as 49 percent of overweight people could develop heart disease yet still be less than half.

(B) No. The problem with the argument is that as much as 49 percent of crimes involving handguns could result in fatalities yet still be less than a majority. However, this answer-choice is not discussing the percentage or fraction of people who are better off not following fitness programs that include swimming daily.

(C) No. The problem with the argument is that as much as 49 percent of crimes involving handguns could result in fatalities yet still be less than a majority. However, this answer-choice is not discussing the percentage or fraction of people who need not avoid nontraditional dietary regimens.

(D) No. The problem with the argument is that as much as 49 percent of crimes involving handguns could result in fatalities yet still be less than a majority. However, this answer-choice is not discussing the percentage or fraction of people who need to spend more time exercising.

(E) No. The problem with the argument is that as much as 49 percent of crimes involving handguns could result in fatalities yet still be less than a majority. However, this answer-choice is not discussing the percentage or fraction of people who should undergo psychological evaluation.

2. (A) No. An individual is not mentioned.

(B) No. The conclusion (that which is to be proved) is mentioned only once—at the end of the passage.

(C) No. While several generalizations are made (e.g., “*Tall children can generally reach high shelves easily.*”), no specific cases are mentioned that refute these principles.

(D) Yes. This is a false causal argument. It falsely assumes that the difficulty short children have in reaching high shelves is what stunts their growth.

(E) No. The argument errs in falsely establishing a causal relationship between two items—difficulty reaching shelves as a child and short height as an adult—that are actually both effects of a third, independent cause. True, no specific evidence is given, but its lack is not used as a basis for any conclusion.

3. (A) No. Just the opposite. Balanced reporting sometimes presents one side of a conflict in worse light than the other side: “*This concept of balance ... does not justify concealing or glossing over basic injustices in an effort to be even-handed.*”

(B) Yes. The passage argues that balanced reporting contains two equal parts:

- 1) The facts must be presented accurately, with each side’s view represented.
- 2) Any facts that reflect more poorly on one side than the other must also be presented.

(C) No. Although this statement is made in the passage, it is done to support the main idea: In an accurate representation, balanced reporting sometimes presents the two sides in a conflict as having unequal justification.

(D) No. Civil wars and conflicts are used to illustrate the main idea.

(E) No. The passage does not state or imply that balanced reporting cannot be achieved. Further, there is no discussion of the subjectiveness of the balanced reporting.

4. (A) No. This would probably increase the deforestation rate. If the landowner's opposition to the government's program grew more violent, then the government should have more difficulty implementing the program.

(B) Yes. We are looking for an agent (other than the government's program) that might cause the deforestation rate to decrease. Rainfall is one such agent. Heavy rainfall during the burning season might prevent the burning of the forest or at least hinder it.

(C) No. This information can be interpreted as either supporting the government's claim or undermining it. If during the previous year the government issued fines totaling only \$1 million, then increasing the fines to \$9 million was probably effective. However, if during the previous year the government issued fines totaling \$8.5 million, then increasing the fines to \$9 million was probably irrelevant.

(D) No. Although this does somewhat weaken the government's claim, it is just as possible that direct observation might show that the deforestation rate was even lower than what the satellite data indicated. Besides, there is a more direct answer-choice offered.

(E) No. It's conceivable that the money spent on research was more effective than the money spent on enforcement. Perhaps the money spent on research showed the government how to better enforce the laws.

5. (A) No. This strengthens the claim. Had the proportion of shoppers expressing no preference been very large, it would have weakened the claim.

(B) No. The shoppers still prefer Northwoods' particular old-fashioned way.

(C) No. Usually, surveys only cover a small minority of the total population. For example, most political surveys poll less than 5,000 people, yet the potential electorate is over 100 million.

(D) Yes. The advertisement implies that shoppers choose Northwoods Maple Syrup because of the taste, but does not state that taste was why shoppers choose the syrup. There may be many other reasons for choosing Northwoods Maple Syrup. One possibility is a low price.

(E) No. The claim is expressly made about maple syrup, not about any other types of syrup.

6. (A) No. This would increase the poll's credibility. Had the interviewers revealed their political affiliations, it would have decreased the poll's credibility because their opinions might have influenced the people they were interviewing.

(B) No. This would increase the poll's credibility. The opinions of those unqualified to vote were irrelevant since they did not vote.

(C) Yes. We are looking for something that might have caused the poll to be unrepresentative of the general population. Now, in 1936, phones were not as common

as today. If most of the phones were in the homes of the wealthy who held opinions that differed from those of most of the population, then the poll would not have been based on a good cross section of the electorate.

(D) No. Asking for the respondents' political affiliations would probably help determine how representative the poll was. However, if a disproportionate number of respondents were supporters of Alfred Landon, this choice does not explain why the selection process was skewed.

(E) No. This might somewhat explain the inaccuracy of the poll: Perhaps the support for Landon was weak or very volatile. Nevertheless, there is a much stronger explanation offered.

7. (A) No. The passage claims that the amount of plastic being thrown away by the public is not decreasing. How the waste management companies handle the disposal is irrelevant.

(B) No. The passage claims that the amount of plastic being thrown away by the public is not decreasing. Whether this plastic is recyclable or not is irrelevant.

(C) No. This should decrease the percentage of plastic waste discarded by the public. In spite of this, the percentage is actually increasing.

(D) Yes. Suppose an increasing proportion of paper, glass, and metal cans are being recycled. Then even if people are throwing away less plastic than before, the percentage could still increase since there could be considerably less of the other materials being thrown away.

(E) No. The argument is about the amount of plastic people throw away, which is only loosely related to the total amount of plastic manufactured. Perhaps industry uses plastic more efficiently in equipment that is not disposed in landfills. Then consumers will use a greater percentage of the total amount of plastic produced.

8. (A) No. This contradicts what the passage implies. If the amount of ultraviolet radiation reaching the Earth decreased, then the incidence of skin cancer and cataracts should also decrease, not increase.

(B) No. This makes the discrepant facts in the passage even more puzzling. Why did the radiation reaching the Earth's surface in Brazil increase as expected while it decreased under similar conditions in North America?

(C) No. The passage states that the layer of stratospheric ozone has thinned. Knowing why it thinned does not explain why the expected increase in radiation reaching the Earth's surface did not occur.

(D) Yes. If the amount of ozone in the lower atmosphere increased dramatically, then it may more than offset the decrease in ozone in the upper atmosphere.

(E) No. The passage is about the average ozone layer in North America, not about the Earth's general layer of ozone.

Questions 9–10

9. (A) Yes. This draws a strong analogy between what happens in two similar situations. Since aisles leading to the exits allowed more people to escape fires in

theaters, it is reasonable to expect a similar result if aisles are formed to the exits on aircraft.

- (B) No. The cost of refitting could be so high that the proposal would be impractical.
- (C) No. This would a strong answer-choice if the proposal were to install smoke detectors, not to install aisles to the exits.
- (D) No. This does not address the issue of removing seats to increase access to the exits.
- (E) No. This does not address the issue of removing seats to increase access to the exits.

10. (A) No. The given proposal already covers this situation: the obstructing seats in the new aircraft would be removed.

- (B) Yes. The passage states *“The number of aircraft collisions on the ground is increasing because of the substantial increase in the number of flights operated by the airlines.”* So increasing the number of flights should also increase the number fatalities.
- (C) No. Although this might reduce the amount of time passengers have to wait at airports, it would not affect the likelihood of on-ground aircraft collisions so long as the number of flights remains unchanged.
- (D) No. This may be a wise business policy, but it does not increase safety.
- (E) No. This does not increase safety. In fact, it might decrease safety: if ticket prices are allowed to rise, the number of tickets sold might decrease, which in turn would decrease congestion at the exits.

11. (A) No. None of the evidence mentioned in the passage is refuted.

- (B) No. This is the second-best answer. Although the passage does state several general principles (e.g., *“all fast-breathing animals are warm-blooded*), this is done as part of a series of evidence rather than directly used to deduce the conclusion of the argument.
- (C) No. The passage is casting doubt on a present claim about the past.
- (D) No. This is too strong. The passage merely implies, *“fossil evidence casts doubt on the evolutionary theory that dinosaurs are more closely related to reptiles than to other classes of animals.”*
- (E) Yes. The passage presents a sequence of evidence indicating that dinosaurs were similar to modern birds and dissimilar to modern reptiles.

Characteristics	Dinosaur s	Birds	Reptiles
hollow bones	yes	yes	no
well-developed senses	yes	yes	no
arched mouth roof	yes	yes	no
growth pattern typical of warm-blooded animals	yes	yes	no

12. (A) Yes. Perhaps the abnormalities can be as benign as splotches of color in a dog’s white coat. Since such cases would have no effect on a dog’s health, there would be no medical need for costly surgery.

(B) No. At first glance, this choice seems good. But the passage already implies that both purebred and nonpurebred dogs suffer genetically determined abnormalities. The more important issue is the percentage of purebred dogs who have genetically determined abnormalities versus the percentage of nonpurebred who have genetically determined abnormalities.

(C) No. This should not affect health care costs for the dogs. The key phrase in this answer-choice is “*natural life spans.*”

(D) No. The argument concerns only the avoidance of costly medical bills.

(E) No. Even if the offspring of nonpurebred dogs are as likely to have abnormalities as the offspring of purebred dogs, the passage implies the current generation of nonpurebred dogs is less likely to have the abnormalities.

13. (A) No. The passage states only that if the press is subsidized then there will be outside control. The conditional statement in this answer-choice does not allow us to infer anything if there is no subsidy. Perhaps there is outside control for political, not financial, reasons.

(B) No. The passage states only that if the press is subsidized then there will be outside control. The conditional statement in this answer-choice does not allow us to infer anything if there is no subsidy. Perhaps the press produces propaganda for political reasons.

(C) No. The passage states only that if the press is subsidized then there will be outside control. The conditional statement in this answer-choice does not allow us to infer anything if there is no subsidy. Perhaps the press makes a profit through the use of sound business practices.

(D) Yes. The passage presents a chain of implications:

Not profit-making → Subsidies → Outside control → Not honest journalism

This answer-choice then negates the conclusion (“*if the press is to produce honest journalism*”). By using the contrapositive, we can then conclude the negation of the premise of the above chain, “*the press must be a profit-making institution.*”

(E) No. Just the opposite: if the press is to produce honest journalism, it must make a profit.

Questions 14–15

14. (A) No. Lucien does offer justification; it’s just flawed.

(B) No. Although the evidence is anecdotal, Lucien does not give it the weight of knowledge gained through scientific study.

