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 passage is an excerpt from The Wonderful Lamp *in* The Arabian Nights *edited by Kate Douglas Wiggin and Nora A. Smith introducing Aladdin's story.*

In the capital of one of the large and rich provinces of the kingdom of China there lived a tailor, named Mustapha, who was so poor that he could hardly, by his daily labour, maintain himself and his family, which consisted of a wife and son.

His son, who was called Aladdin, had been brought up in a very careless and idle manner, and by that means had contracted many vicious habits. He was obstinate and disobedient to his father and mother, who, when he grew up, could not keep him within doors. He was in the habit of going out early in the morning and would stay out all day, playing in the streets with idle children of his own age.

When he was old enough to learn a trade, his father, not being able to put him out to any other, took him into his own shop and taught him how to use his needle: but neither fair words nor the fear of chastisement were capable of fixing his lively genius. All his father's endeavours to keep him to his work were in vain; for no sooner was his back turned than he was gone for that day. Mustapha chastised him, but Aladdin was incorrigible, and his father, to his great grief, was forced to abandon him to his idleness and was so much troubled at not being able to reclaim him, that it threw him into a fit of sickness, of which he died in a few months.

The mother, finding that her son would not follow his father's business, shut up the shop, sold off the implements of trade, and with the money she received for them, and what she could get by spinning cotton, thought to maintain herself and her son.

Aladdin, who was now no longer restrained by the fear of a father, and who cared so little for his mother that whenever she chid him he would abuse her, gave himself entirely over to his idle habits and was never out of the streets from his companions. This course he followed till he was fifteen years old without giving his mind to any useful pursuit or the least reflection on what would become of him. In this situation, as he was one day playing with his vagabond associates, a stranger passing by stood to observe him.

This stranger was a sorcerer called the African magician as he was a native of Africa, and had been but two days arrived from thence.

The African magician, who was a good physiognomist, observing in Aladdin's countenance something absolutely necessary for the execution of the design he was engaged in, inquired artfully about his family, who he was, and what were his inclinations; and when he had learned all he desired to know, went up to him, and taking him aside from his comrades, said: "Child, was not your father called Mustapha, the tailor?" "Yes, sir," answered the boy; "but he has been dead a long time."

At these words, the African magician threw his arms about Aladdin's neck, and kissed him several times with tears in his eyes. Aladdin, who observed his tears, asked him what made him weep. "Alas! my son," cried the African magician with a sigh, "how can I forbear? I am your uncle; your worthy father was my own brother. I have been many years abroad and now I am come home with the hopes of seeing him; you tell me he is dead. But it is some relief to my affliction that I knew you at first sight; you are so like him." Then he asked Aladdin, putting his hand into his purse, where his mother lived, and as soon as he had informed him, gave him a handful of small money, saying: "Go,

my son, to your mother; give my love to her and tell her that I will visit her tomorrow that I may have the satisfaction of seeing where my good brother lived so long."

As soon as the African magician left his newly-adopted nephew, Aladdin ran to his mother, overjoyed at the money his uncle had given him. "Mother," said he, "have I an uncle?" "No, child," replied his mother, "you have no uncle by your father's side, or mine." "I am just now come," said Aladdin, "from a man who says he is my uncle on my father's side. He cried and kissed me when I told him my father was dead; and to show you that what I tell you is truth," added he, pulling out the money, "see what he has given me? He charged me to give his love to you and to tell you that tomorrow he will come and pay you a visit, that he may see the house my father lived and died in." "Indeed, child," replied the mother, "your father had a brother, but he has been dead a long time, and I never heard of another."

1. The primary purpose of the passage is to

A. scold young boys for misbehaving.
B. stress the importance of avoiding strangers.
C. set the scene for the rest of the story.
D. introduce the climax of the story.

2. As used in line 11, "contracted" most nearly means

A. decreased.
B. shortened.
C. developed.
D. puckered.

3. It can be inferred from the passage that the reason for Aladdin's misbehavior is due to

A. his environment.
B. his upbringing.
C. innate behavior.
D. being an only child.

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

A. Lines 1-7 ("In … son.")
B. Lines 8-11 ("His … habits.")
C. Lines 14-18 ("He … age.")
D. Lines 25-27 ("All … vain;")

5. The language of the passage most resembles the language of a(n)

A. fairy tale.
B. science fiction novel.
C. sermon.
D. epic.

6. It can most reasonably be inferred from the passage that the stranger mentioned in line 58 is

A. seeking his long lost brother.
B. manipulating events for selfish purposes.
C. coming to the capital for a magic show.
D. looking to help orphans in need.

