

EST I – Literacy Test II

Student's Name _____

National ID _____

Test Center: _____

Duration: 65 minutes

52 Multiple Choice Questions

Instructions:

- Place your answer on the answer sheet. Mark only one answer for each of the multiple choice questions.
- Avoid guessing. Your answers should reflect your overall understanding of the subject matter.

The following edited passage is an excerpt from The Scarlet Letter by Nathaniel Hawthorne, a historical fiction novel set in Boston in the 1600s.

A throng of bearded men, in sad-coloured garments and grey steeple-crowned hats, inter-mixed with women, some wearing hoods, and others
5 bareheaded, was assembled in front of a wooden edifice, the door of which was heavily timbered with oak, and studded with iron spikes.

The founders of a new colony, whatever
10 Utopia of human virtue and happiness they might originally project, have invariably recognised it among their earliest practical necessities to allot a portion of the virgin soil as a cemetery,
15 and another portion as the site of a prison. In accordance with this rule it may safely be assumed that the forefathers of Boston had built the first prison-house somewhere in the Vicinity
20 of Cornhill, almost as seasonably as they marked out the first burial-ground, on Isaac Johnson's lot, and round about his grave, which subsequently became the nucleus of all the congregated
25 sepulchres in the old yard of King's Chapel. Certain it is that, some fifteen or twenty years after the settlement of the town, the wooden jail was already marked with weather-stains and other
30 indications of age, which gave a yet darker aspect to its beetle-browed and gloomy front. The rust on the ponderous iron-work of its oaken door looked more antique than anything else in the New
35 World. Like all that pertains to crime, it seemed never to have known a youthful era. Before this ugly edifice, and between it and the wheel-track of the street, was a grass-plot, much
40 overgrown with burdock, pig-weed, apple-pern, and such unsightly vegetation, which evidently found something congenial in the soil that had so early borne the black flower of

45 civilised society, a prison. But on one side of the portal, and rooted almost at the threshold, was a wild rose-bush, covered, in this month of June, with its delicate gems, which might be imagined
50 to offer their fragrance and fragile beauty to the prisoner as he went in, and to the condemned criminal as he came forth to his doom, in token that the deep heart of Nature could pity and be kind to
55 him.

This rose-bush, by a strange chance, has been kept alive in history; but whether it had merely survived out of the stern old wilderness, so long after the fall of the
60 gigantic pines and oaks that originally overshadowed it, or whether, as there is fair authority for believing, it had sprung up under the footsteps of the sainted Ann Hutchinson as she entered
65 the prison-door, we shall not take upon us to determine. Finding it so directly on the threshold of our narrative, which is now about to issue from that inauspicious portal, we could hardly do
70 otherwise than pluck one of its flowers, and present it to the reader. It may serve, let us hope, to symbolise some sweet moral blossom that may be found along the track, or relieve the darkening
75 close of a tale of human frailty and sorrow.

The grass-plot before the jail, in Prison Lane, on a certain summer morning, not less than two centuries ago, was
80 occupied by a pretty large number of the inhabitants of Boston, all with their eyes intently fastened on the iron-clamped oaken door. Amongst any other population, or at a later period in the
85 history of New England, the grim rigidity that petrified the bearded physiognomies of these good people would have augured some awful business in hand. It could have
90 betokened nothing short of the anticipated execution of some noted culprit, on whom the sentence of a legal

tribunal had but confirmed the verdict of public sentiment. But, in that early severity of their character, an inference of this kind could not so indubitably be drawn. It might be that a sluggish bond-servant, or an undutiful child, whom his parents had given over to the civil authority, was to be corrected at the whipping-post. It might be that an Antinomian, a Quaker, or other heterodox religionist, was to be scourged out of the town, or an idle or vagrant Indian, whom the white man's firewater had made riotous about the streets, was to be driven with stripes into the shadow of the forest. It might be, too, that a witch, like old Mistress Hibbins, the bitter-tempered widow of the magistrate, was to die upon the gallows. In either case, there was very much the same solemnity of demeanour on the part of the spectators, as befitted a people among whom religion and law were almost identical, and in whose character both were so thoroughly interfused, that the mildest and severest acts of public discipline were alike made venerable and awful. Meagre, indeed, and cold, was the sympathy that a transgressor might look for, from such bystanders, at the scaffold. On the other hand, a penalty which, in our days, would infer a degree of mocking infamy and ridicule, might then be invested with almost as stern a dignity as the punishment of death itself.

