VSTEP FINAL READING TEST

Time limit: 60 minutes

PASSAGE 1

Galaxies are the **major** building blocks of the universe. A galaxy is a giant family of many millions of stars, and it is held together by its own gravitational field. Most of the material universe is organized into galaxies of stars, together with gas and dust.

There are three main types of the galaxy: spiral, elliptical, and irregular. The Milky Way is a spiral galaxy: a flattish disc of stars with two spiral arms emerging from its central nucleus. About one-quarter of all galaxies have this shape. Spiral galaxies are well supplied with the interstellar gas in **which** new stars form; as the rotating spiral pattern sweeps around the galaxy it compresses gas and dust, triggering the formation of bright young stars in its arms. The elliptical galaxies have a **symmetrical** elliptical or

spheroidal shape with no **obvious** structure. Most of their member stars are very old and since ellipticals are devoid of interstellar gas, no new stars are forming in them. The biggest and brightest galaxies in the universe are ellipticals with masses of about 1013 times that of the Sun; these giants may frequently be sources of strong radio emission, in which case they are called radio galaxies. About two-thirds of all galaxies are elliptical. Irregular galaxies comprise about one-tenth of all galaxies and they come in many subclasses.

Measurement in space is quite different from measurement on Earth. Some terrestrial distances can be expressed as intervals of time: the time to fly from one continent to another or the time it takes to drive to work, for example. By comparison with these familiar yardsticks, the distances to the galaxies are incomprehensibly large, but **they** too are made more manageable by using a time calibration, in this case the distance that light travels in one year. On such a scale the nearest giant spiral galaxy, the Andromeda galaxy, is two million light years away. The most distant luminous objects seen by telescopes are probably ten thousand million light years away. Their light was already halfway here before the Earth even formed. The light from the nearby Virgo galaxy set out when reptiles still dominated the animal world.

LIVEWORKSHEETS

1. The world "**major**" in line 1 is closest in meaning to

(A) intense (B) principal (C) huge (D) unique

2. What does the second paragraph mainly discuss?

(A) The Milky Way

(B) Major categories of galaxies

(C) How elliptical galaxies are formed

(D) Difference between irregular and spiral galaxies

3. The word "**which**" in line 7 refers to

(A) dust (B) gas (C) pattern (D) galax

4. According to the passage, new stars are formed in spiral galaxies due to

(A) an explosion of gas

(B) the compression of gas and dust

(C) the combining of old stars

(D) strong radio emissions

5. The word "**symmetrical**" in line 9 is closest in meaning to

(A) proportionally balanced

(B) commonly seen

(C) typical large

(D) steadily growing

6. The word "**obvious**" in line 9 is closest in meaning to

(A) discovered (B) apparent (C) understood (D) simplistic

7. According to the passage, which of the following is NOT true of elliptical galaxies?

(A) They are the largest galaxies.

(B) They mostly contain old stars.

(C) They contain a high amount of interstellar gas.

(D) They have a spherical shape

LIVEWORKSHEETS

8. Which of the following characteristics of radio galaxies is mentioned in the passage?

(A) They are a type of elliptical galaxy.

(B) They are usually too small to be seen with a telescope

(C) They are closely related to irregular galaxies.

(D) They are not as bright as spiral galaxies.

9. What percentage of galaxies are irregular?

(A) 10% (B) 25% (C) 50% (D) 75%

10. The word "**they**" in line 18 refers to

(A) intervals (B) yardsticks (C) distances (D) galaxies

PASSAGE 2:

There are many theories about the beginning of drama in ancient Greece. The one most widely accepted today is based on the assumption that drama evolved from ritual.

The argument for this view goes as follows. In the beginning, human beings viewed Line the natural forces of the world, even the seasonal changes, as unpredictable, and **they** sought, through various means, to control these unknown and feared powers. Those

measures which appeared to bring the desired results were then retained and repeated until they hardened into fixed rituals. Eventually stories arose which explained or veiled the mysteries of the rites. As time passed some rituals were abandoned, but the stories, later called myths, persisted and provided material for art and drama. Those who believe that drama evolved out of ritual also argue that those rites contained the seed of theater because music, dance, masks, and costumes were almost always used. Furthermore, a suitable site had to be provided for performances, and when the entire community did not participate, a clear division was usually made between the "acting area" and the "auditorium." In addition, there were performers, and, since **considerable** importance was attached to avoiding mistakes in the **enactment** of rites, religious leaders usually assumed that task. Wearing mask and costumes, **they** often impersonated other people, animals, or supernatural beings, and mimed the desired effect — success in hunt or battle, the coming rain,

LIVEWORKSHEETS

the revival of the Sun — as an actor might. Eventually such dramatic representations were separated from religious activities.