(C) Yes. The issue is whether the “available” housing is affordable. Since Lucien identifies himself and his colleagues as professionals, the apartments that are available in their buildings probably are not affordable to the working class.

(D) No. Lucien does not need to argue that all apartment buildings have vacant apartments for rent, just that his and his colleagues’ apartment buildings have vacancies and that this situation is not uncommon.

(E) No. Lucien argues that there is no need to construct more low-income housing.

15. (A) No. Maria does not respond to Lucien's personal experiences.
(B) Yes. Lucien states "*Homelessness can, therefore, only be caused by people's inability or unwillingness to work to pay the rent.*" Maria shows that this statement is false by pointing out "*that a significant percentage of this city's homeless people hold regular jobs*" and that "*These are people who lack neither will nor ability.*"
(C) No. Maria never directs her argument toward Lucien.
(D) No. Maria does not respond to the evidence presented by Lucien.
(E) No. This is the second-best answer. Maria indirectly provides another explanation for Lucien's observations, but does so by directly attacking one of his premises.
16. (A) Yes. If "*law does not cover all circumstances in which one person morally wrongs another,*" then there is a situation in which a person can legally commit an immoral act against another person. But this directly contradicts the statement: "*it is inconceivable that something that is legally permissible could be immoral.*"
(B) No. This is consistent with the statement: "*it is inconceivable that something that is legally permissible could be immoral.*"
(C) No. This is irrelevant.
(D) No. This is consistent with the statement that "*something that is legally permissible [is not] immoral.*" In other words, the law reflects the morals of society.
(E) No. This is irrelevant.
17. (A) No. The passage establishes a relation between the amount of energy used to sterilize nylon instruments and the amount of energy required to produce these instruments. It also establishes a relation between the amount of energy used to sterilize stainless steel instruments and the amount of energy required to produce these instruments. However, the passage gives no information to compare nylon and steel instruments to one another. Therefore, it can be true that it takes more energy to sterilize nylon instruments than to sterilize steel instruments.
(B) Yes. The passage states that 50 complete sterilizations of nylon surgical instruments takes 3.4 times more energy than manufacturing those instruments. Making the reasonable assumption that each sterilization requires the same amount of energy, one complete sterilization should require $3.4/50$ (a number less than one) times the energy required to produce the instruments. In other words, it can not be true that "*more energy was required for each complete sterilization of the nylon instruments than was required to manufacture the nylon instruments.*"
(C) No. Nothing indicates the total number of instruments of either type used in the study. Therefore, it can be true that more nylon instruments were used in this study than stainless steel instruments.
(D) No. The passage establishes a relation between the amount of energy used to sterilize nylon instruments and the amount of energy required to produce these instruments. It also establishes a relation between the amount of energy used to sterilize stainless steel instruments and the amount of energy required to produce these instruments. However, the passage gives no information to compare nylon and steel instruments to one another. Therefore, it can be true that more energy was used to produce the steel instruments than the nylon instruments.

(E) No. While the passage implies that the energy costs of 50 complete sterilization of stainless steel instruments is greater than the energy costs of manufacturing them, nothing in the passage indicates the total costs of manufacturing the instruments. Perhaps the raw materials for the instruments are expensive, or maybe labor costs for manufacturing are much greater than for sterilization.

18. (A) No. The principle states that in certain cases the letter of the law need not be followed. However, this answer-choice never mentions a law.

(B) No. The principle states “*citizens need not refrain from actions that fail to comply with the law if they have made a good-faith effort to comply but are prevented from doing so by government inaction.*” In this answer-choice, the resident did refrain from actions that fail to comply with the law—she stopped construction. Further, there was government action—it actively refused to rezone the property.

(C) No. The principle states “*citizens need not refrain from actions that fail to comply with the law if they have made a good-faith effort to comply but are prevented from doing so by government inaction.*” In this answer-choice, the citizens did not make a good-faith effort to comply with the law.

(D) No. The principle states “*citizens need not refrain from actions that fail to comply with the law if they have made a good-faith effort to comply but are prevented from doing so by government inaction.*” In this answer-choice, the government did act—it issued the permit.

(E) Yes. The principle states “*citizens need not refrain from actions that fail to comply with the law if they have made a good-faith effort to comply but are prevented from doing so by government inaction.*” In applying for the license one year earlier, the doctor made a good faith effort to comply with the law, but government inaction prevented him from getting the license.

Questions 19–20

19. (A) No. The passage refers to only universities. So any assumption does not need to exclude other institutions that are not universities.

(B) No. The passage explicitly refers to “potentially valuable” discoveries. So the argument does not need to assume that most inventions by university faculty members would be profitable, nor even that some inventions would be profitable. It needs to assume only that there are some discoveries by faculty members.

(C) No. The passage is about the suppression of information, not about how to best disseminate information.

(D) Yes. The passage states that universities have a motive to suppress information about potentially valuable discoveries until patents have been secured. It then states, “*suppressing information concerning such discoveries is incompatible with the university’s obligation to promote the free flow of ideas.*” This assumes that on at least one occasion universities will act on their motives.

(E) No. The passage does not allude to any struggle between the faculty and the university regarding who should get the patents, so this assumption is not needed.

20. (A) Yes. The conclusion is stated in the opening of the passage (“*A university should not be entitled to patent the inventions of its faculty members*”). The rest of the passage presents an argument to support that conclusion.

(B) No. It is the conclusion.

(C) No. It is the conclusion of the argument, not a premise (i.e., assumption) of the argument.

(D) No. It is the conclusion.

(E) No. It is the conclusion.

21. (A) No. In fact, if English and Mbarbaram share other words besides “dog” then the conclusion is strengthened.

(B) No. In fact, this could weaken the argument because it makes it more likely that both English and Mbarbaram borrowed the word “dog” from a third language.

(C) No. This directly attacks the conclusion of the argument: “*Thus this case shows that sometimes when languages share words that are similar in sound and meaning the similarity is due neither to language relatedness nor to borrowing.*”

(D) Yes. The argument needs to assume that the word “dog” is native to both languages. Otherwise, perhaps ancient travelers had contact with both languages and introduced the word “dog” to both languages.

(E) No. This directly attacks the conclusion of the argument: “*Thus this case shows that sometimes when languages share words that are similar in sound and meaning the similarity is due neither to language relatedness nor to borrowing.*”

22. (A) No. The politician only needs to support the conclusion that “*fewer people now find themselves among the ranks of the unemployed*”; He is not required to specifically refute the opposition’s position. Even so, he does implicitly address the opposition, which apparently claims that a greater or equal number of people are unemployed now than four years ago.

(B) No. This is irrelevant. The politician’s claim is about *the “number of people unemployed city-wide”* and does not concern differences in employment that might exist among different neighborhoods in the city.

(C) No. This is irrelevant. Since both the politician’s party and the opposition’s party held office for four years, annual seasonal fluctuations should have no impact on overall employment.

(D) Yes. Although the percentage increase in unemployment was less than it was under the previous administration, it still did increase. So by definition, there are now more people unemployed than before.

(E) No. The politician’s claim concerns programs that were implemented under the leadership of his party. Whatever programs were supported by the opposition is irrelevant.

23. (A) Yes. The passage defines categories: everyone is poor or rich, honest or dishonest, a farmer or a non-farmer. It then states that all poor farmers are honest; in other words, there are no dishonest poor farmers. It then concludes that all rich farmers are dishonest; in other words, there are no honest rich farmers. We can represent these

statements as follows (where the crossed-out boxes indicate those combinations that do not exist):

	HONEST	DISHONEST
P O O R	farmer	farmer
R I C H	non-farmer	non-farmer

From the table, we see that the passage assumes that every farmer who is honest is also poor.

(B) No. The passage defines categories: everyone is poor or rich, honest or dishonest, a farmer or a non-farmer. It then states that all poor farmers are honest; in other words, there are no dishonest poor farmers. It then concludes that all rich farmers are dishonest; in other words, there are no honest rich farmers. We can represent these statements as follows (where the crossed-out boxes indicate those combinations that do not exist):

	HONEST	DISHONEST
P O O R	farmer	farmer
R I C H	non-farmer	non-farmer

From the table, we see that the passage allows for honest people who are not farmers—namely, some poor and rich non-farmers).

(C) No. The passage defines categories: everyone is poor or rich, honest or dishonest, a farmer or a non-farmer. It then states that all poor farmers are honest; in other words, there are no dishonest poor farmers. It then concludes that all rich farmers are dishonest; in other words, there are no honest rich farmers. We can represent these statements as follows (where the crossed-out boxes indicate those combinations that do not exist):

	HONEST	DISHONEST
P	farmer	farmer
O	non-farmer	non-farmer
R	farmer	farmer
I	non-farmer	non-farmer
C		
H		

From the table, we see that the passage allows for dishonest people who are not rich farmers—namely, some poor and rich non-farmers).

(D) No. The passage defines categories: everyone is poor or rich, honest or dishonest, a farmer or a non-farmer. It then states that all poor farmers are honest; in other words, there are no dishonest poor farmers. It then concludes that all rich farmers are dishonest; in other words, there are no honest rich farmers. We can represent these statements as follows (where the crossed-out boxes indicate those combinations that do not exist):

	HONEST	DISHONEST
P	farmer	farmer
O	non-farmer	non-farmer
R	farmer	farmer
I	non-farmer	non-farmer
C		
H		

From the table, we see that the passage allows for people who are both poor and dishonest—namely, some non-farmers).

(E) No. The passage defines categories: everyone is poor or rich, honest or dishonest, a farmer or a non-farmer. It then states that all poor farmers are honest; in other words, there are no dishonest poor farmers. It then concludes that all rich farmers are dishonest; in other words, there are no honest rich farmers. We can represent these statements as follows (where the crossed-out boxes indicate those combinations that do not exist):

	HONEST	DISHONEST
P O O R	farmer	farmer
	non-farmer	non-farmer
R I C H	farmer	farmer
	non-farmer	non-farmer

From the table, we see that the passage allows for poor people who are not farmers.

24. No. The Novelist's argument can be paraphrased as follows:

If a work is to express the content of a
novel, then it must be a novel
A summary is not a novel
A summary cannot express the content of
a novel

This answer-choice can be paraphrased as follows:

If this drawing is a blueprint, then it is a
guide
This drawing is a guide
This drawing is a blueprint

Clearly, this paraphrase does not have the same structure as the paraphrase of the Novelist's argument.

(B) No. The Novelist's argument can be paraphrased as follows:

If a work is to express the content of a
novel, then it must be a novel
A summary is not a novel
A summary cannot express the content of
a novel

This answer-choice can be paraphrased as follows:

If this is used as a press release, then it
 does not divulge company secrets
 This does not divulge company secrets
 (but is uninformative)

This cannot be used as a press release

This argument does not have the same structure as the original argument. In the original argument, the second statement negates the “then” portion of the first statement, while in this choice, the second statement affirms the “then” portion of the first statement.