1. The primary purpose of the passage is to
 - A. discuss the door of the prison.
 - B. describe the inhabitants of Boston.
 - C. present the context of punishment in Boston.
 - D. introduce the importance of the rose bush.

2. As used in line 22, "lot" most nearly means
 - A. condition.
 - B. bundle.
 - C. fate.
 - D. ground.
3. The author alludes to the rose bush's existence as
 - A. justified.
 - B. arbitrary.
 - C. meaningful.
 - D. elusive.
4. Which choice best provides evidence for the answer to the previous question?
 - A. Lines 45-55 ("But ... him.")
 - B. Lines 56-57 ("This ... history;")
 - C. Lines 57-66 ("but ... determine.")
 - D. Lines 66-71 ("Finding ... reader.")
5. The author uses descriptive language in the first paragraph to
 - A. allow the reader to visualize the opening scene.
 - B. prove his large repertoire of descriptive diction.
 - C. confuse the reader of the passage's setting with jargon.
 - D. build up to the punishments to take place.
6. As used in line 35, "pertains" most nearly means
 - A. exists.
 - B. concerns.
 - C. belongs to.
 - D. neglects.

7. The inhabitants' perception of law and punishment can best be described as which of the following?
- A. The inhabitants hold dual feelings for all forms of punishment.
 - B. The inhabitants are repulsed at the severity of the punishments.
 - C. The inhabitants did not participate in the spectacles, but viewed it as a necessity.
 - D. The inhabitants feared repercussion if they did not observe the punishments.
8. Which choice best provides evidence for the answer to the previous question?
- A. Lines 9-16 ("The ... prison.")
 - B. Lines 77-83 ("The ... door.")
 - C. Lines 112-120 ("In ... awful.")
 - D. Lines 123-128 ("On ... itself.")
9. The author mentions "Meagre, indeed, and cold was the sympathy that a transgressor might look for, from such bystanders, at the scaffold" in lines 120-123 in order to portray a mood of
- A. chronic poverty.
 - B. austerity and remorselessness.
 - C. compassion and concern.
 - D. empathy within indifference.
10. What is the relationship between the last paragraph and the rest of the passage?
- A. The last paragraph presents the reader with the criminals while the rest of the passage describes the gallows.
 - B. The last paragraph builds upon the analogy of the rose bush.
 - C. The last paragraph provides contradictory supporting details.
 - D. The last paragraph informs the reader of the type of spectators at the gallows while the rest of the passage describes the context of a prison door.

The following edited passage is taken from History of the Plague in London by Daniel Defoe on the plague's re-emergence in Holland.

It was about the beginning of September, 1664, that I, among the rest of my neighbors, heard in ordinary discourse that the plague was returned again in
5 Holland; for it had been very violent there, and particularly at Amsterdam and Rotterdam, in the year 1663, whither, they say, it was brought (some said from Italy, others from the Levant) among
10 some goods which were brought home by their Turkey fleet; others said it was brought from Candia; others, from Cyprus. It mattered not from whence it came; but all agreed it was come into
15 Holland again.

We had no such thing as printed newspapers in those days, to spread rumors and reports of things, and to improve them by the invention of men, as
20 I have lived to see practiced since. But such things as those were gathered from the letters of merchants and others who corresponded abroad, and from them was handed about by word of mouth only; so
25 that things did not spread instantly over the whole nation, as they do now. But it seems that the government had a true account of it, and several counsels were held about ways to prevent its coming
30 over; but all was kept very private. Hence it was that this rumor died off again; and people began to forget it, as a thing we were very little concerned in and that we hoped was not true, till the latter end of
35 November or the beginning of December, 1664, when two men, said to be Frenchmen, died of the plague in Longacre, or rather at the upper end of Drury Lane. The family they were in
40 endeavored to conceal it as much as possible; but, as it had gotten some vent in the discourse of the neighborhood, the secretaries of state got knowledge of it. And concerning themselves to inquire
45 about it, in order to be certain of the truth,

two physicians and a surgeon were ordered to go to the house, and make inspection. This they did, and finding evident tokens of the sickness upon both
50 the bodies that were dead, they gave their opinions publicly that they died of the plague. Whereupon it was given in to the parish clerk, and he also returned them to the hall; and it was printed in the weekly
55 bill of mortality in the usual manner.