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

A. Lines 58-61 ("This … thence.")
B. Lines 62-68 ("The …inclinations;")
C. Lines 83-86 ("I … dead.")
D. Lines 88-92 ("Then … saying:")

8. As used in line 66, "design" most nearly means

A. outline.
B. sketch.
C. pattern.
D. plan.

9. In the passage, the stranger is most specifically portrayed as

A. generous.
B. prudent.
C. kind.
D. observant.

10. According to the last paragraph, Aladdin's eagerness to believe the stranger may be due to

A. his ego.
B. the money given to him.
C. his quick-witted personality.
D. his need for a paternal role model.

The following edited passage is taken from Popular Law-Making *by Frederic Jesup Stimson on Early English Legislation and the Magna Carta.*

Parliament began avowedly to make new laws in the thirteenth century; but the number of such laws concerning private relations—private civil law—remained, for centuries, small. You could digest them all into a book of thirty or forty pages. And even to Charles the First all the statutes of the realm fill but five volumes. The legislation under Cromwell was all repealed; but the bulk, both under him and after, was far greater. For legislation seems to be considered a democratic idea; "judge-made law" to be thought aristocratic. And so in our republic; especially as, during the Revolution, the sole power was vested in our legislative bodies, and we tried to cover a still wider field, with democratic legislatures dominated by radicals. Thus at first the American people got the notion of law-making; of the making of new law, by legislatures, frequently elected; and in that most radical period of all, from about 1830 to 1860, the time of "isms" and reforms—full of people who wanted to legislate and make the world good by law, with a chance to work in thirty different States—the result has been that the bulk of legislation in this country, in the first half of the last century, is probably one thousandfold the entire law-making of England for the five centuries preceding. And we have by no means got over it yet; probably the output of legislation in this country to-day is as great as it ever was. If any citizen thinks that anything is wrong, he, or she (as it is almost more likely to be), rushes to some legislature to get a new law passed. Absolutely different is this idea from the old English notion of law as something already existing. They have forgotten that completely, and have the modern American notion of law, as a ready-made thing, a thing made to-day to meet the emergency of to-morrow. They have gotten over the notion that any parliament, or legislature, or sovereign, should only *sign* the law—and I say sign advisedly because he doesn't enact it, doesn't create it, but signs a written statement of law already existing; all idea that it should be justified by custom, experiment, has been forgotten. And here is the need and the value of this our study; for the changes that are being made by new legislation in this country are probably more important to-day than anything that is being done by the executive or the judiciary—the other two departments of the government.

But before coming down to our great mass of legislation here it will be wise to consider the early English legislation, especially that part which is alive to-day, or which might be alive to-day. I mentioned one moment ago thirty pages as possibly containing the bulk of it. I once attempted to make an abstract of such legislation in early England as is significant to us to-day in this country; not the merely political legislation, for ours is a sociological study. We are concerned with those statutes which affect private citizens, individual rights, men and women in their lives and businesses; not matters of state, of the king and the commons, or the constitution of government. Except incidentally, we shall not go into executive or political questions, but the sociological—I wish there were some simpler word for it—let us say, the *human* legislation; legislation that concerns not the government, the king, or the state, but each man in his relations to every other; that deals with property, marriage, divorce, private rights, labor, the corporations, combinations, trusts, taxation, rates, police power, and the other great questions of the day, and indeed of all time.

And Parliament did not begin by being a law-making body. Its legislative functions were not very active, as they were confined to declaring what the law was; more important were its executive and

judicial functions. In modern English government, particularly in our own, one of the basic principles is that of the three departments, executive, legislative, and judicial; the Norman or Roman theory rather reposed all power in one; that is, in the sovereign, commonly, of course, the king, the others being theoretically his advisers or servants. In England, to-day, the real sovereign is the Parliament; the merest shadow of sovereignty is left to the executive, the king, and none whatever given the judicial branch. In this country we preserve the three branches distinct, though none, not all three together, are sovereign; it is the people who are that.