(C) No. The Novelist’s argument can be paraphrased as follows:

If a work is to express the content of a
 novel, then it must be a novel

A summary is not a novel

A summary cannot express the content of
 a novel

This answer-choice can be paraphrased as follows:

If you are watching a travelogue, then you
 are not traveling

A travelogue has some of the benefits of
traveling without the hardships

Many people watch travelogues and do
 not suffer the difficulties of travel

Clearly, the structure of this paraphrase is very different from the Novelist’s argument.

(D) Yes. The Novelist’s argument can be paraphrased as follows:

If a work is to express the content of a
 novel, then it must be a novel

A summary is not a novel

A summary cannot express the content of
 a novel

This answer-choice can be paraphrased as follows:

If a representation conveys the experience
 of a landscape, it must be 3D

A photograph is not 3D

A photograph cannot convey the
 experience of a landscape

Clearly, the two arguments have the same structure.

(E) No. The Novelist's argument can be paraphrased as follows:

If a work is to express the content of a
novel, then it must be a novel
A summary is not a novel
A summary cannot express the content of
a novel

In the way that the original argument contrasts a summary and a novel, this answer-choice contrasts two functions of a menu: as a list of contents of a meal, and as a reminder of a meal. However, there is no similar pattern of reasoning used in both the argument and this answer-choice.

25. (A) Yes. There may be ways other than medical journals for researchers to get their work reviewed by their colleagues.

(B) No. This is too strong. The passage only assumes that most people who don't serve on medical review panels (i.e., the public) do not have the knowledge to evaluate research findings.

(C) No. The argument is about the delay of research before publication, not about access after publication.

(D) No. This is too strong. The passage does not assume that all research findings are subject to peer review, only that those findings that have been reviewed do not contain erroneous or potentially harmful information.

(E) No. This would weaken the argument. If non-medical reasons influence the review panels, then peer review may not "*to protect the public from making decisions based on possibly substandard research.*"

Test I
Section III
Solutions

Questions 1–7

1. (A) No. This choice violates the condition “*Corsage 3 must contain at least one gardenia but no orchids.*”

(B) No. This choice violates the condition “*At least one of each flower.*” There are no violets.

(C) Yes. All the conditions are satisfied: There is one of each type of flower. There are 4 roses, which is twice the number of orchids, 2. Corsage 1 contains exactly two types of flowers. Corsage 2 contains at least one rose. Finally, Corsage 3 does contain at least 1 gardenia and does not contain an orchid.

(D) No. This choice violates the condition “*Corsage 1 must contain exactly two types of flowers.*”

(E) No. This choice violates the condition “*Corsage 2 must contain at least one rose.*”

2. (A) No. The following arrangement has 4 roses and satisfies all the conditions:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
2 roses	1 rose	2 gardenias
1 orchid	1 gardenia	1 rose
	1 violet	

Note, since the question asks for greatest number possible, you should start with choice (E)—the greatest number.

(B) No. The following arrangement has 5 roses and satisfies all the conditions:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
2 roses	1 rose	1 gardenia
1 orchid	1 gardenia	2 roses
	1 violet	

Note, since the question asks for greatest number possible, you should start with choice (E)—the greatest number.

(C) No. The following arrangement has 6 roses and satisfies all the conditions:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
2 roses	3 roses	1 rose
1 orchid		1 gardenia
		1 violet

Note, since the question asks for greatest number possible, you should start with choice (E)—the greatest number.

(D) Yes. The following arrangement has 6 roses and satisfies all the conditions:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
2 roses	3 roses	1 rose
1 orchid		1 gardenia
		1 violet

Furthermore, there cannot be more than 6 flowers of any one type since there is a total of 9 flowers, and at least 1 from each of the 4 types of flowers must be chosen.

(E) No. There is a total of 9 flowers, and at least 1 from each of the 4 types of flowers must be chosen. Hence, there cannot be more than 6 flowers of any one type.

3. (A) No. The following arrangement has 2 violets and satisfies all the conditions:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 rose	3 roses	1 gardenia
2 orchids		2 violets

(B) Yes. Since “*at least twice as many roses as orchids must be used,*” at least 4 roses must be used (we are given that Corsage 1 contains two orchids and one rose). Now, from the original conditions, Corsage 3 must contain at least one gardenia. This determines seven of the nine flowers, none of which are violets. Hence, there can be at most two violets. Furthermore, the following arrangement has 2 violets and satisfies all the conditions:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 rose	3 roses	1 gardenia
2 orchids		2 violets

(C) No. Since “*at least twice as many roses as orchids must be used,*” at least 4 roses must be used (we are given that Corsage 1 contains 2 orchids and 1 rose). Now, from the original conditions, Corsage 3 must contain at least one gardenia. This determines seven of the nine flowers, none of which are violets. Hence, there can be at most two violets.

(D) No. Since “*at least twice as many roses as orchids must be used,*” at least 4 roses must be used (we are given that Corsage 1 contains 2 orchids and 1 rose). Now, from the original conditions, Corsage 3 must contain at least one gardenia. This determines seven of the nine flowers, none of which are violets. Hence, there can be at most two violets.

(E) No. Since “*at least twice as many roses as orchids must be used,*” at least 4 roses must be used (we are given that Corsage 1 contains two orchids and one rose). Now, from the original conditions, Corsage 3 must contain at least one gardenia. This determines seven of the nine flowers, none of which are violets. Hence, there can be at most two violets.

4. (A) Yes. Since Corsage 2 is identical to Corsage 3, it too must contain a gardenia:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
	1 gardenia	1 gardenia

Now, suppose Corsage 1 contains two orchids and one violet:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
2 orchids	1 gardenia	1 gardenia
1 violet		

Now, since there are 2 orchids, there must be 4 roses (*at least twice as many roses as orchids must be used*). The roses can be arranged without violating any conditions as follows:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
2 orchids	1 gardenia	1 gardenia
1 violet	2 roses	2 roses

This diagram satisfies all the conditions. Hence, the corsages can include exactly two orchids.

(B) No. Since Corsage 2 is identical to Corsage 3, it too must contain a gardenia:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
	1 gardenia	1 gardenia

Now, if there is to be a third gardenia, it must be in Corsage 1 (Why?):

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 gardenia	1 gardenia

Since Corsage 3 cannot contain an orchid, neither can Corsage 2. Hence, Corsage 1, which contains exactly two types of flowers, must contain 2 orchids:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 gardenia	1 gardenia
2 orchids		

Since there are “*at least twice as many roses as orchids*,” there must be at least 4 roses. However, this arrangement already has 9 flowers selected and the violets are yet to be selected. Hence, the arrangement cannot include exactly 3 gardenias.

(C) No. Corsage 1 cannot contain all three roses since it must contain two types of flowers. Hence, each corsage must contain exactly 1 rose (neither Corsage 2 nor Corsage 3 could contain two roses [why?]):

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 rose	1 rose	1 rose

Since Corsage 3 cannot contain an orchid, neither can Corsage 2. Hence, Corsage 1 must contain 2 orchids:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 rose 2 orchids	1 rose	1 rose

Since there are “*at least twice as many roses as orchids,*” there must be at least 4 roses. However, this violates our assumption that there are exactly 3 roses. Hence, the arrangement cannot include exactly 3 roses.

(D) No. There cannot be 3 roses in Corsage 1 since it must contain two types of flowers. Hence, there must be one rose in Corsage 1, two roses in Corsage 2, and two roses in Corsage 3:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 rose	2 roses	2 roses

Since Corsage 3 cannot contain an orchid, neither can Corsage 2. Hence, Corsage 1 must contain 2 orchids:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 rose 2 orchids	2 roses	2 roses

Now, Corsage 3 “*must contain at least one gardenia,*” so Corsage 2 does as well. However, this leaves all nine flowers chosen with no violet selected. Hence, the arrangement cannot include exactly 5 roses.

(E) No. There cannot be 3 violets in Corsage 1 since it must contain two types of flowers. Hence, there must be one violet in Corsage 1, two violets in Corsage 2, and two violets in Corsage 3:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 violet	2 violets	2 violets

Since Corsage 3 contains a gardenia, so does Corsage 2:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 violet	2 violets 1 gardenia	2 violets 1 gardenia

The rose and the orchid must fill the remaining two spaces in Corsage 1. However, this violates the condition “*Corsage 1 must contain exactly two types of flowers.*” Hence, the arrangement cannot include exactly 5 violets.

5. (A) No. Since Corsage 3 cannot contain an orchid, the two corsages containing at least one orchid each must be Corsage 1 and Corsage 2. Now, arranging the remaining flowers as follows will not violate any condition:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	1 orchid	2 violets
2 roses	2 roses	1 gardenia

In this valid arrangement, Corsage 2 does not have a gardenia.

(B) No. Since Corsage 3 cannot contain an orchid, the two corsages containing at least one orchid each must be Corsage 1 and Corsage 2. Now, arranging the remaining flowers as follows will not violate any condition:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	1 orchid	2 violets
2 roses	2 roses	1 gardenia

In this valid arrangement, Corsage 2 does not have a gardenia.

(C) Yes. Since Corsage 3 cannot contain an orchid, the two corsages containing at least one orchid each must be Corsage 1 and Corsage 2. Further, the initial conditions state "*Corsage 2 must contain at least one rose.*" Thus, Corsage 2 contains both an orchid and a rose.

(D) No. Since Corsage 3 cannot contain an orchid, the two corsages containing at least one orchid each must be Corsage 1 and Corsage 2. Now, arranging the remaining flowers as follows will not violate any condition:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	1 orchid	2 violets
2 roses	2 roses	1 gardenia

In this valid arrangement, Corsage 2 does not have a violet.

(E) No. Since Corsage 3 cannot contain an orchid, the two corsages containing at least one orchid each must be Corsage 1 and Corsage 2. Now, arranging the remaining flowers as follows will not violate any condition:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	1 orchid	2 violets
2 roses	2 roses	1 gardenia

In this valid arrangement, Corsage 2 does not have a violet.

6. (A) No. From the initial conditions, each of the 4 types of flowers must be used and there must be at least twice as many roses as orchids. Hence, any arrangement must contain at least 2 roses.