The people showed a great concern at this, and began to be alarmed all over the town, and the more because in the last week in December, 1664, another man
60 died in the same house and of the same distemper. And then we were easy again for about six weeks, when, none having died with any marks of infection, it was said the distemper was gone; but after
65 that, I think it was about the 12th of February, another died in another house, but in the same parish and in the same manner.

This turned the people's eyes pretty much towards that end of the town; and, the weekly bills showing an increase of burials in St. Giles's Parish more than usual, it began to be suspected that the
70 plague was among the people at that end of the town, and that many had died of it, though they had taken care to keep it as much from the knowledge of the public as possible. This possessed the heads of the people very much; and few cared to
75 go through Drury Lane, or the other streets suspected, unless they had extraordinary business that obliged them to it.

This increase of the bills stood thus: the usual number of burials in a week, in the parishes of St. Giles-in-the-Fields and St. Andrew's, Holborn, were from twelve to
85 seventeen or nineteen each, few more or less; but, from the time that the plague first began in St. Giles's Parish, it was observed that the ordinary burials increased in number considerably.
90

Dec. 27 to Jan. 3, St. Giles's	16
St. Andrew's	17
Jan. 3 to Jan. 10, St. Giles's	12
St. Andrew's	25
Jan. 10 to Jan. 17, St. Giles's	18
St. Andrew's	18
Jan. 17 to Jan. 24, St. Giles's	23
St. Andrew's	16
Jan. 24 to Jan. 31, St. Giles's	24
St. Andrew's	15
Jan. 31 to Feb. 7, St. Giles's	21
St. Andrew's	23
Feb. 7 to Feb. 14, St. Giles's	24

Number of Burials in Two Areas

	Buried.	Increased.
Dec. 20 to Dec. 27	291	0
Dec. 27 to Jan. 3	349	58
Jan. 3 to Jan. 10	394	45
Jan. 10 to Jan. 17	415	21
Jan. 17 to Jan. 24	474	59

Overall Number of Burials

Source: Daniel Defoe

11. The main idea of the passage is to

- A. conclude a premise.
- B. refute an argument.
- C. present societal consequences.
- D. establish a reputation.

12. As used in line 78, “possessed” most nearly means

- A. occupied.
- B. enjoyed.
- C. enchanted.
- D. owned.

13. According to the passage, how did news of the plague mainly reach Holland?

- A. by a Turkey fleet
- B. by printed press
- C. by verbal circulation
- D. by the government

14. Which choice best provides evidence for the answer to the previous question?

- A. Lines 9-15 (“among ... again.”)
- B. Lines 16-20 (“We ... since.”)
- C. Lines 20-24 (“But ... only;”)
- D. Lines 26-30 (“But ... private.”)

15. Which of the following is NOT mentioned in the passage?

- A. It was unclear where the plague had come from.
- B. The government attempted to keep the presence of the plague in Holland a secret.
- C. People were disturbed by the initial news of the plague entering Holland.
- D. People avoided areas where there were known deaths caused by the plague.

16. According to the passage, how did the inhabitants of Holland initially perceive the extent of the threat of the plague?

- A. They took the threat seriously and self-isolated.
- B. They practiced denial and carried on life normally.
- C. They showed a lack of care for the consequences.
- D. They panicked and lacked proper procedure.

17. Which choice best provides evidence for the answer to the previous question?

- A. Lines 30-34 (“Hence ... true.”)
- B. Lines 39-43 (“The ... it.”)
- C. Lines 56-61 (“The ... distemper.”)
- D. Lines 78-83 (“This ... it.”)

