KUAT is a computer-based test. This sample test is only to show example questions in each of the three sections of the test.

1. Quantitative Section (50 Questions - 90 minutes)
2. Verbal Section (30 Questions - 45 minutes)
3. Essay Writing (30 minutes)

These questions in paper-based format are to help applicants prepare for KUAT.
Actual test will be done on computer. Test-takers will be able to practice on the computer before start of the test to familiarize with the interface.

Answers are given at the end.

## Instructions:

Solve the problem and indicate the best of the answer choices given.

$$
\text { 1. } \quad \begin{aligned}
& 2 x-y=8 \\
& x+2 y=4
\end{aligned}
$$

For the system of equations above, what is the value of $x+y$ ?
(A) -1
(B) 4
(C) 5
(D) 20
2. Which of the following statements is true about the graph of the equation $2 y-3 x=$ -4 in the xy-plane?
(A) It has a negative slope and a positive $y$-intercept.
(B) It has a negative slope and a negative y-intercept.
(C) It has a positive slope and a positive $y$-intercept.
(D) It has a positive slope and a negative $y$-intercept.
3. If r\&s are integers and $8^{r}=1024^{s}$, what is the value of $s / r$ ?
(A) $1 / 3$
(B) 0.3333
(C) $3 / 10$
(D) $10 / 3$

4. Which of the following is an equation of line $e$ in the xy -plane above?
(A) $x=1$
(B) $y=1$
(C) $y=x$
(D) $y=x+1$
5. Kate ordered beef burgers. The price of each burger was Rs. 175. Sales Tax of $20 \%$ is applied to each burger. Rs. 5 per burger were delivery charges. Which of the following equations represent Kate's total charge, in Rs, for ordering $n$ burgers?
(A) 210 n
(B) $210 \mathrm{n}+5$
(C) $215^{n}$
(D) None of the given options.
6. If $f(x)$ has 3 real roots. Two of the factors of $f(x)$ are $x-1$ and $x+3$. One root of the equation $f(x)$ is 5. Find $f(x)$ ?
(A) $f(x)=x^{3}-4 x^{2}-13 x-15$
(B) $f(x)=x^{2}-6 x+7$
(C) $f(x)=x^{4}-3 x^{3}+5 x^{2}+7 x-9$
(D) $f(x)=x^{3}-3 x^{2}-13 x+15$

7. The circle above with center O has a circumference of 36 . What is the length of minor arc $p A C$ ?
(A) 9
(B) 12
(C) 18
(D) 36
8. $\quad \mathrm{C}=75 \mathrm{~h}+125$

The equation above gives the amount C, in Rupees, an electrician charges for a job that takes h hours. Ms. Sara and Mr. Ross each hired this electrician. The electrician worked 2 hours longer on Ms. Sara's job than on Mr. Ross' job. How much more did the electrician charge Ms. Sara than Mr. Ross?
(A) Rs. 75
(B) Rs. 125
(C) Rs. 150
(D) Rs. 275
9. Harry drove 100 miles to visit a friend. If he had driven 8 miles per hour faster than he did, he would have arrived in $5 / 6$ of the time he actually took. How many minutes did the trip take?
(A) 100
(B) 120
(C) 125
(D) 150
10. In air, the speed of sound $S$, in meters per second, is a linear function of the air temperature T, in degrees Celsius, and is given by $S(T)=0.6 T+331.4$. Which of the following statements is the best interpretation of the number 331.4 in this context?
(A) The speed of sound, in meters per second, at $0^{\circ} \mathrm{C}$
(B) The speed of sound, in meters per second, at $0.6^{\circ} \mathrm{C}$
(C) The increase in the speed of sound, in meters per second, that corresponds to an increase of $1^{\circ} \mathrm{C}$
(D) The increase in the speed of sound, in meters per second, that corresponds to an increase of $0.6^{\circ} \mathrm{C}$