11. The main idea of the passage is

- **A.** to define legislation and its characteristics.
- **B.** the detrimental attributes of early legislation.
- **C.** the difference between American legislation and English legislation.
- **D.** the connection between the origin of legislation and its transformation in modern law.

12. As used in line 50, "enact" most nearly means

- **A.** present.
- **B.** act.
- **C.** perform.
- **D.** pass.

13. The author appeals to the reader by using

- **A.** inclusive language.
- **B.** metaphors.
- **C.** scientific evidence.
- **D.** italicized terms.

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

- **A.** Lines 14-19 ("And … radicals.")
- **B.** Lines 23-25 ("and … reforms—")
- **C.** Lines 46-52 ("They … existing;")
- **D.** Lines 81-92 ("I … time.")

15. The author states all of the following EXCEPT:

- **A.** Many early legislations remained in public law.
- **B.** Legislation was ideally about reforms that would make the world better.
- **C.** Before the 13th century English government consisted of the king, executive parliament, and the judicial department.
- **D.** In modern England, the king is merely a shadow of sovereignty.

16. According to the passage, how was legislation viewed in the early centuries?

- **A.** It was welcomed by the monarchy ruling at the time.
- **B.** Legislation was an essential factor to the aristocratic class.
- **C.** It was frowned upon because of its self-governing characteristics.
- **D.** It hindered the formation of modern laws in America.

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

- **A.** Lines 1-2 ("Parliament … century;")
- **B.** Lines 11-14 ("For … aristocratic.")
- **C.** Lines 19-23 ("Thus … elected;")
- **D.** Lines 42-46 ("They … to-morrow.")

18. The passage is most likely written for

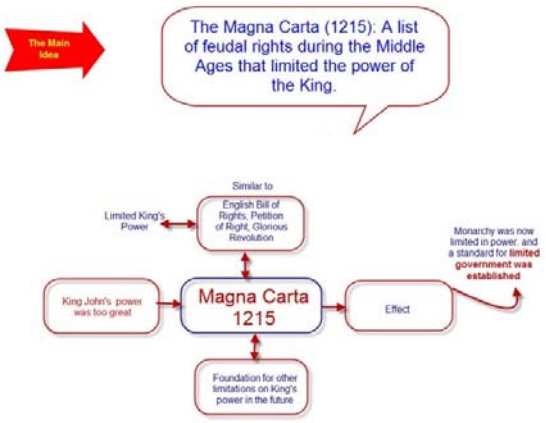
A. experienced historians conducting research.
B. high school students studying social studies.
C. someone searching for basic information on the magna carta.
D. someone preparing a presentation to their local community on past English laws.

19. As used in line 103, "reposed" most nearly means

A. lied.
B. rested.
C. placed.
D. reclined.

20. The graphic serves to

A. contradict the objective of legislation mentioned in the passage.
B. impose a subjective opinion of legislation and its effects.
C. create a timeline that supports the passage.
D. add new information to build on the key ideas in the passage.



Magna Carta
Source: Unknown

Passage 1, The Minds and Manners of Wild Animals: A Book of Personal Observation *by Hornaday, discusses his methodology used to understand an ape's mind. Passage 2, taken from* Anecdotes of the Habit and Instinct of Animals *by Mrs. R. Lee, discusses her close personal examination of monkeys.*

Passage 1

In the study of animal minds, much depends upon the method employed. It seems to me that the problem-box method of the investigators of "animal behavior" leaves much to be desired. Certainly it is not calculated to develop the mental status of animals along lines of natural mental progression. To place a wild creature in a great artificial contrivance, fitted with doors, cords, levers, passages and what not, is enough to daze or frighten any timid animal out of its normal state of mind and nerves. To put a wild sapajou monkey,— weak, timid and afraid,—in a strange and formidable prison box filled with strange machinery, and call upon it to learn or to invent strange mechanical processes, is like bringing a boy of ten years up to a four-cylinder duplex Hoe printing-and-folding press, and saying to him: "Now, go ahead and find out how to run this machine, and print both sides of a signature upon it."

The average boy would shrink from the mechanical monster, and have no stomach whatever for "trial by error."

I think that the principle of determining the mind of a wild animal *along the lines of the professor* is not the best way. It should be developed *along the natural lines of the wild-animal mind.* It should be stimulated to do what it feels most inclined to do, and educated to achieve real mental progress.