18. As used in line 91, “observed” most nearly means

- A. viewed.
- B. honored.
- C. celebrated.
- D. discerned.

- 19.** The first chart with respect to the passage
- A.** supports statistics given in the last paragraph.
 - B.** contradicts statistics given in the last paragraph.
 - C.** provides new information to the passage.
 - D.** is irrelevant.
- 20.** In the second chart, it is observed that
- A.** burials had the largest increase between Jan 17 and Jan 24.
 - B.** burials remained stable over the recorded weeks.
 - C.** there is a gap in the data.
 - D.** the number of burials steadily declined.

The first passage is from The Minds and Manners of Wild Animals: A Book of Personal Observation by Hornaday discussing an elephant's mental capacity. Passage 2 taken from Anecdotes of the Habit and Instinct of Animals by Mrs. R. Lee discusses elephants in their natural habitat.

Passage 1

While many wonderful stories are related of the elephant's sagacity and independent powers of reasoning, it must be admitted that a greater number of more
5 wonderful anecdotes are told on equally good authority of dogs. But the circumstances in the case are wholly to the advantage of the universal dog, and against the rarely seen elephant. While
10 the former roams at will through his master's premises, through town and country, mingling freely with all kinds of men and domestic animals, with unlimited time to lay plans and execute
15 them, the elephant in captivity is chained to a stake, with no liberty of action whatever aside from begging with his trunk, eating and drinking. His only amusement is in swaying his body,
20 swinging one foot, switching his tail, and (in a zoological park) looking for something that he can open or destroy. Such a ponderous beast cannot be allowed to roam at large among human
25 beings, and the working elephant never leaves his stake and chain except under the guidance of his mahout. There is no means of estimating the wonderful powers of reasoning that captive
30 elephants might develop if they could only enjoy the freedom accorded to all dogs except the blood-hound, bull-dog and a few others.

In the jungles of India the writer
35 frequently has seen wild elephants reconnoiter dangerous ground by means of a scout or spy; communicate intelligence by signs; retreat in orderly silence from a lurking danger, and

40 systematically march, in single file, like the jungle tribes of men.

Once having approached to within fifty yards of the stragglers of a herd of about thirty wild elephants, which was scattered
45 over about four acres of very open forest and quietly feeding, two individuals of the herd on the side nearest us suddenly suspected danger. One of them elevated his trunk, with the tip bent forward, and
50 smelled the air from various points of the compass. A moment later an old elephant left the herd and started straight for our ambush, scenting the air with upraised trunk as he slowly and noiselessly
55 advanced. We instantly retreated, unobserved and unheard. The elephant advanced until he reached the identical spot where we had a moment before been concealed. He paused, and stood
60 motionless as a statue for about two minutes, then wheeled about and quickly but noiselessly rejoined the herd. In less than half a minute the whole herd was in motion, heading directly away from us,
65 and moving very rapidly, but *without the slightest noise*. The huge animals simply vanished like shadows into the leafy depths of the forest. Before proceeding a quarter of a mile, the entire herd formed
70 in single file and continued strictly in that order for several miles. Like the human dwellers in the jungle, the elephants know that the easiest and most expeditious way for a large body of animals to traverse a
75 tangled forest is for the leader to pick the way, while all the others follow in his footsteps.

On one occasion a herd which I was designing to attack, and had approached
80 to within forty yards, as its members were feeding in some thick bushes, discovered my presence and retreated so silently that they had been gone five minutes before I discovered what their sudden quietude
85 really meant. In this instance, as in several others, the still alarm was communicated by silent signals, or sign-language.

Passage 2

90 The favourite habitation of the elephant is the forest, or green plain, near which is a river, or lake: water he must have, for both in freedom and captivity, bathing seems to be a necessary condition of his existence.

95 This propensity reminds me of the often-repeated trick of the before-mentioned elephant of the Jardin des Plantes. His stable opened into a small enclosure, in the midst of which was a pond. In this
100 pond he constantly laid himself, and was so hidden by the water, that nothing of him appeared, except the end of his proboscis, which it required an experienced eye to detect. The crowd
105 often assembled round the enclosure of the "elephant's park," as it was called, supposing they should see him issue from his stable.