(B) No. From the initial conditions, each of the 4 types of flowers must be used and there must be at least twice as many roses as orchids. Hence, any arrangement must contain at least

2 roses
1 orchid
1 violet
1 gardenia

If arranged properly, the 4 remaining flowers can all be violets. Hence, the greatest possible number of violets is 5. The following diagram illustrates one possible arrangement:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	2 roses	1 gardenia
2 violets	1 violet	2 violets

(C) No. From the initial conditions, each of the 4 types of flowers must be used and there must be at least twice as many roses as orchids. Hence, any arrangement must contain at least

2 roses
1 orchid
1 violet
1 gardenia

If arranged properly, the 4 remaining flowers can all be violets. Hence, the greatest possible number of violets is 5, which corresponds to exactly 1 orchid. The following diagram illustrates one possible arrangement:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	2 roses	1 gardenia
2 violets	1 violet	2 violets

(D) Yes. From the initial conditions, each of the 4 types of flowers must be used and there must be at least twice as many roses as orchids. Hence, any arrangement must contain at least

2 roses
1 orchid
1 violet
1 gardenia

If arranged properly, the 4 remaining flowers can all be violets. Hence, the greatest possible number of violets is 5, which corresponds to exactly 2 roses. The following diagram illustrates one possible arrangement:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	2 violets	1 gardenia
2 violets	1 rose	1 rose
		1 violet

(E) No. From the initial conditions, each of the 4 types of flowers must be used and there must be at least twice as many roses as orchids. Hence, any arrangement must contain at least

2 roses
1 orchid
1 violet
1 gardenia

If arranged properly, the 4 remaining flowers can all be violets. Hence, the greatest possible number of violets is 5. The following diagram illustrates one possible arrangement:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 orchid	2 violets	1 gardenia
2 violets	1 rose	1 rose
		1 violet

7. (A) Yes. Since Corsage 3 cannot contain an orchid, it must contain 1 gardenia, 1 violet, and 1 rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia		1 gardenia
1 violet		1 violet
		1 rose

Since Corsage 1 contains exactly two flowers and each type of flower must be used, Corsage 2 must contain both an orchid and a rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 orchid	1 gardenia
1 violet	1 rose	1 violet
		1 rose

The third flower in Corsage 2 can be a gardenia without violating any condition.

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 orchid	1 gardenia
1 violet	1 rose	1 violet
	1 gardenia	1 rose

Finally, if the third flower in Corsage 1 is either another gardenia or another violet, then all the conditions will be satisfied.

(B) No. Since Corsage 3 cannot contain an orchid, it must contain 1 gardenia, 1 violet, and 1 rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia		1 gardenia
1 violet		1 violet
		1 rose

Since Corsage 1 contains exactly two flowers and each type of flower must be used, Corsage 2 must contain both an orchid and a rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 orchid	1 gardenia
1 violet	1 rose	1 violet
		1 rose

Now, if a second orchid is chosen for Corsage 2, then at least two more roses would need to be selected (*at least twice as many roses as orchids must be used*). However, this scenario has 10 flowers being selected.

(C) No. Since Corsage 3 cannot contain an orchid, it must contain 1 gardenia, 1 violet, and 1 rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia		1 gardenia
1 violet		1 violet
		1 rose

Since Corsage 1 contains exactly two flowers and each type of flower must be used, Corsage 2 must contain both an orchid and a rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 orchid	1 gardenia
1 violet	1 rose	1 violet
		1 rose

Clearly, there is no room in Corsage 2 for two violets.

(D) No. Since Corsage 3 cannot contain an orchid, it must contain 1 gardenia, 1 violet, and 1 rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia		1 gardenia
1 violet		1 violet
		1 rose

Since Corsage 1 contains exactly two flowers and each type of flower must be used, Corsage 2 must contain both an orchid and a rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 orchid	1 gardenia
1 violet	1 rose	1 violet
		1 rose

Now, adding a gardenia and an additional rose to Corsage 2 would bring the total number of flowers in Corsage 2 to four.

(E) No. Since Corsage 3 cannot contain an orchid, it must contain 1 gardenia, 1 violet, and 1 rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia		1 gardenia
1 violet		1 violet
		1 rose

Since Corsage 1 contains exactly two flowers and each type of flower must be used, Corsage 2 must contain both an orchid and a rose:

<u>Corsage 1</u>	<u>Corsage 2</u>	<u>Corsage 3</u>
1 gardenia	1 orchid	1 gardenia
1 violet	1 rose	1 violet
		1 rose

Now, adding a violet and an additional rose to Corsage 2 would bring the total number of flowers in Corsage 2 to four.

Questions 8–13

The statement A *unless* B means that A is true in all cases, except when B is true. In other words, if B is false, then A must be true. That is, if not B , then A .

$$(A \text{ unless } B) = (\text{If not } B, \text{ then } A)$$

This can be symbolized as $\sim B \rightarrow A$.

Symbolizing the condition " N cannot be selected unless L is selected" yields

$$\sim L \rightarrow \sim N$$

Applying the contrapositive to this diagram yields

$$\mathbf{N \rightarrow L}$$

Next, the condition “*Either J or K must be selected, but J and K cannot both be selected*” can be symbolized as

$$\mathbf{J \text{ or } K}$$

Note, we won’t indicate in the symbol that “*J and K cannot both be selected*”—just keep it in mind. Symbolizing the remaining conditions in like manner yields

$$\begin{array}{c} \mathbf{J \text{ or } K} \\ \mathbf{N \text{ or } P} \\ \mathbf{N \rightarrow L} \\ \mathbf{Q \rightarrow K} \end{array}$$

8. (A) No. This violates the condition “*J and K cannot both be selected.*”
 (B) No. This violates the condition $\mathbf{Q \rightarrow K}$ since Q is selected but K is not.
 (C) No. This violates the condition $\mathbf{Q \rightarrow K}$ since Q is selected but K is not.
 (D) Yes. All the conditions are satisfied: Since K is selected, the condition $\mathbf{J \text{ or } K}$ is satisfied. Since P is selected, the condition $\mathbf{N \text{ or } P}$ is satisfied. Since N is not selected, the condition $\mathbf{N \rightarrow L}$ does not apply. Since both Q and K are selected, the condition $\mathbf{Q \rightarrow K}$ is satisfied.
 (E) No. This violates the condition “*N and P cannot both be selected.*”

9. (A) No. The following group contains neither K nor Q and does not violate any of the conditions:

$$\mathbf{J, L, P, M}$$

- (B) Yes. Suppose neither L nor M is selected. Then applying the contrapositive to the condition $\mathbf{N \rightarrow L}$ shows that N cannot attend. This leaves only J, K, P, and Q. But “*J and K cannot both be selected.*”
 (C) No. The following group contains neither N nor M and does not violate any of the conditions:

$$\mathbf{K, L, P, Q}$$

- (D) No. The following group contains neither N nor Q and does not violate any of the conditions:

$$\mathbf{K, L, M, P}$$

- (E) No. The following group contains neither P nor Q and does not violate any of the conditions:

K, L, M, N

10. (A) No. The following group contains both J and N and does not violate any of the conditions:

J, L, M, N

(B) Yes. Suppose both J and Q are selected. Then from the condition $Q \rightarrow K$, K must be selected. However, this violates the condition "*J and K cannot both be selected.*"

(C) No. The following group contains both K and L and does not violate any of the conditions:

K, L, M, N

(D) No. The following group contains both K and N and does not violate any of the conditions:

K, L, M, N

(E) No. The following group contains both N and Q and does not violate any of the conditions:

K, L, N, Q

11. (A) No. The following group does not contain M or J and does not violate any of the conditions:

K, L, N, Q

(B) Yes. Since M is not selected, 6 people remain in the selection pool—J, K, L, N, P, and Q. Now, exactly one of either J and K must be selected. This leaves 4 people in the pool—L, N, P, and Q. Next, exactly one of either N and P must be selected. This leaves 2 people in the pool—L and Q. Since 4 people are to be selected, both L and Q must be selected. Further, from the condition $Q \rightarrow K$, we know that K must be selected. Thus, both K and L must be selected.

(C) No. The following group does not contain M or P and does not violate any of the conditions:

K, L, N, Q

(D) No. The following group does not contain M or P and does not violate any of the conditions:

K, L, N, Q

(E) No. The following group does not contain M or N and does not violate any of the conditions:

K, L, P, Q

12. (A) No. Both of the following groups satisfy all the conditions:

K, L, N, M K, L, N, Q

(B) No. All three of the following groups satisfy all the conditions:

K, L, N, M K, L, N, Q J, L, N, M

(C) Yes. If P is not selected, then from the condition **N or P** we know that N must be selected. Now, from the condition **N→L**, we know that L must also be selected. Next, along with N and L, we must select either J or K, but not both. This yields two groups:

Group I	Group II
J, L, N	K, L, N

In Group I, Q cannot be selected because the condition **Q→K** would force K into the group—violating the condition “*J and K cannot both be selected.*” Hence, Group I is uniquely determined:

J, L, N, M

However, either M or Q can join Group II without violating any conditions:

K, L, N, M K, L, N, Q

Thus, there are only 3 acceptable groups.

(D) No. If P is not selected, then from the condition **N or P** we know that N must be selected. Now, from the condition **N→L**, we know that L must also be selected. Next, along with N and L, we must select either J or K, but not both. This yields two groups:

Group I	Group II
J, L, N	K, L, N

In Group I, Q cannot be selected because the condition **Q→K** would force K into the group—violating the condition “*J and K cannot both be selected.*” Hence, Group I is uniquely determined:

J, L, N, M

However, either M or Q can join Group II without violating any conditions:

K, L, N, M K, L, N, Q

Thus, there are only 3 acceptable groups.

(E) No. If P is not selected, then from the condition **N or P** we know that N must be selected. Now, from the condition **N→L**, we know that L must also be selected. Next, along with N and L, we must select either J or K, but not both. This yields two groups:

Group I Group II
J, L, N K, L, N

In Group I, Q cannot be selected because the condition **Q→K** would force K into the group—violating the condition “*J and K cannot both be selected.*” Hence, Group I is uniquely determined:

J, L, N, M

However, either M or Q can join Group II without violating any conditions:

K, L, N, M K, L, N, Q

Thus, there are only 3 acceptable groups.