I think that the ideal way to study the minds of apes, baboons and monkeys would be to choose a good location in a tropical or sub- tropical climate that is neither too wet nor too dry, enclose an area of five acres with an unclimbable fence, and divide it into as many corrals as there are species to be experimented upon. Each corral would need a shelter house and indoor playroom. The stage properties should be varied and abundant, and designed to stimulate curiosity as well as activity.

Somewhere in the program I would try to teach orang-utans and chimpanzees the properties of fire, and how to make and tend fires. I would try to teach them the seed-planting idea, and the meaning of seedtime and harvest. I would teach sanitation and cleanliness of habit,—a thing much more easily done than most persons suppose. I would teach my apes to wash dishes and to cook, and I am sure that some of them would do no worse than some human members of the profession who now receive $50 per month, or more, for spoiling food.

In one corral I would mix up a chimpanzee, an orang-utan, a golden baboon and a good-tempered rhesus monkey. My apes would begin at two years old, because after seven or eight years of age all apes are difficult, or even impossible, as subjects for peaceful experimentation.

I would try to teach a chimpanzee the difference between a noise and music, between heat and cold, between good food and bad food.

Passage 2

That monkeys enjoy movement, that they delight in pilfering, in outwitting each other and their higher brethren—men; that they glory in tearing and destroying the works of art by which they are surrounded in a domestic state; that they lay the most artful plans to affect their purposes, is all perfectly true; but the terms *mirthful* and *merry*, seem to me to be totally misapplied, in reference to their feelings and actions; for they do all in solemnity and seriousness. Do you stand under a tree, whose thick foliage completely screens you from the sun, and you hope to enjoy perfect shade and

repose; a slight rustling proves that companions are near; presently a broken twig drops upon you, then another, you raise your eyes, and find that hundreds of other eyes are staring at you. In another minute you see the grotesque faces to which those eyes belong, making grimaces, as you suppose, but it is no such thing, they are solemnly contemplating the intruder; they are not pelting him in play, it is their business to drive him from their domain. Raise your arm, the boughs shake, the chattering begins, and the sooner you decamp; the more you will shew your discretion.

Watch the ape or monkey with which you come into closer contact; does he pick up a blade of grass, he will examine it with as much attention as if he were determining the value of a precious stone. Do you put food before him, he tucks it into his mouth as fast as possible, and when his cheek pouches are so full that they cannot hold any more, he looks at you as if he seriously asked your approval of his laying up stores for the future. If he destroy the most valuable piece of glass or china in your possession, he does not look as if he enjoyed the mischief, but either puts on an impudent air, as much as to say, "I don't care," or calmly tries to let you know he thought it his duty to destroy your property. Savage, violent and noisy are they when irritated or disappointed, and long do they retain the recollection of an affront. I once annoyed a monkey in the collection of the Jardin des Plantes, in Paris, by preventing him from purloining the food of one of his companions; in doing which I gave him a knock upon his paws. It was lucky that strong wires were between us, or he would probably have hurt me severely in his rage.

21. Why does the author repeat "strange" several times in lines 13-18?

A. He does so because only "strange" can express the author's opinion.
B. It is to support the problem-box method.
C. It is used to contradict the previous statement on animal mental health.
D. It is used to emphasize how unnatural the proposed situation is.

22. It can most reasonably be inferred from Passage 1 that it is preferred that an animal is studied in a mock natural habitat because

A. they should be kept in the wild to preserve their rights.
B. it is the only way to study animal behavior patterns.
C. animal behavior is more likely to reflect their innate state of being.
D. it is far from a prison-like structure.

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

A. Lines 13-23 ("To … it.")
B. Lines 24-26 ("The …error.")
C. Lines 29-34 ("It … progress.")
D. Lines 35-43 ("I … upon.")

24. In Passage 1, the author most likely uses an analogy in lines 13-26 in order to

A. draw similarities between a human boy and a wild monkey.
B. bring to light the author's idea in another perspective that appeals to the reader.
C. show how equally weak humans and animals are.
D. expose the complexity of modern machinery.

25. It can most reasonably be inferred from Passage 2 that the author uses

A. a narrative style to relay observation.
B. statistical evidence to support her data.
C. subjective evaluation of former information.
D. objective analysis of a monkey's behavior.

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

A. Lines 74-76 ("That … men;")
B. Lines 85-93 ("Do … you.")
C. Lines 104-105 ("Watch … contact;")
D. Lines 121-124 ("Savage … affront.")