All at once, however, a copious shower
110 would assail them, and ladies with their transparent bonnets, and gentlemen with their shining hats, were forced to seek shelter under the neighbouring trees, where they looked up at the cloudless
115 sky, and wondered from whence the shower could come. When they directed their eyes towards the elephant's pond, they saw him standing in the midst, evincing an awkward joy at the trick he
120 had played. In process of time his pastime became generally known, and the moment the water rose from his trunk, his beholders ran away, which he also seemed to enjoy exceedingly, getting up
125 as fast as he could to behold the bustle he had created.

21. According to Passage 1, many more anecdotes are told of a dog's mental reasoning than an elephant's because

- A. people are fonder of dogs.
- B. elephants are limited to simple means of expression such as swaying their body.
- C. elephants do not show a high level of reasoning.
- D. dogs have the liberty to roam as they please.

22. Which choice best provides evidence for the answer to the previous question?

- A. Lines 1-6 ("While ... dogs.")
- B. Lines 6-9 ("But ... elephant.")
- C. Lines 9-18 ("While ... drinking.")
- D. Lines 18-22 ("His ... destroy.")

23. As used in line 28, "means" most nearly means

- A. money.
- B. resources.
- C. method.
- D. substance.

24. The main idea of Passage 2 is

- A. to illustrate the keenness of an elephant.
- B. to establish evidence against an elephant's natural behavior.
- C. to formulate a hypothesis on elephant behavior.
- D. to recount an unnecessary event.

25. In Passage 1, what is the relation of the first paragraph to the rest of the passage?

- A. The first paragraph focuses on the intelligence of dogs before shifting to elephants.
- B. The first paragraph builds the premise and the rest of the passage supports it.
- C. The first paragraph contradicts the rest of the passage.
- D. The first paragraph is unrelated to the rest of the passage.

26. According to Passage 2, what can be inferred about the elephant's character?
- A. stoic and indifferent
 - B. reserved and observant
 - C. mischievous and playful
 - D. aggressive and hateful
27. Which choice best provides evidence for the answer to the previous question?
- A. Lines 95-97 ("This ... Plantes.")
 - B. Lines 104-108 ("The ... stable.")
 - C. Lines 109-116 ("All ... come.")
 - D. Lines 116-120 ("When ... played.")
28. In Passage 1, all the following are mentioned EXCEPT:
- A. Elephants held captive cannot reach their full potential.
 - B. Elephants can communicate without a sound.
 - C. Elephants need to see the threat to locate it.
 - D. Elephants are able to move silently enough to not be observed at all.
29. What can be said about Passage 1 and Passage 2?
- A. The passages have a similar writing style as they both use the first person.
 - B. The two passages differ in theme.
 - C. Both passages contradict one another.
 - D. The passages have a similar tone of indifference.
30. Which of the following points would the authors of both passages most likely agree with?
- A. Elephants can be malicious towards intruders.
 - B. An elephant's intelligence is clearly misunderstood.
 - C. Despite the fact that most elephants are observed in confinement, elephants exhibit astounding intelligence in behavior.
 - D. Elephants enjoy playing tricks on humans.
31. As used in line 105, "assembled" most nearly means
- A. collected.
 - B. built.
 - C. connected.
 - D. gathered.

The following edited passage is taken from Popular Law-Making by Frederic Jesup Stimson on early labour legislation and laws against trusts.

Far the most important phrase to us found in the Statute of Westminster I, save perhaps that common right should be done to rich and poor, is to be found in this sentence: "Excessive toll, contrary to the common custom of the realm," is forbidden. The statute applies only to market towns, but the principle established there would naturally go elsewhere, and indeed most towns where there was any trade were, in those days, market towns. Every word is noticeable: "Excessive toll"—extortion in rates. As this statute passed into the common law of England and hence our own, it has probably always been law in America except, possibly, in those few States which expressly repealed the whole common law and those where civil law prevailed.