13. (A) No. The following two groups contain both J and L, and they do not violate any of the conditions:

J, L, N, M J, L, M, P

(B) No. The following two groups contain both K and M, and they do not violate any of the conditions:

K, L, N, M K, L, M, P

(C) No. The following two groups contain both L and N, and they do not violate any of the conditions:

J, L, N, M K, L, N, M

(D) No. The following two groups contain both L and Q, and they do not violate any of the conditions:

K, L, P, Q K, L, N, Q

(E) Yes. Suppose both M and Q are selected. Then from the condition **Q→K**, we know that K must be selected. This yields the following partial group:

K, M, Q

Now, we must select either N or P. Suppose N is selected. Then from the condition $N \rightarrow L$, L must also be selected. This, however, puts 5 people—K, M, Q, N, and L—in the group. Hence, N cannot be selected, so P must be selected, and the group is uniquely determined:

K, M, Q, P

Questions 14–18

14. (A) No. The following diagram satisfies all the conditions and has Miguel paired with Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Rita	Karl/Sarah	Karl/Tura
Miguel/Sarah	Miguel/Tura	Miguel/Rita
h		
Luis/Tura	Luis/Rita	Luis/Sarah

(B) No. The following diagram satisfies all the conditions and has Miguel paired with Rita in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Karl/Tura	Karl/Rita
Miguel/Rita	Miguel/Sarah	Miguel/Tura
h		
Luis/Tura	Luis/Rita	Luis/Sarah

(C) No. The following diagram satisfies all the conditions and has Miguel paired with Rita in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Karl/Tura	Karl/Rita
Miguel/Rita	Miguel/Sarah	Miguel/Tura
h		
Luis/Tura	Luis/Rita	Luis/Sarah

(D) Yes. Miguel can partner with Rita in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Karl/Tura	Karl/Rita

Miguel/Rita	Miguel/Sara h	Miguel/Tura
Luis/Tura	Luis/Rita	Luis/Sarah

Further, Miguel can partner with Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Rita	Karl/Sarah	Karl/Tura
Miguel/Sara h	Miguel/Tura	Miguel/Rita
Luis/Tura	Luis/Rita	Luis/Sarah

Now, suppose Miguel partners Tura in dance 1. Since Luis partners Sarah in dance 3, the condition “*Whoever partners Rita in dance 2 must partner Sarah in dance 3*” force Luis to partner Rita in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Tura	Luis/Rita	Luis/Sarah

However, this leaves no partner for Luis in dance 1: Luis cannot partner Tura because Miguel already does. Luis cannot partner Rita because he already did in dance 2, and Luis cannot partner Sarah because he already did in dance 3. Hence, a complete and accurate list of the people who could partner Miguel in dance 1 is Rita and Sarah.

(E) No. The following diagram satisfies all the conditions and has Miguel paired with Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Rita	Karl/Sarah	Karl/Tura
Miguel/Sara h	Miguel/Tura	Miguel/Rita
Luis/Tura	Luis/Rita	Luis/Sarah

15. (A) No. Since Miguel partners Rita in dance 2, the condition “*Whoever partners Rita in dance 2 must partner Sarah in dance 3*” forces Miguel to partner Sarah in dance 3.

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Tura	Miguel/Rita	Miguel/Sara h

Since Miguel partners Rita in dance 2 and Sarah in dance 3, he must partner Tura in dance 1 (*No two children can partner each other in more than one dance*). However, this answer-choice already has Karl paired with Tura.

(B) Yes. Since Miguel partners Rita in dance 2, the condition “*Whoever partners Rita in dance 2 must partner Sarah in dance 3*” forces Miguel to partner Sarah in dance 3. Now, suppose Luis partners Sarah in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
	Luis/Sarah	Miguel/Sarah

This diagram satisfies the first two conditions, and the following pairs can be added to the diagram without violating the last condition:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Miguel/Rita	Miguel/Sarah
Luis/Rita	Luis/Sarah	Luis/Tura
Miguel/Tura	Karl/Tura	Karl/Rita

(C) No. Since Miguel partners Rita in dance 2, the condition “*Whoever partners Rita in dance 2 must partner Sarah in dance 3*” forces Miguel to partner Sarah in dance 3.

(D) No. Since Miguel partners Rita in dance 2, the condition “*Whoever partners Rita in dance 2 must partner Sarah in dance 3*” forces Miguel to partner Sarah in dance 3. Hence, Miguel cannot partner Sarah in dance 1 (*No two children can partner each other in more than one dance*).

(E) No. Since Miguel partners Rita in dance 2, the condition “*Whoever partners Rita in dance 2 must partner Sarah in dance 3*” forces Miguel to partner Sarah in dance 3.

16. (A) No. Since Miguel partners Sarah in dance 1, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	

Since Miguel and Karl have partnered Sarah, Luis must partner Sarah in dance 3—otherwise the condition “*No two children can partner each other in more than one dance*” would be violated:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	Luis/Sarah

From “*whoever partners Rita in dance 2 must partner Sarah in dance 3*,” Luis must partner Rita in dance 2. This leaves Tura as the only person he hasn’t danced with, so he dances with her in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	Luis/Sarah
h	Luis/Rita	
Luis/Tura		

Now, in dance 1, Karl must dance with Rita. Since Karl already dances with Sarah in dance 2, which leaves Tura as Karl's partner in dance 3.

(B) Yes. Since Miguel partners Sarah in dance 1, the condition "*Karl partners Sarah in either dance 1 or dance 2*" forces Karl to partner Sarah in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	
h		

Since Miguel and Karl have partnered Sarah, Luis must partner Sarah in dance 3—otherwise the condition "*No two children can partner each other in more than one dance*" would be violated:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	Luis/Sarah
h		

From "*whoever partners Rita in dance 2 must partner Sarah in dance 3*," Luis must partner Rita in dance 2. This leaves Tura as the only person he hasn't danced with, so he dances with her in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	Luis/Sarah
h	Luis/Rita	
Luis/Tura		

Now, in dance 1, Karl must dance with Rita. Since Karl already dances with Sarah in dance 2, which leaves Tura as Karl's partner in dance 3.

(C) No. Since Miguel partners Sarah in dance 1, the condition "*Karl partners Sarah in either dance 1 or dance 2*" forces Karl to partner Sarah in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sarah	Karl/Sarah	
h		

Since Miguel and Karl have partnered Sarah, Luis must partner Sarah in dance 3—otherwise the condition "*No two children can partner each other in more than one dance*" would be violated:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sara h	Karl/Sarah	Luis/Sarah

(D) No. Since Miguel partners Sarah in dance 1, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sara h	Karl/Sarah	

Since Miguel and Karl have partnered Sarah, Luis must partner Sarah in dance 3—otherwise the condition “*No two children can partner each other in more than one dance*” would be violated:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sara h	Karl/Sarah	Luis/Sarah

(E) No. Since Miguel partners Sarah in dance 1, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 2:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sara h	Karl/Sarah	

Since Miguel and Karl have partnered Sarah, Luis must partner Sarah in dance 3—otherwise the condition “*No two children can partner each other in more than one dance*” would be violated:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sara h	Karl/Sarah	Luis/Sarah

From “*whoever partners Rita in dance 2 must partner Sarah in dance 3,*” Luis must partner Rita in dance 2. This leaves Tura as the only person he hasn’t danced with, so he dances with her in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Miguel/Sara h	Karl/Sarah Luis/Rita	Luis/Sarah
Luis/Tura		

Now, in dance 1, Karl must dance with Rita. Since Karl already dances with Sarah in dance 2, which leaves Tura as Karl’s partner in dance 3.

17. (A) No. Since Luis partners Sarah in dance 2, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 1.

(B) No. Since Luis partners Sarah in dance 2, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 1.

(C) Yes. Since Luis partners Sarah in dance 2, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Luis/Sarah	

This forces Miguel to partner Sarah in dance 3, which in turn forces Miguel to partner Rita in dance 2 (*Whoever partners Rita in dance 2 must partner Sarah in dance 3*).

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Luis/Sarah	Miguel/Sarah
		h
	Miguel/Rita	

Now, if Luis partners Tura in dance 1, then Miguel must partner Rita in dance 1. However, Miguel has already been paired with Rita in dance 2. Hence, Luis must be paired with Rita in dance 1.

(D) No. Since Luis partners Sarah in dance 2, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Luis/Sarah	

This forces Miguel to partner Sarah in dance 3, which in turn forces Miguel to partner Rita in dance 2 (*Whoever partners Rita in dance 2 must partner Sarah in dance 3*).

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Luis/Sarah	Miguel/Sarah
		h
	Miguel/Rita	

Now, if Luis partners Tura in dance 1, then Miguel must partner Rita in dance 1. However, Miguel has already been paired with Rita in dance 2.

(E) No. Since Luis partners Sarah in dance 2, the condition “*Karl partners Sarah in either dance 1 or dance 2*” forces Karl to partner Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Luis/Sarah	

This forces Miguel to partner Sarah in dance 3, which in turn forces Miguel to partner Rita in dance 2. Since “No two children can partner each other in more than one dance,” Miguel cannot partner Rita in dance 1.

18. (A) No. If Karl partners Rita in dance 2, then the condition “Whoever partners Rita in dance 2 must partner Sarah in dance 3” forces Karl to partner Sarah in dance 3. However, this violates the condition “Karl partners Sarah in either dance 1 or dance 2.”

(B) No. Since “No two children can partner each other in more than one dance,” this violates the condition “Karl partners Sarah in either dance 1 or dance 2.”

(C) No. The following arrangement satisfies all the conditions and has Karl paired with Sarah in dance 1:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Karl/Tura	Karl/Rita
Miguel/Rita	Miguel/Sarah	Miguel/Tura
	h	
Luis/Tura	Luis/Rita	Luis/Sarah

(D) Yes. Since Miguel partners Rita in dance 1, either Luis or Karl must partner Rita in dance 2. Suppose Karl partners Rita in dance 2. Then the condition “Whoever partners Rita in dance 2 must partner Sarah in dance 3” forces Karl to partner Sarah in dance 3. However, this violates the condition “Karl partners Sarah in either dance 1 or dance 2.” Hence, Luis partners Rita in dance 2.

(E) No. The following arrangement satisfies all the conditions and has Luis paired with Sarah in dance 3:

<u>Dance 1</u>	<u>Dance 2</u>	<u>Dance 3</u>
Karl/Sarah	Karl/Tura	Karl/Rita
Miguel/Rita	Miguel/Sarah	Miguel/Tura
	h	
Luis/Tura	Luis/Rita	Luis/Sarah

Questions 19–24

Applying the conditions to the diagram yields

City 1	City 2
City 3	City 4
U	
City 5	City 6
	JH

Since “None of the cities contains both a jail and a university” and “The universities are located in two cities that do not share a common boundary,” the remaining university must be in City 2:

City 1	City 2 U
City 3 U	City 4
City 5	City 6 JH

19. (A) No. Since there is a university in City 3, this would violate the condition “The universities are located in two cities that do not share a common boundary.”
- (B) No. Since there is already a jail in City 6, this would violate the condition “None of the cities contains both a jail and a university.”
- (C) No. The original diagram has a university in City 2. Hence, placing a jail in City 2 would violate the condition “None of the cities contains both a jail and a university.”
- (D) No. Since there is a university in City 3, this would violate the condition “None of the cities contains both a jail and a university.”
- (E) Yes. In the original diagram, place a hospital in City 3:

City 1	City 2 U
City 3 UH	City 4
City 5	City 6 JH

Now, the remaining jail can be placed in City 1 along with one of the remaining hospitals, and the last remaining hospital can be placed in City 4—all without violating any conditions:

City 1 JH	City 2 U
City 3 UH	City 4 H
City 5	City 6 JH

20. (A) Yes. The follows diagram satisfies all the conditions:

City 1 H	City 2 U
City 3 UH	City 4 JH
City 5	City 6 JH

(B) No. The original diagram has the two universities in Cities 2 and 3.