27. As used in line 26, "stomach" most nearly means

A. taste.
B. tummy.
C. insides.
D. desire.

28. In Passage 1, the author's perception of animals can best be described as

A. sheer astonishment.
B. patient understanding.
C. silent awe.
D. persistent disgust.

29. The author of Passage 1 and the author of Passage 2 share which view point?

A. Animals should be observed in their natural habitat.
B. Apes are aggressive when confronted.
C. Apes are one of the few animals who can be taught right from wrong.
D. Most animals need to be confined in order to be observed.

30. One difference between the information described in both passages is that, unlike the author of Passage 2, Hornaday focuses on

A. experimental teaching rather than observation.
B. statistics rather than behavior.
C. objective criticism rather than subjective evaluation.
D. mindful behavior rather than instinct.

31. As used in line 76, "higher" most nearly means

A. elevated.
B. unreasonable.
C. evolved.
D. grand.

The following edited passage is taken from The Lives of the Poets of Great Britain and Ireland *by Theophilus Cibber on the poetess, Ms. Manley, and her father Sir Roger Manley.*

The celebrated authoress of the Atalantis, was born in Hampshire, in one of those islands which formerly belonged to France, of which her father Sir Roger Manley was governor; who afterwards enjoyed the same post in other places in England. He was the second son of an ancient family; the better part of his estate was ruined in the civil war by his firm adherence to Charles I. He had not the satisfaction of ever being taken notice of, nor was his loyalty acknowledged at the restoration. The governor was a brave gallant man, of great honour and integrity.

He became a scholar in the midst of the camp, having left the university at the age of sixteen, to follow the fortunes of Charles I. His temper had too much of the Stoic in it to attend much to the interest of his family. After a life spent in the civil and foreign wars, he began to love ease and retirement, devoting himself to his study, and the charge of his little post, without following the court; his great virtue and modesty, debarring him from soliciting favours from such persons as were then at the helm of affairs, his deserts were buried, and forgotten. In this solitude he wrote several tracts for his own amusement. One Dr. Midgley, an ingenious physician, related to the family by marriage, had the charge of looking over his papers. Amongst them he found that manuscript, which he reserved to his proper use, and by his own pen, and the assistance of some others, continued the work till the eighth volume was finished, without having the honesty to acknowledge the author of the first.

The governor likewise wrote the History of the Rebellion in England, Scotland and Ireland; wherein the most material passages, battles, sieges, policies, and stratagems of war, are impartially related on both sides.

His daughter, our authoress, received an education suitable to her birth, and gave very early discoveries of a genius, not only above her years, but much superior to what is usually to be found amongst her own sex. She had the misfortune to lose her mother, while she was yet an infant, a circumstance, which laid the foundation of many calamities, which afterwards befell her.

The brother of Sir Roger Manley, who was of principles very opposite to his, joined with the Parliamentarian party; and after Charles I had suffered, he engaged with great zeal in the cause of those who were for settling a new form of government, in which, however, they were disappointed by the address of Cromwell. During these heats and divisions, Mr. Manley, who adhered to the most powerful party, was fortunate enough to amass an estate, and purchased a title; but these, upon the restoration, reverted back to the former possessor; so that he was left with several small children unprovided for. The eldest of these orphans, Sir Roger Manley took under his protection, bestowed a very liberal education on him, and endeavoured to inspire his mind with other principles, than those he had received from his father. This young gentleman had very promising parts, but under the appearance of an open simplicity, he concealed the most treacherous hypocrisy. Sir Roger, who had a high opinion of his nephew's honour, as well as of his great abilities, on his death-bed bequeathed to him the care of our authoress, and her youngest sister.

This man had from nature a very happy address, formed to win much upon the hearts of unexperienced girls; and his two cousins respected him greatly. He placed them at the house of an old, out-of-fashion aunt; she was full of the heroic stiffness of her own times, and would

read books of Chivalry, and Romances with her spectacles.

This sort of conversation, much infected the mind of our poetess, and filled her imagination with lovers, heroes, and princes; made her think herself in an enchanted region, and that all the men who approached her were knights errant. In a few years the old aunt died, and left the two young ladies without any control; which as soon as their cousin Mr. Manley heard, he hasted into the country, to visit them; appeared in deep mourning, as he said for the death of his wife.