It was therefore equally unnecessary to adopt new statutes providing against extortion or discrimination, for the last part of the phrase "contrary to the common custom of the realm" means discrimination. But this is one of the numerous cases where our legislatures, if not our bar and bench, erred through simple historical ignorance. They had forgotten this law, or, more charitably, they may have thought it necessary to remind the people of it. There has been a recent agitation in this country with the object of compelling great public-service companies, such as electric lighting or gas companies, to make the same rates to consumers, large or small. This also was very possibly the common law, and required no new statutes; there are cases reported as far back as the fourteenth and fifteenth centuries where, for instance, a ferryman was punished for charging less for the ferriage of a large drove of sheep

or cattle than for a smaller number, "contrary to the common custom of the realm." Nine years before this statute is the Assize of Bread, attempting to fix the price of bread according to the cost of wheat, but notable to us as containing both the first pure-food statute and the first statute against "forestalling."

Now forestalling, regrating, and engrossing are the early English phrases for most of the unlawful or unmoral actions which we ascribe to the modern trust. In fact, there is hardly one legal injury which a trust is said to commit in these days which cannot be ranked under those three heads, or that of monopoly or that of restraint of trade.

"Forestalling" is the buying up provisions on the way to a market with intent to sell at a higher price; and the doctrine applied primarily to provisions, that is to say, necessities of life. Precisely the same thing exists to-day, only we term it the buying of futures, or the attempt to create a corner. We shall find that the buying of futures, that is to say, of crops not yet grown or outputs not yet created, is still obnoxious to many of our legislatures to-day, and has been forbidden, or made criminal, in many States. "Regrating" is defined in some of the early dictionaries as speculating in provisions; the offence of buying provisions at a market for the purpose of reselling them within four miles of the place. The careful regulation of markets and market towns that existed in early times in England would not suffer some rich capitalist to go in and buy all that was offered for sale with intent of selling it to the same neighborhood at a higher price. Hatto of the Rhine, you may remember, paid with his life for this offence. The prejudice against this sort of thing has by no means ended to-day. We have legislation against speculation in theatre tickets, as well as in cotton or grain. "Engrossing" is really the result of a successful forestalling, with or without regrating; that is to say, it is a

complete "corner of the market"; from it our word "grocer" is derived. Such
95 corners, if completely successful, would have the public at their mercy; luckily they rarely are; the difficulty, in fact, begins when you begin to regrate. But in artificial commodities it is easier; so in
100 the Northern Pacific corner, a nearly perfect engrossing; the shares of stock went to a thousand dollars, and might have gone higher but for the voluntary interference of great financiers. Leiter's
105 Chicago corner in wheat, Sully's corner in cotton, were almost perfect examples of engrossing, but failed when the regrating began. All these tend to monopoly, and act, of course, in restraint of trade; the
110 broader meanings of these two latter more important principles we leave for later discussion.

32. The primary purpose of the passage is to

- A. explore the history behind common law in the market and the three unlawful actions.
- B. discuss the history of labor laws and laws against trust.
- C. examine the notion of "forestalling" and its presence in modern law.
- D. provide examples of unlawful practices.

33. In lines 39-46, the author uses an example to

- A. solidify his position against new statutes.
- B. support the common law against discrimination.
- C. contradict claims of discrimination in trade.
- D. absolve previous experience of thievery and injustice.

34. The passage is most likely written for

- A. fellow researchers at a university research center.
- B. young historians who have a basic background on labor laws.
- C. students in high school history class.
- D. a light reader with some interest in policy.

35. As used in line 22, "adopt" most nearly means

- A. take in.
- B. choose.
- C. assume.
- D. nominate.

36. The author appeals to the reader by

- A. using inclusive language.
- B. comparing different legislations.
- C. defending their position.
- D. using statistics and quantitative analysis.

37. Which choice best provides evidence for the answer to the previous question?

- A. Lines 21-26 ("It ... discrimination.")
- B. Lines 37-39 ("This ... statutes;")
- C. Lines 39-46 ("there ... realm.")
- D. Lines 84-86 ("Hatto ... offense.")