(C) No. The original diagram has a university in City 2. Hence, placing a jail in City 2 would violate the condition “*None of the cities contains both a jail and a university.*”

(D) No. The original diagram has the two universities in Cities 2 and 3.

(E) No. The original diagram has the two universities in Cities 2 and 3.

21. (A) No. A jail cannot be in City 2 because the original diagram has a university in City 2, which would violate the condition “*None of the cities contains both a jail and a university.*” This eliminates choices (B) and (E). Next, a jail can be in City 1 as the following diagram illustrates:

City 1 JH	City 2 U
City 3 UH	City 4 H
City 5	City 6 JH

This eliminates choice (C)—it doesn’t contain 1. Since both of the remaining answer-choices contain City 4, we need not check whether a jail can be placed in City 4—it can be. Suppose City 5 contains a jail. Then the remaining 3 hospitals can be placed in City 5, without violating any of the conditions:

City 1	City 2 U
City 3 U	City 4
City 5	City 6

JHHH	JH
-------------	-----------

Thus, the additional jail can be in only cities 1, 4, or 5.

(B) No. A jail cannot be in City 2 because the original diagram has a university in City 2, which would violate the condition “*None of the cities contains both a jail and a university.*” This eliminates choices (B) and (E). Next, a jail can be in City 1 as the following diagram illustrates:

City 1	City 2
JH	U
City 3	City 4
UH	
City 5	City 6
	JH

This eliminates choice (C)—it doesn’t contain 1. Since both of the remaining answer-choices contain City 4, we need not check whether a jail can be placed in City 4—it can be. Suppose City 5 contains a jail. Then the remaining 3 hospitals can be placed in City 5, without violating any of the conditions:

City 1	City 2
	U
City 3	City 4
U	
City 5	City 6
JHHH	JH

Thus, the additional jail can be in only cities 1, 4, or 5.

(C) No. A jail cannot be in City 2 because the original diagram has a university in City 2, which would violate the condition “*None of the cities contains both a jail and a university.*” This eliminates choices (B) and (E). Next, a jail can be in City 1 as the following diagram illustrates:

City 1	City 2
JH	U
City 3	City 4
UH	H

City 5	City 6
	JH

This eliminates choice (C)—it doesn't contain 1. Since both of the remaining answer-choices contain City 4, we need not check whether a jail can be placed in City 4—it can be. Suppose City 5 contains a jail. Then the remaining 3 hospitals can be placed in City 5, without violating any of the conditions:

City 1	City 2
	U
City 3	City 4
U	
City 5	City 6
JHHH	JH

Thus, the additional jail can be in only cities 1, 4, or 5.

(D) Yes. A jail cannot be in City 2 because the original diagram has a university in City 2, which would violate the condition “None of the cities contains both a jail and a university.” This eliminates choices (B) and (E). Next, a jail can be in City 1 as the following diagram illustrates:

City 1	City 2
JH	U
City 3	City 4
UH	H
City 5	City 6
	JH

This eliminates choice (C)—it doesn't contain 1. Since both of the remaining answer-choices contain City 4, we need not check whether a jail can be placed in City 4—it can be. Suppose City 5 contains a jail. Then the remaining 3 hospitals can be placed in City 5, without violating any of the conditions:

City 1	City 2
	U
City 3	City 4
U	

City 5	City 6
JHHH	JH

Thus, the additional jail can be in only cities 1, 4, or 5.

(E) No. A jail cannot be in City 2 because the original diagram has a university in City 2, which would violate the condition “*None of the cities contains both a jail and a university.*” This eliminates choices (B) and (E). Next, a jail can be in City 1 as the following diagram illustrates:

City 1	City 2
JH	U
City 3	City 4
UH	H
City 5	City 6
	JH

This eliminates choice (C)—it doesn’t contain 1. Since both of the remaining answer-choices contain City 4, we need not check whether a jail can be placed in City 4—it can be. Suppose City 5 contains a jail. Then the remaining 3 hospitals can be placed in City 5, without violating any of the conditions:

City 1	City 2
	U
City 3	City 4
U	
City 5	City 6
JHHH	JH

Thus, the additional jail can be in only cities 1, 4, or 5.

22. (A) No. The following diagram satisfies all the conditions and does not have a jail in City 1:

City 1	City 2
H	U
City 3	City 4
U	JH
City 5	City 6
H	JH

(B) No. The following diagram satisfies all the conditions and does not have a hospital in City 2:

City 1 H	City 2 U
City 3 U	City 4 JH
City 5 H	City 6 JH

(C) No. The following diagram satisfies all the conditions and does not have a hospital in City 3:

City 1 H	City 2 U
City 3 U	City 4 JH
City 5 H	City 6 JH

(D) Yes. City 4 cannot contain a university since the original diagram has the two universities in Cities 2 and 3. So City 4 must contain either a hospital or a jail. But if it contains a jail, then it must also contain a hospital (*Each jail is located in a city that contains at least one hospital*). So in all cases, City 4 contains a hospital.

(E) No. The following diagram satisfies all the conditions and does not have a jail in City 4:

City 1 JH	City 2 U
City 3 U	City 4 H
City 5 H	City 6 JH

23. (A) No. The following diagram has three hospitals in City 1 and does not violate any of the conditions:

City 1 JHHH	City 2 U
City 3	City 4

U	
City 5	City 6 JH

(B) Yes. Suppose there are three hospitals in City 2. Then the original diagram becomes

City 1	City 2 UHHH
City 3 U	City 4
City 5	City 6 JH

The remaining jail cannot be placed in City 6 since that would violate the condition “None of the cities contains more than one jail.” The remaining jail cannot be placed in City 2 since that would violate the condition “None of the cities contains both a jail and a university.” The remaining jail cannot be placed in Cities 1, 4, or 5 since that would violate the condition “Each jail is located in a city that contains at least one hospital” (all four hospitals have already been placed on the diagram). Thus, there is no room to place the remaining jail. Hence, there must be fewer than three hospitals in City 2.

(C) No. The following diagram has three hospitals in City 4 and does not violate any of the conditions:

City 1	City 2 U
City 3 U	City 4 JHHH
City 5	City 6 JH

(D) No. The following diagram has three hospitals in City 5 and does not violate any of the conditions:

City 1	City 2 U
City 3 U	City 4
City 5 JHHH	City 6 JH

(E) No. The following diagram has three hospitals in City 6 and does not violate any of the conditions:

City 1 JH	City 2 U
City 3 U	City 4
City 5	City 6 JHHH

24. (A) Yes. The following diagram satisfies all the conditions and does not contain a hospital in Cities 1, 3, or 5:

City 1	City 2 UHH
City 3 U	City 4 JH
City 5	City 6 JH

(B) No. Referring to the original diagram, we see that the remaining jail cannot be placed in Cities 2 or 3 because that would violate the condition “None of the cities contains both a jail and a university.” Further, since “None of the cities contains more than one jail,” the remaining jail cannot be placed in City 6. Hence, the remaining jail must be placed in City 1, 4, or 5. Since “Each jail is located in a city that contains at least one hospital,” City 1, 4, or 5 must contain a hospital.

(C) No. The original diagram has the two universities placed in Cities 2 and 3. Hence, the city that contains exactly two hospitals and exactly one university must be either City 2 or City 3.

(D) No. The original diagram has a hospital in City 6.

(E) No. The original diagram has a hospital in City 6.

Test I
Section IV
Solutions

1. (A) No. The author implies that other people accuse the postal service of incompetence and inefficiency and does not dispute that accusation. Instead, he states that the result of the postal service's function—for example, a personal letter from a friend—is worth the increased cost.

(B) No. This is irrelevant to those who believe a five-cent increase is significant.

(C) Yes. The argument is confusing the emotional value of a letter from a friend with the monetary value of delivering the letter (i.e., the price of the stamp).

(D) No. There is no outside authority mentioned in the passage.

(E) No. *Who* makes the criticism is not relevant; the issue is the *truthfulness* of the criticism.

2. (A) No. Regardless of the reason, the delay still occurred and the argument's validity remains unaffected.

(B) No. This is irrelevant. The passage states that aspirin is effective in tests with humans.

(C) No. The conclusion does not state that the general health of people who take aspirin would be better, just that their risk of heart attack would be lessened.

(D) No. Regardless of the reason, the delay still occurred and the argument's validity remains unaffected.

(E) Yes. If aspirin must be taken regularly for two years before any benefits are realized, then taking aspirin during the six-week delay would have had no affect on reducing the risk of heart attacks during the delay.

3. (A) No. This doesn't provide enough information about the 90 percent of the travelers who seek discount fares. Are they new travelers who would not have otherwise purchased tickets except at a discount? Or are they travelers who were intending to pay full-fare but took advantage of a good deal?

(B) No. This is irrelevant.

(C) Yes. If across-the-board discounts attract passengers who displace full-fare travelers on filled flights, then revenues will decrease on those flights. Further, if no new passengers are attracted to usually unfilled flights, there will be no corresponding increases in revenue elsewhere. The net effect is a decrease in revenues and thus profits.

(D) No. This is actually a pretty good choice, but it's not the answer for two reasons: 1) There is a stronger answer-choice. 2) It has a flaw: Although only a small number of people who had never flown before were persuaded to do so, it's possible that people who already travel by air greatly increased the number of trips they take.

(E) No. This is irrelevant.

4. (A) No. Given the statement "*Only if the electorate is moral and intelligent will a democracy function well,*" we know that if a democracy is functioning well, then the electorate must be moral and intelligent. This can be diagrammed as follows:

FW—>(M & I)

where the arrow means “If ..., then ...” Now, this answer-choice states, “If the electorate is moral and intelligent, then a democracy will function well,” which can be diagrammed as follows:

$$(M \& I) \rightarrow FW$$

This is clearly the fallacy of affirming the conclusion.

(B) No. Given the statement “*Only if the electorate is moral and intelligent will a democracy function well,*” we know that if a democracy is functioning well, then the electorate must be moral and intelligent. This can be diagrammed as $FW \rightarrow (M \& I)$, where the arrow means “If ..., then ...”