32. The main idea of this passage is

A. introducing the different facets of Sir Roger Manley's life and its influences.
B. evaluating Ms. Manley's upbringing as a future poet.
C. discussing gender roles in pre-modern Britain.
D. emphasizing the importance of wealth for one's education.

33. As used in line 24, "charge" most nearly means

A. fee.
B. responsibility.
C. accusation.
D. onslaught.

34. Sir Roger Manley's work was plagiarized by which of the following persons?

A. Charles I
B. Dr. Midgley
C. his daughter
D. his nephew

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

A. Lines 16-19 ("He … Charles I.")
B. Lines 34-40 ("Amongst … first.")
C. Lines 52-56 ("She … her.")
D. Lines 78-82 ("This … hypocrisy.")

36. In lines 47-48, the author mentions that Ms. Manley "received an education suitable to her birth" meaning

A. her education reflected her father's higher standing in society.
B. her education reflected the limitations set upon women of her time.
C. her education was minimal and only given to her at a young age.
D. her education surpassed her peers in most subjects.

37. According to his actions, Sir Roger Manley's character can best be described as

A. complacent and willing.
B. unrelenting and confrontational.
C. cold and withdrawn.
D. nourishing and supportive.

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

A. Lines 10-13 ("He … restoration.")
B. Lines 16-19 ("He … Charles I.")
C. Lines 72-78 ("The … father.")
D. Lines 88-90 ("This … girls;")

39. As used in line 69, "title" most nearly means

A. publication.
B. property.
C. label.
D. profession of.

40. How does the last paragraph relate to the rest of the passage?

A. It gives further evidence of the influences in Ms. Manley's upbringing.
B. It contrasts Mr. Manley's character to his uncle's.
C. It focuses solely on Ms. Manley's aunt in comparison to Sir Roger Manley.
D. It negates the previous paragraphs on Sir Roger Manley's honor,

41. Which of the following was NOT mentioned in the passage?

A. Sir Roger Manley spent his past time writing.
B. Sir Roger Manley's daughter exceeded her peers in education.
C. Sir Roger Manley's daughter was greatly affected by her aunt's taste in her early age.
D. Mr. Manley mourned the loss of his uncle and honored his death.

42. The author's tone throughout the passage is one of

A. suspicion.
B. indifference.
C. pride.
D. objectivity.

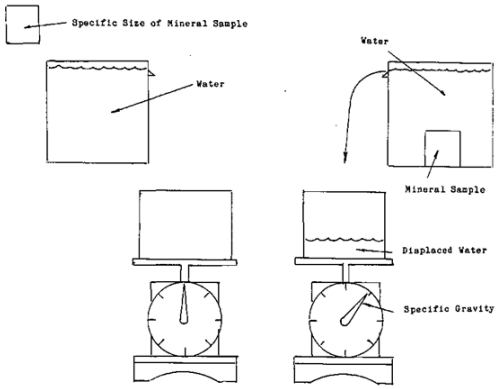
The following edited passage is taken from The Chemistry, Properties and Tests of Precious Stones *by Jon Mastin on the specific gravity of stones.*

The fixing of the specific gravity of a stone also determines its group position with regard to weight; its colour and other characteristics defining the actual stone. This is a safe and very common method of proving a stone, since its specific gravity does not vary more than a point or so in different specimens of the same stone. There are several ways of arriving at this, such as by weighing in balances in the usual manner, by displacement, and by immersion in liquids the specific gravity of which are known.

Cork is of less specific gravity than water, therefore it floats on the surface of that liquid, whereas iron, being heavier, sinks. So that by changing the liquid to one lighter than cork, the cork will sink in it as does iron in water; in the second instance, if we change the liquid to one heavier than iron, the iron will float on it as does cork on water, and exactly as an ordinary flat-iron will float on quicksilver, bobbing up and down like a cork in a tumbler of water. If, therefore, solutions of known but varying densities are compounded, it is possible to tell almost to exactitude the specific gravity of any stone dropped into them, by the position they assume. Thus, if we take a solution of pure methylene iodide, which has a specific gravity of 3.2981, and into this drop a few stones selected indiscriminately, the effect will be curious: first, some will sink plump to the bottom like lead; second, some will fall so far quickly, then remain for a considerable time fairly stationary; third, some will sink very slowly; fourth, some will be partially immersed, that is, a portion of their substance being above the surface of the liquid and a portion covered by it; fifth, some will float on the surface without any apparent immersion. In the first case, the stones will be much heavier than 3.2981; in the second, the stones will be about 3.50; in the third and fourth instances, the stones will be about the same specific gravity as the liquid, whilst in the fifth, they will be much lighter, and thus a rough but tolerably accurate isolation may be made.