38. In the first paragraph, the author uses a quote in lines 5-6 to

- A. stress the gravity of the statement by presenting a word-for-word account instead of paraphrasing.
- B. contradict his claims made in the rest of the passage.
- C. bolster the need for new statutes.
- D. exemplify the lack of value given to such statute.

39. "Regrating" can be compared to

- A. buying a chair at a furniture store to sell at your own store a few streets away.
- B. buying out shampoo products that have not yet been produced.

- C. an on-going debate that has yet to be resolved in court.
 - D. selling the same apples at a lower price than other stores in the same city.
40. Which choice best provides evidence for the answer to the previous question?
- A. Lines 65-68 (“Precisely ... corner.”)
 - B. Lines 68-73 (“We ... States.”)
 - C. Lines 78-84 (“The ... price.”)
 - D. Lines 86-88 (“The ... to-day.”)
41. As used in line 94, “derived” most nearly means
- A. gained.
 - B. extracted.
 - C. acquired.
 - D. proceeded from.
42. The author mentions all the following EXCEPT
- A. the statute that forbids unlawful market practice is present in America except in a few states.
 - B. the statute encompasses acts of discrimination.
 - C. “regrating” is the act of buying items only to re-sell them a year later at a different price.
 - D. when a “forestall” succeeds, it is a form of “engrossing”.

The following edited passage is taken from On Laboratory Arts by Richard Threlfall on the choice of sizes of glass tube and testing glass.

It will be found that for general purposes tubes about one-quarter inch in inside diameter, and from one-twentieth to one-fortieth of an inch thick, are most in demand. Some very thin soda glass of these dimensions (so-called "cylinder" tubes) will be found very handy for many purposes. For physico-chemical work a good supply of tubing, from one-half to three-quarters of an inch inside diameter, and from one-twentieth to one-eighth inch thick, is very necessary. A few tubes up to three inches diameter, and of various thicknesses, will also be required for special purposes.

Thermometer and "barometer" tubing is occasionally required, the latter, by the way, making particularly bad barometers. The thermometer tubing should be of all sizes of bore, from the finest obtainable up to that which has a bore of about one-sixteenth of an inch. Glass rods varying from about one-twentieth of an inch in diameter up to, say, half an inch will be required, also two or three sticks of white enamel glass for making joints.

To facilitate choice, there is appended a diagram of sizes from the catalogue of a reliable German firm, Messrs. Desaga of Heidelberg, and the experimenter will be able to see at a glance what sizes of glass to order. It is a good plan to stock the largest and smallest size of each material as well as the most useful working sizes.

"Reject glass which has lumps or knots, is obviously conical, or has long drawn-out bubbles running through the substance." If a scratch be made on the surface of a glass tube, and one end of the scratch be touched by a very fine point of fused glass, say not more than one-sixteenth inch in diameter, the tube,

however large it is (within reason), ought to crack in the direction of the scratch. If a big crack forms and does not run straight, but tends to turn longitudinally, it is a sign that the glass is ill annealed, and nothing can be done with it. If such glass be hit upon in the course of blow-pipe work, it is inadvisable to waste time upon it; the best plan is to reject it at once, and save it for some experiment where it will not have to be heated.

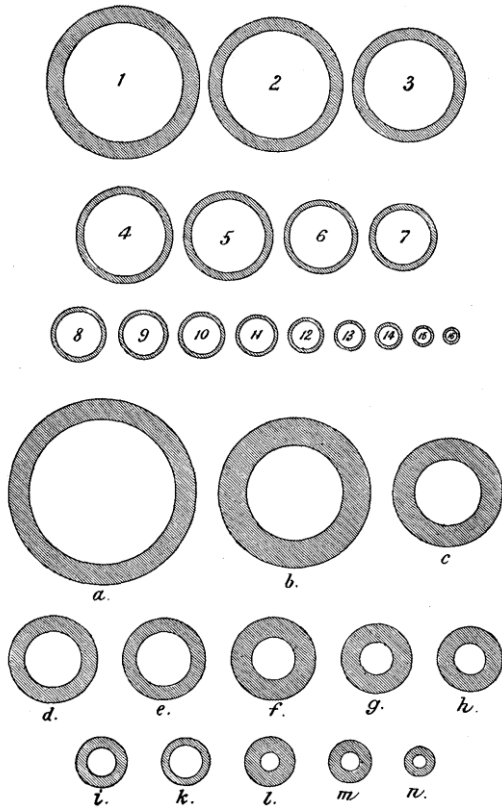
The shortest way of selecting glass is to go to a good firm, and let it be understood that if the glass proves to be badly annealed it will be returned. Though it was stated above that the glass should not be distinctly conical, of course allowance must be made for the length of the pieces, and, on the other hand, a few highly conical tubes will be of immense service in special cases, and a small supply of such should be included.