Now, an *if-then* statement is false only when its premise is true and its conclusion is false—in all other cases it is true. The following “truth-table” illustrates all four possible cases for the original argument:

Premise	Conclusion	If-then Statement
FW	M & I	$FW \rightarrow (M \& I)$
T	T	T
T	F	F
F	T	T
F	F	T

Now, the opposite of Choice (B) is

The democracy functions well and the electorate is moral and intelligent.

This is the first row of the truth-table in which the original *if-then* statement is true. Since the opposite of Choice (B) is consistent with the original argument, Choice (B) does not necessarily follow from the original argument.

(C) Yes. Given the statement “*Only if the electorate is moral and intelligent will a democracy function well,*” we know that if a democracy is functioning well, then the electorate must be moral and intelligent. This can be diagrammed as follows:

$$FW \rightarrow (M \& I)$$

where the arrow means “If ..., then ...” Applying the contrapositive yields

$$\sim(M \& I) \rightarrow \sim FW$$

Now, saying that the electorate is not both moral and intelligent, $\sim(M \& I)$, is equivalent to saying that the electorate is either not moral or not intelligent, $\sim M$ or $\sim I$.

$$(\sim M \text{ or } \sim I) \rightarrow \sim FW$$

In other words, if the electorate is not moral or not intelligent, then a democracy will not function well.

(D) No. Given the statement “*Only if the electorate is moral and intelligent will a democracy function well,*” we know that if a democracy is functioning well, then the electorate must be moral and intelligent. This can be diagrammed as follows:

$$\text{FW} \rightarrow (\text{M} \ \& \ \text{I})$$

where the arrow means “If ..., then ...” Applying the contrapositive yields

$$\sim(\text{M} \ \& \ \text{I}) \rightarrow \sim\text{FW}$$

In other words, if the electorate is not both moral and intelligent, then a democracy will not function well. Now, this answer-choice states “*a democracy does not function well.*” This affirms the conclusion in the last diagram. The answer-choice then commits the fallacy of affirming the conclusion by concluding “*the electorate is not moral or not intelligent.*”

(E) No. Given the statement “*Only if the electorate is moral and intelligent will a democracy function well,*” we know that if a democracy is functioning well, then the electorate must be moral and intelligent. This can be diagrammed as follows:

$$\text{FW} \rightarrow (\text{M} \ \& \ \text{I})$$

where the arrow means “If ..., then ...” Now, recall that an *if-then* statement is false only when its premise is true and its conclusion is false. Hence, it is possible for the premise to be false (democracy will not function well) and the conclusion to be true (the electorate is moral and intelligent) simultaneously.

5. (A) No. While the passage discusses infants younger than six months, there is nothing in the passage that states this ability disappears immediately at six months of age.
 (B) No. This is irrelevant. The passage is about similar but *different* speech sounds.
 (C) No. This is irrelevant.
 (D) No. There is no discussion of individuals in the passage.
 (E) Yes. There might be several factors that contribute to the observed difference in ability to distinguish similar sounds. For example, perhaps the portion of the brain that identifies and interprets sounds responds differently in infants than in adults.

6. (A) No. The argument does not need this assumption. The problem is not that the younger workers are not skilled, it’s that there are not enough younger workers.
 (B) No. The passage is about the size of the labor pool, not about the plight of retired workers.
 (C) Yes. If the people would retire regardless of whether they were forced to, then abolishing the practice of mandatory retirement would have no affect on the size of the labor pool.
 (D) No. This is irrelevant.

(E) No. This would weaken the argument. If many retired workers were already in the labor pool, those remaining may not be sufficient to make up for the coming labor shortages.

7. (A) No. In fact, the passage implies that Japan and North America have similar levels of industrial pollution.

(B) No. In fact, the passage states that Japan has a modern life-style. Therefore, it is reasonable to assume that the levels of stress are equivalent to those in North America.

(C) No. This choice is tempting, but it has a flaw. Instead of the Japanese diet curing cancer, perhaps the North American diet causes cancer.

(D) Yes. That Japanese who immigrated to North America soon developed the same rate of cancer as other North Americans is strong evidence that the lower cancer rate in Japan is due to diet, not genetic or environmental factors.

(E) No. This is too strong. Although the passage provides support for arguing that the different cancer rates in Japan and North America are due to the different diets, it does not state or imply that any particular factor in the North American diet causes cancer.

8. (A) No. If stylistic differences between human translators could be reduced by providing guidelines for writing, there would be fewer reasons to use a computer for translation. This answer-choice provides an alternate solution to the stated problem.

(B) No. To determine the relative accuracy of computer versus human translations, numerical evaluations would be very useful.

(C) Yes. The issue is the different writing styles *within* a given document. The argument advocates using a *single* computer program to translate a given document—thus, insuring the writing style will be consistent throughout the document.

(D) No. The argument presumes that accurate translation is important. It is certainly relevant to determine whether a translation program makes errors that change the meaning of the text.

(E) No. Knowing how the translation is used is important for determining whether the style of the translation is more important than its accuracy.

Questions 9–10

9. (A) No. Myrna does not dispute Roland's statements. Rather, she expands the scope of the discussion from mortality to overall health.

(B) Yes. While Roland considers only the changes in life-span that would result from a change in diet, Myrna considers the overall health benefits.

(C) No. Myrna does not dispute Roland's statements. Rather, she expands the scope of the discussion from mortality to overall health.

(D) No. Myrna does not dispute Roland's statements.

(E) No. Myrna does not say that Roland's argument is circular. Rather, she expands the scope of the discussion from mortality to overall health.

10. (A) No. In fact, Roland argues that the slightly lengthened life-span is not worth the sacrificial changes in diet.

(B) Yes. Roland's argument is based on the comparative value of two possibilities:

- 1) A higher-fat diet and a shorter life-span.
- 2) An “unappealing low-fat diet” and a longer life-span.

However, he does not consider a third possibility—that a low-fat diet can be appealing and still increase life-span.

(C) No. Nothing indicates that Roland makes this assumption. The argument mentions only diet because it is the particular factor that Myrna and Roland are discussing.

(D) No. Just the opposite. Roland states that a low-fat diet would be “*unappealing*” and would require a “*lifetime of sacrifice*.”

(E) No. This is irrelevant: Roland’s argument is directed toward those who do have a higher-fat diet. In fact, if many people have a low-fat diet instead of the “average” diet, his argument could be weakened if those people found their nutritional lifestyle to be worthwhile.

11. (A) No. The argument challenges those critics who believe that more great works of art should be displayed outside large metropolitan areas. The basis of this challenge is twofold: 1) since only a limited number great works of art exists, distribution of these works of art outside of metropolitan museums is impractical; 2) masterpieces are best appreciated in the context of other works of art of the same era, which is more likely in “*huge metropolitan museums*.” The principle in this answer-choice is not espoused by the author of the argument. It is the critics who would likely hold this principle since they believe it is unfair that “*the populations served by [metropolitan] museums already have access to a wide variety of important artwork*.”

(B) No. This is the second-best choice. The argument challenges those critics who believe that more great works of art should be displayed outside large metropolitan areas. The basis of this challenge is twofold: 1) the critic’s position “*is in principle unwarranted because the limited number of masterpieces makes wider distribution of them impractical*”; 2) masterpieces are best appreciated in the context of other works of art of the same era, which is more likely in “*huge metropolitan museums*.” The principle in this answer-choice is not espoused by the author of the argument. It is the critics who would likely hold this principle since they believe it is unfair that “*the populations served by [metropolitan] museums already have access to a wide variety of important artwork*.” Although this answer-choice might support the second point, does not serve as the principle of the first point.

(C) No. The argument challenges those critics who believe that more great works of art should be displayed outside large metropolitan areas. The author responds to these critics by claiming that their desire to redistribute masterpieces is “*in principle unwarranted because the limited number of masterpieces makes wider distribution of them impractical*.” In other words, no matter how inequitable a situation is, criticism of that situation is warranted only if a better arrangement is practical. The appropriateness of redistribution that deprives some people for the benefit of others is not discussed.

(D) Yes. The argument challenges those critics who believe that more great works of art should be displayed outside large metropolitan areas. The author responds to these critics by claiming that their desire to redistribute masterpieces is “*in principle unwarranted because the limited number of masterpieces makes wider distribution of*

them impractical.” In other words, no matter how inequitable a situation is, criticism of that situation is warranted only if a better arrangement is practical.

(E) No. Although the author does believe that great works of art are best seen in surroundings that depict the social and historical situation in which they were created, such surroundings are not necessarily those that the artist had intended. Regardless, this point is not relevant to the principle the author uses to establish her position.

12. (A) No. The argument is concerned with comparisons between accountants who use adding machines and those who use computers. It is not concerned with comparisons of the relative number of accountants in each group.

(B) No. This does not relate to computers.

(C) Yes. Since the passage states that a computer can perform more calculations in less time than an adding machine (in other words, more calculations per hour) and that an accountant can earn more per hour using a computer, the passage needs to assume that the more calculations an accountant performs, the more money he or she will earn.

(D) No. This contradicts the argument. The argument concludes that “*an accountant who uses a computer generally can earn more per hour than an accountant who uses an adding machine*” whereas this answer-choice states the opposite.

(E) No. This is irrelevant. The argument is concerned with two categories of accountants—those who use adding machines and those who use computers.

13. (A) Yes. This year, she earned 3 weeks of vacation time but took a 4-week vacation. Now, she can use only up to half of any vacation time she did not use last year. Since she took one additional week of vacation this year, she must not have used at least 2 weeks of vacation last year.

(B) No. The passage only states “*Anyone who has worked at KVZ Manufacturing for between one and four years is automatically entitled to exactly three weeks paid vacation each year*” and that Jennifer has worked at KVZ just over three years. The passage tells us nothing about the vacation time earned by employees who have worked with the company for more than four years.

(C) No. This is independent of the issue in the passage, which is concerned about Jennifer.

(D) No. Although Jennifer had to have at least two weeks of vacation time available at the end of last year (to apply one week to this year), conceivably she could have taken no vacation time last year.

(E) No. Though this might be true, it cannot be concluded from the passage.

14. (A) Yes. That better training of anesthetists improved safety in no way implies that new equipment would not have a similar result. The argument cannot validly make a conclusion about equipment that was not studied.

(B) No. The argument is not circular. In fact, the argument is flawed because it takes too big of a leap in logic.

(C) No. The passage does not argue that the absence of a certain factor (monitoring devices) caused a certain result (increase in safety). Rather, it states that the presence of better-trained anesthetists resulted in a better safety record. The argument then invalidly

concludes that the presence of the monitoring devices would not also improve the safety record.