Another theory traces the theater's origin from the human interest in storytelling. According to this view, tales (about the hunt, war, or other feats) are gradually elaborated, at first through the use of impersonations, action, and dialogue by a narrator and then through the assumption of each of the roles by a different person. A closely related theory traces theater to those dances that are primarily rhythmical and gymnastic or that are imitations of animal movements and sounds.

11. What does the passage mainly discuss?

(A) The origins of theater

(C) The importance of storytelling

(B) The role of ritual in modern dance

(D) The variety of early religious activities

12. The word "**they**" in line 4 refers to

(A) seasonal changes (B) natural forces (C) theories (D) human beings

13. What aspect of drama does the author discuss in the first paragraph?

(A) The reason drama is often unpredictable

(B) The seasons in which dramas were performed

(C) The connection between myths and dramatic plots

(D) The importance of costumes in early drama

14. Which of the following is NOT mentioned as a common element of theater and ritual?

(A) Dance (B) Costumes (C) Music (D) Magic

15. The word "**considerable**" in line 15 is closest in meaning to

(A) thoughtful (B) substantial (C) relational (D) ceremonial

16. The word "**enactment**" in line 15 is closest in meaning to

(A) establishment (B) performance (C) authorization (D) season

17. The word "**they**" in line 16 refers to

LIVEWORKSHEETS

(A) mistakes (B) costumes (C) animals (D) performers

18. According to the passage, what is the man in difference between ritual and drama?

(A) Ritual uses music whereas drama does not.

(B) Ritual is shorter than drama.

(C) Ritual requires fewer performers than drama.

(D) Ritual has a religious purpose and drama does not.

19. The passage supports which of the following statements?

(A) No one really knows how the theater began.

(B) Myths are no longer represented dramatically.

(C) Storytelling is an important part of dance.

(D) Dramatic activities require the use of costumes.

20. Where in the passage does the author discuss the separation of the stage and the audience?

(A) Lines 8-9 (B) Lines 12-14 (C) Lines 19-20 (D) Lines 22-24

PASSAGE 3:

Because the **low latitudes** of the Earth, the areas near the equator, receive more heat than the latitudes near the poles, and because the nature of heat is to expand and move, heat is transported from the tropics to the middle and high latitudes. Some of this heat is moved by winds and some by ocean currents, and some gets stored in the atmosphere in the form of latent heat. The term "latent heat" refers to the energy that has to be used to **convert** liquid water to water vapor. We know that if we warm a pan of water on a stove, it will **evaporate**, or turn into vapor, faster than if it is allowed to sit at room temperature.

We also know that if we hang wet clothes outside in the summer-time they will dry faster than in winter, when temperatures are colder. The energy used in both cases to change liquid water to water vapor is supplied by heat – supplied by **the stove** in the first case and by the Sun in the latter case. This energy is not lost. It is stored in water vapor in the atmosphere as latent heat.

LIVEWORKSHEETS

Eventually, the water stored as vapor in the atmosphere will condense to liquid again, and the energy will be released to the atmosphere.

In the atmosphere, a large portion of the Sun's incoming energy is used to evaporate Water, primarily in the tropical oceans. Scientists have tried to quantify this proportion of the Sun's energy. By analyzing temperature, water vapor, and wind data around the globe, they have estimated the quantity to be about 90 watts per square meter, or nearly 30 percent of the Sun's energy. Once this latent heat is stored within the atmosphere, **it** can be transported, **primarily** to higher latitudes, by **prevailing**, large-scale winds. Or it can be transported vertically to higher levels in the atmosphere, where it forms clouds and subsequent storms, which then release the energy back to the atmosphere.

21. The passage mainly discusses how heat

(A) is transformed and transported in the Earth's atmosphere

(B) is transported by ocean currents

(C) can be measured and analyzed by scientists

(D) moves about the Earth's equator

22. The passage mentions that the tropics differ from the Earth's polar regions in which of the following ways?

(A) The height of cloud formation in the atmosphere

(B) The amount of heat they receive from the Sun

(C) The strength of their large scale winds.