The glass, as it is obtained, should be placed in a rack, and covered by a cloth to reduce the quantity of dust finding its way into the tubes. It has been stated by Professor Ostwald that tubes when reared up on end tend to bend permanently. I have not noticed this with lead glass well supported. Each different supply should be kept by itself and carefully described on a label pasted on to the rack, and tubes from different lots should not be used for critical welds. This remark is more important in the case of soda than of lead glass.

In the case of very fine thermometer tubes it will be advisable to cover the ends with a little melted shellac, or, in special cases, to obtain the tubes sealed from the works. Soda glass can generally be got in rather longer lengths than lead glass; the longer the lengths are the better, for the waste is less.

It is useful to be able to distinguish the different kinds of glass by the colour.

95 This is best observed by looking towards a bright surface along the whole length of the tube and through the glass. Lead glass is yellow, soda glass is green, and hard glass purple in the samples in my laboratory, and I expect this is practically true of most samples.



Tube Sizes

Source: Richard Threlfall

43. The main idea of the passage is to
- A. discuss storage of glasses.
 - B. recommend thermometer tubing of all sizes.
 - C. criticize different glass sizes.
 - D. inform on different sizes an experimenter should obtain.

44. Which of the following best summarizes the relationship of the first paragraph to the rest of the passage?

- A. prediction followed by analysis
- B. general introduction followed by specific examples
- C. specific examples followed by generalization
- D. premise followed by hypotheses

45. The purpose of the graphic is to

- A. support the use of different glasses.
- B. discredit the author's advice for different glasses.
- C. inform the reader that different glass sizes exist.
- D. exemplify a glass size catalogue mentioned in the passage.

46. The graphic illustrates the main idea of which paragraph?

- A. first paragraph
- B. second paragraph
- C. third paragraph
- D. fourth paragraph

47. As used in line 50, "ill" most nearly means

- A. sickly.
- B. harmfully.
- C. scarcely.
- D. poorly.

48. Which of the following is NOT mentioned in the passage?

- A. A catalogue is used to help choose glass sizes.
- B. A glass is not annealed correctly if glass cracks longitudinally.
- C. Distinguishing different colour glasses is essential.
- D. Glasses should be stored and covered to avoid dust.

- 49.** Which choice best provides evidence for the answer to the previous question?
- A.** Lines 28-33 (“To ... order.”)
 - B.** Lines 47-51 (“If ... it.”)
 - C.** Lines 69-72 (“The ... tubes.”)
 - D.** Lines 91-92 (“It ... colour.”)
- 50.** As used in line 74, “reared” most nearly means
- A.** nurtured.
 - B.** raised.
 - C.** grown.
 - D.** bred.
- 51.** It can most reasonably be inferred from the passage that the author
- A.** uses objective language to convince the reader of his premise.
 - B.** mentions a reputable source for credibility.
 - C.** exhibits egotistical behavior with his excessive knowledge.
 - D.** seeks to lead the reader astray with false information.
- 52.** Which choice best provides evidence for the answer to the previous question?
- A.** Lines 16-19 (“Thermometer ... barometers.”)
 - B.** Lines 72-75 (“It ... permanently.”)
 - C.** Lines 83-87 (“In ... works.”)
 - D.** Lines 96-99 (“Lead ... samples.”)