(D) No. Only one piece of evidence is cited—a review of hospital fatalities due to anesthesia during the last 20 years. No evidence is cited to support the conclusion regarding the use of monitoring equipment.

(E) No. The argument states that one event (better training of anesthetists) resulted in another event (an improved safety record in hospital anesthesia use). Nothing in the passage suggests that both of these results were independently caused by a third event.

15. (A) No. The argument describes a situation in which an alternative designed to produce savings in an area may have side effects that counteract these savings, and the overall impact of the change may actually require more resources than another alternative.

New washing machines → less energy but
wetter clothes
Wetter clothes → more energy to dry
New washing machines → may
consume more energy overall

This answer-choice can be paraphrased as follows:

Machines that require greater skill →
harder to find operators
Harder to find operators → more they must
be paid
Machines that require greater skill →
higher wages for operators

This valid application of the transitive property is not parallel to the original argument.

(B) No. The argument describes a situation in which an alternative designed to produce savings in an area may have side effects that counteract these savings, and the overall impact of the change may actually require more resources than another alternative.

New washing machines → less energy but
wetter clothes
Wetter clothes → more energy to dry
New washing machines → may
consume more energy overall

In this answer-choice, there are two alternatives: a scenic route between Centerville and Mapletown, and a more direct route. However, there is no discussion of unexpected side-effects from choosing either route.

(C) No. The argument describes a situation in which an alternative designed to produce savings in an area may have side effects that counteract these savings, and the overall impact of the change may actually require more resources than another alternative.

New washing machines → less energy but
wetter clothes
Wetter clothes → more energy to dry
New washing machines → may
consume more energy overall

This answer-choice can be paraphrased as follows:

More people in reading room → Noisier
the room becomes
Noisier the room becomes → Less
efficient people work
More people in reading room → Less
efficient people work

This valid application of the transitive property is not parallel to the original argument.
(D) Yes. The argument describes a situation in which an alternative designed to produce savings in an area may have side effects that counteract these savings, and the overall impact of the change may actually require more resources than another alternative.

New washing machines → less energy but
wetter clothes
Wetter clothes → more energy to dry
New washing machines → may
consume more energy overall

This answer-choice can be paraphrased as follows:

Pine furniture → less expensive but more
susceptible to rot
Susceptible to rot → more expensive paint
Pine furniture → may cost more overall

Like the original argument, this answer-choice describes an alternative that costs less initially but may end up costing more in the long run.
(E) No. The argument describes a situation in which an alternative designed to produce savings in an area may have side effects that counteract these savings, and the overall impact of the change may actually require more resources than another alternative.

New washing machines → less energy but
wetter clothes
Wetter clothes → more energy to dry
New washing machines → may
consume more energy overall

This answer-choice can be paraphrased as follows:

More weights on machine → more muscle strength needed
 More muscle strength needed → person becomes stronger

 More weights on machine → can make a person stronger

Although this choice is not strictly a deductive argument, it has the same structure as a transitive argument and is not parallel to the original argument.

Questions 16–17

16. (A) No. G states “*Equal numbers of photographers, sculptors, and painters submitted works that met the traditional criteria for the show.*” However, this allows the photographers to submit more items each than the sculptors and painters.

(B) No. H’s statements imply that some works submitted for the Metropolitan Art Show did not meet the traditional criteria for the show: “*All submitted works that met the traditional criteria—and only those works—were exhibited in the show.*”

(C) No. We know only that the quality of objects displayed—photographs, sculptures, and paintings—met or surpassed the traditional criteria. We are given no information about the relative quality of the different types of works.

(D) No. H’s statements imply that some works submitted for the Metropolitan Art Show did not meet the traditional criteria for the show: “*All submitted works that met the traditional criteria—and only those works—were exhibited in the show.*” However, we do not have enough information to determine whether any of these works were photographs.

(E) Yes. G states only that equal numbers of photographers, sculptors, and painters submitted works. This allows the photographers to submit more items each than the sculptors. For example, each photographer may have submitted 10 photographs, whereas each sculptor may have submitted only 1 sculpture.

17. (A) No. The passage concerns the number of works submitted and displayed at the Art Show, not the rate of sales of the art.

(B) Yes. Clearly, putting a larger financial burden on painters and sculptors shows a bias.

(C) No. This shows that the committee was balanced.

(D) No. This is irrelevant. G’s allegation of bias is directed toward those who selected the works of art to be displayed, not toward the news coverage of the show.

(E) No. This suggests that the imbalance is not intentional.

Questions 18–19

18. (A) No. This is the second-best choice. Anita states that traditional journalistic ethics do not provide sufficient guidelines for journalists to make professional decisions.

(“*But in the typical case, where a journalist has some information but is in a quandary about whether it is yet important or ‘newsworthy,’ this guidance is inadequate.*”) Rather than object to Marcus’ assertion that traditional ethics are clear, she objects to his claim that these ethics are adequate.

(B) No. She does not believe that traditional journalistic ethics are incorrect for most ethical dilemmas (“*Well, Marcus, of course interesting and important information should be brought before the public—that is a journalist’s job*”), just that the precepts are inadequate (“*But in the typical case, where a journalist has some information but is in a quandary about whether it is yet important or “newsworthy,” this guidance is inadequate*”).

(C) Yes. Anita does not disagree with the journalistic principles that Marcus cites, she just believes that they are not sufficient guidelines for typical situations journalists encounter.

(D) No. This is too strong. She merely believes that the particular principle of journalistic ethics Marcus cited is inadequate for typical cases.

(E) No. She does not reject traditional journalistic ethics as unnecessary and convoluted (“*Well, Marcus, of course interesting and important information should be brought before the public—that is a journalist’s job*”). Rather, she believes that traditional journalistic ethics are insufficient to guide journalists.

19. (A) Yes. Anita argues that traditional journalistic ethics is not sufficient for “*the typical case, where a journalist has some information but is in a quandary about whether it is yet important or “newsworthy”*” Now, if deciding whether a piece of information is or is not newsworthy does not raise ethical dilemmas for journalists, then her argument is moot.

(B) No. She agrees with Marcus that “*when journalists have uncovered newsworthy information, they should go to press with it as soon as possible.*” This is seen from her opening line “*Well, Marcus, of course interesting and important information should be brought before the public—that is a journalist’s job.*”

(C) No. The discussion is limited to typical cases, not other types of professional dilemmas.

(D) No. Anita discusses only the traditional system of journalistic ethics. She does not mention whether a different, adequate system of journalistic ethics could be designed.

(E) No. This is too strong. She is merely implying that a system of journalistic ethics should at least cover a typical case.

Questions 20–21

20. (A) No. It would justify placing fewer restrictions on owners of burglar alarms than on owners of car alarms since burglar alarms at least occasionally deter crime.

(B) No. One obvious solution to the problem is to outlaw the use of burglar alarms. The statement heads off this suggestion by implying that outlawing burglar alarms would be unacceptable.

(C) Yes. One obvious solution to the problem is to outlaw the use of burglar alarms. The statement heads off this suggestion by implying that outlawing burglar alarms would be unacceptable.

- (D) No. Although this is true, it is not needed for the purpose of the argument.
(E) No. The statement appears to apply equally to both businesses and homes.

21. (A) No. As Question 20 established, the arguer does not want to banish burglar alarms, just require that their owners compensate the public for the loss of police time in responding to false alarms.

(B) No. The arguer merely wants burglar alarm owners to reimburse the public for the police costs of responding to false alarms, not legitimate alarms.

(C) No. There is no mention in the passage of reducing the crime level throughout an area.

(D) No. The arguer merely wants burglar alarm owners to reimburse the public for the police costs of responding to false alarms, not legitimate alarms.

(E) Yes. *“This situation causes an enormous and dangerous drain on increasingly scarce public resources ..., and a disproportionate share of police service goes to alarm system users, who are mostly businesses and affluent homeowners ... the only acceptable solution is to fine burglar alarm system owners the cost of 45 minutes of police time for each false alarm their systems generate.”*

22. (A) No. This is irrelevant. The argument is about health, not profits.

(B) No. This would strengthen the argument. The argument’s intent is to lower the public’s intake of butterfat, and increasing the water content in a product would decrease the amount of butterfat.

(C) No. Although this does weaken the argument, there is a stronger answer-choice that applies to most, not just some, individuals.

(D) No. This is irrelevant.

(E) Yes. The purpose of the recommendation is to lower the amount of butterfat that people eat. But *“Most people deterred from eating ‘imitation butter’ because of its name choose alternatives with a lower butterfat content than this product has.”* So if the labeling change prompted people to return to the original product, they would actually increase their butterfat intake.

23. (A) No. The passage implies that some behavioral tendencies of farm animals cannot be altered: the opening line of the argument implies that some behavioral tendencies are instinctive, and the closing line of the argument implies that the animals will resist changing these tendencies.

(B) No. This is too strong. The passage merely states that current farm-management practices *“can also be less efficient than those other farm-management practices.”*

(C) No. The passage implies just the opposite: that farm-management practices that cause less pain and distress to farm animals can increase efficiency.

(D) No. This goes too far. The passage merely states that current farm-management practices *“can also be less efficient than those other farm-management practices.”*

(E) Yes. *“Because the animals tend to resist this type of organization, current practices can also be less efficient than those other farm-management practices.”*

24. (A) No. Although this argument also fails to account for other possible explanations for the observed situation, there is another answer-choice that is more similar to the original argument.
- (B) No. This is more of a prediction than an argument.
- (C) No. Unlike the passage, this is a reasonably valid argument.
- (D) Yes. Like the original this argument fails to consider that other factors may have caused the drop in sales. Perhaps there was a recession during the past year, or perhaps the manufactures were able maximize their profits by selling their products at a price that the average consumer or school district could not afford.
- (E) No. Unlike the passage, this is a reasonably valid argument.
25. (A) No. They are, in fact, assuming that the original experiments had been described in sufficient detail to make an exact replication possible.
- (B) No. The scientists attempted the replication to determine whether the original results were in error. However, the controversy may have increased the desire to attempt the replication.
- (C) No. If anything, this would support the original results.
- (D) Yes. Both sets of experiments are subject to faulty measurements. So for the argument to be valid, it must assume that original experiments were more likely to have been marred by faulty measurements than were the replication experiments.
- (E) No. The scientists do not need to assume this to make their conclusion. Besides, it's difficult to conclude anything from the statement that the original researchers observed their results only once. Perhaps the observation was a false artifact, or perhaps the single observation indicates the difficulty of the experiment and explains the failure to replicate the result.