On certain stones being extracted and placed in other liquids of lighter or denser specific gravity, as the case may be, their proper classification may easily be arrived at, and if the results are checked by actual weight, in a specific gravity balance, they will be found to be fairly accurate. The solution commonly used for the heaviest stones is a mixture of nitrate of thallium and nitrate of silver. This double nitrate has a specific gravity of 4.7963, therefore such a stone as zircon, which is the heaviest known, will float in it. For use, the mixture should be slightly warmed till it runs thin and clear; this is necessary, because at 60° (taking this as ordinary atmospheric temperature) it is a stiff mass. A lighter liquid is a mixture of iodide of mercury in iodide of potassium, but this is such an extremely corrosive and dangerous mixture, that the more common solution is one in which methylene iodide is saturated with a mixture of iodoform until it shows a specific gravity of 3.601; and by using the methylene iodide alone, in its pure state, it having a specific gravity of 3.2981, the stones to that weight can be isolated, and by diluting this with benzole, its weight can be brought down to that of the benzole itself, as in the case of Sonstadt's solution. This solution, in full standard strength, has a specific gravity of 3.1789, but may be weakened by the addition of distilled water in varying proportions till the weight becomes almost that of water.

This is especially appreciated when it is remembered that so far science has been unable (except in very rare instances of no importance) to manufacture any stone of the same colour as the genuine and at the same time of the same specific gravity. Either the colour and characteristics suffer in obtaining the required weight or density, or if the colour and other properties of an artificial stone are made closely to resemble the real, then the specific gravity is so greatly different, either more or less, as at once to stamp the jewel as false.



Measuring Specific Gravity

Source: Unknown

43. The main idea of the passage is

- **A.** to provide evidence for methods of acquiring the specific gravity of a stone in a liquid.
- **B.** to assess the colour and other attributes of a stone to define it.
- **C.** a cork's relation to water and its specific gravity.
- **D.** to discuss the effect of temperature on specific gravity.

44. The passage is mostly likely written for an audience that

- **A.** solely wants the basic approach of calculating specific gravity.
- **B.** has years of professional experience in measuring specific gravity for liquids and stones.
- **C.** seeks methods of defining specific gravity of stones.
- **D.** understands the definition of specific gravity.

45. As used in line 56, "extracted" most nearly means

- **A.** derived.
- **B.** removed.
- **C.** evolved.
- **D.** obtained.

46. According to the second paragraph, if a stone is dropped into a defined liquid gravity and it submerges bit by bit, then it can be assumed that

- **A.** the stone has a higher specific gravity than the liquid's.
- **B.** the stone has nearly the same specific gravity as the liquid's.
- **C.** the liquid's specific gravity is moderately lower than the stone's.
- **D.** the liquid's specific gravity is significantly higher than the stone's.

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

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

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

- **A.** Corks have a lower specific gravity than water.
- **B.** Depending on the stone's specific gravity in relation to the liquid's, the stone either submerges at different rates or stays afloat.
- **C.** Colour may be compromised when a stone is being manufactured.
- **D.** Using liquids to calculate a stone's specific gravity is unreliable.

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

- **A.** Lines 18-20 ("So … water;")
- **B.** Lines 32-36 ("Thus … curious:")
- **C.** Lines 56-63 ("On … accurate.")
- **D.** Lines 94-100 ("This … gravity.")

50. As used in line 101, "suffer" most nearly means

- **A.** hurt.
- **B.** are affected by.
- **C.** experience.
- **D.** permit.

51. It can most reasonably be inferred that the use of a dense liquid

- **A.** will weigh down the stones when weakened.
- **B.** is a dangerous mixture and less common.
- **C.** gives the most accurate results.
- **D.** allows for the heaviest stones to be tested.

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

- **A.** Lines 56-63 ("On … accurate.")
- **B.** Lines 66-69 ("This … it.")
- **C.** Lines 74-82 ("A … 3.601;")
- **D.** Lines 88-93 ("This … water.")