(D) The strength of their oceanic currents

23. The word "**convert**" line 5 is closest in meaning to

(A) mix (B) change (C) adapt (D) reduce

24. Why does the author mention "**the stove**" in line 10?

(A) To describe the heat of the Sun (B) To illustrate how water vapor is stored

(C) To show how energy is stored (D) To give an example of a heat source

25. According to the passage, most ocean water evaporation occurs especially

(A) around the higher latitudes (B) in the tropics

(C) because of large-scale winds (D) because of strong ocean currents

26. According to the passage, 30 percent of the Sun's incoming energy

LIVEWORKSHEETS

(A) is stored in clouds in the lower latitudes (B) is transported by ocean currents

(C) never leaves the upper atmosphere (D) gets stored as latent heat

27. The word "**it**" in line 18 refers to

(A) square meter (B) the Sun's energy

(C) latent heat (D) the atmosphere

28. The word "**primarily**" in line 18 is closest in meaning to

(A) chiefly (B) originally (C) basically (D) clearly

29. The word "**prevailing**" in line 19 is closest in meaning to

(A) essential (B) dominant (C) circular (D) closest

30. All of the following words are defined in the passage EXCEPT

(A) low latitudes (line1) (B) latent heat (line 5)

(C) evaporate (line7) (D) atmosphere (line14)

PASSAGE 4:

Naturalists and casual observers alike have been struck by the special relationship between squirrels and acorns (the seeds of oak trees). Ecologists, though, cannot observe these energetic mammals scurrying up and down oak trees and eating and burying acorns without wondering about their complex relationship with trees. Are squirrels dispersers and planters of oak forests or pesky seed predators? The answer is not simple. Squirrels may devour many acorns, but by storing and failing to recover up to 74 percent of them (as **they** do when seeds are abundant), these arboreal rodents can also aid regeneration and dispersal of the oaks.

Their destructive powers are well documented. According to one report, squirrels destroyed tens of thousands of fallen acorns from an oak stand on the University of Indiana campus. A professor there **estimated** that each of the large while oaks had produced between two and eight thousand acorns, but within weeks of seed maturity, hardly an intact acorn could be found among the fallen leaves.

Deer, turkey, wild pigs, and bears also feed heavily on acorns, but do not store them, and are therefore of no benefit to the trees. Flying squirrels, chipmunks, and mice are also unlikely to promote tree dispersal – whose behavior of caching (hiding) acorns below the leaf litter often promotes successful germination of acorns – and perhaps blue jays, important long-distance dispersers, seem to help oaks spread and reproduce.

LIVEWORKSHEETS

Among squirrels, though, there is a particularly puzzling behavior pattern. Squirrels **pry off** the caps of acorns, bite through the shells to get at the nutritious inner kernels, and then discard them half-eaten. The ground under towing oaks is often **littered** with thousands of half-eaten acorns, each one only bitten from the top. Why would any animal waste so much time and energy and risk exposure to such predators as red-tail hawks only to leave a large part of each acorn uneaten? While research is not conclusive at this point, one thing that is certain is that squirrels do hide some of the uneaten portions, and these acorn halves, many of which contain the seeds, may later germinate.

31. What does the passage mainly discuss?

(A) The ecology of oak trees

(B) Factors that determine the feeding habits of Squirrels

(C) Various species of animals that promote the dispersal of tree seeds

(D) The relationship between squirrels and oak trees

32. The word "**they**" in line 6 refers to

(A) oak forests (B) acorns (C) squirrels (D) predators

33. According to the passage, what do squirrels do when large quantities of acorns are available?

(A) They do not store acorns.

(B) They eat more than 74 percent of available acorns.

(C) They do not retrieve all the acorns that they have stored.

(D) They hide acorns in tree cavities.

34. The word "**estimated**" in line 10 is closest in meaning to

(A) commented (B) judged (C) observed (D) discovered

35. Why does the author mention "**the University of Indiana campus**" in line 9-10

(A) To provide evidence that intact acorns are hard to find under oak trees

(B) To indicate a place where squirrels can aid seed dispersal of oaks

LIVEWORKSHEETS

(C) To argue in favor of additional studies concerning the destructive force of squirrels

(D) To support the claim that squirrels can do great damage to oak stands

36. It can be inferred from paragraph 3 that chipmunks do not aid in the dispersal of oak trees because

(A) they store their acorns where they cannot germinate

(B) they consume most of their stored acorns

(C) their stored acorns are located and consumed by other species

(D) they cannot travel the long distance required for dispersal

37. According to the passage, which of the following do squirrels and blue jays have in common?

(A) They travel long distances to obtain acorns.

(B) They promote the reproduction of oak trees.

(C) They bury acorns under fallen leaves.

(D) They store large quantities of acorns.

38. The phrase "**pry off**" in line 18 is closest in meaning to

(A) swallow (B) remove (C) squeeze (D) locate

39. The word "littered" in line 20 is closest in meaning to

(A) covered (B) displayed (C) fertilized (D) planted

40. According to the passage, scientists cannot explain which of the following aspects of squirrel behavior?

(A) Where squirrels store their acorn caches

(B) Why squirrels prefer acorns over other seeds

(C) Why squirrels eat only a portion of each acorn they retrieve

(D) Why squirrels prefer acorns from a particular species of oak trees

LIVEWORKSHEETS