11. A system of three equations is graphed in the xy- plane above. How many solutions does the system have?
(A) None
(B) One
(C) Two
(D) Three
12. The hypotenuse of a right triangle is 16 and one of the angles is 45 degrees.
What's the length of the side opposite to the angle?
(A) $8 \sqrt{2}$
(B) $16 \sqrt{2}$
(C) $32 \sqrt{2}$
(D) None of the given option.
13. If two fair dice are thrown, what is the probability that at least one of them shows a number greater than 3 ?
(A) 0.2
(B) 0.4
(C) 0.6
(D) 0.75
14. Two spheres, one with radius 10 and one with radius 20 , are tangent to each other. If $B$ is any point on one sphere and $C$ is any point on the other sphere what is the maximum possible length of BC ?
(A) 10
(B) 20
(C) 30
(D) 60
15. Half the people on a bus get off at each stop after the first, and no one gets on after the first stop. If four people get off at stop number five, how many people got on the first stop?
(A) 128
(B) 64
(C) 32
(D) 16
16. What is $500 \%$ of $45 \%$ of $22 \%$ of $n$ ?
(A) 0.0495 n
(B) 0.099 n
(C) 0.495 n
(D) 0.99 n
17. If $A$ is the area and $C$ the circumference of a circle, which of the following is an expression for A in terms of C ?
(A) $\frac{C^{2}}{4 \pi}$
(B) $\frac{C^{2}}{4 \pi^{2}}$
(C) $2 c \sqrt{x}$
(D) $2 c^{2} \sqrt{x}$
18. Five different bands have been selected' to March in a parade. One band has been chosen to lead the parade. In how many different orders can the remaining four bands be placed in the parade?
(A) 4
(B) 8
(C) 16
(D) 24
19. What are the solutions of the quadratic equation $4 x^{2}-8 x-12=0$ ?
(A) $x=-1$ and $x=-3$
(B) $x=-1$ and $x=3$
(C) $x=1$ and $x=-3$
(D) $x=1$ and $x=3$
20. If $|x-5|>11$, which of the following could be the value of $x$ ?
I. 16
II. 17
III. -5
(A) I only
(B) II only
(C) III only
(D) II and III only
21. If $x=\frac{a}{a-1}$ and $y=\frac{1}{a-1 \prime}$ then:
(A) $x$ is equal to $y$
(B) $x$ is equal to $y$ only if $a<1$
(C) $x$ is greater than $y$
(D) $x$ is greater than $y$ only if $a<1$
22. At the Modern furniture market, Bob bought 3 chairs for Rs. 3999 each and a dining table for Rs. 5100 . He paid $1 / 3$ of the total cost at the time of purchase and the balance in 8 equal monthly installments. What was the total amount of each month's payment?
(A) Rs. 1500.00
(B) Rs. 1424.75
(C) Rs. 1200.25
(D) None of the given options
23. Which of the following is an example of a function whose graph in the xy-plane has no x-intercepts?
(A) A linear function whose rate of change is not zero
(B) A quadratic function with real zeros
(C) A quadratic function with no real zeros
(D) A cubic polynomial with at least one real zero
24. The volume of right circular cylinder $B$ is 22 cubic centimeters. What is the volume, in cubic centimeters, of a right circular cylinder with twice the radius and half the height of cylinder B?
(A) 11
(B) 22
(C) 44
(D) 66
25. Ali drives an average of 100 miles each week. His car can travel an average of 25 miles per gallon of gasoline. Ali would like to reduce his weekly expenditure on gasoline by Rs.5. Assuming gasoline costs Rs. 4 per gallon, which equation can Ali use to determine how many fewer average miles, $m$, he should drive each week?
(A) $\frac{25}{4} m=95$
(B) $\frac{25}{4} m=5$
(C) $\frac{4}{25} m=95$
(D) $\frac{4}{25} m=5$

26. The graph of the function $f$ in the xyplane above is a parabola. Which of the following defines $f$ ?
(A) $f(x)=4(x-3)^{2}+1$
(B) $f(x)=4(x+3)^{2}+1$
(C) $f(x)=(x-3)^{2}+1$
(D) $f(x)=3(x+3)^{2}+1$
27. $(a x+3)\left(5 x^{2}-b x+4\right)=20 x^{3}-9 x^{2}-$ $2 x+12$

The equation above is true for all x , where a and $b$ are constants. What is the value of $a b$ ?
(A) 18
(B) 20
(C) 24
(D) 40
28. Which of the following is equivalent to

$$
2\left(x^{2}-x\right)+3\left(x^{2}-x\right) ?
$$

(A) $5 x^{2}-5 x$
(B) $5 x^{2}+5 x$
(C) 5 x
(D) $5 x^{2}$

29. The graph of $y=f(x)$ is shown in the xy-plane. What is the value of $f(0)$ ?
(A) 0
(B) 2
(C) 3
(D) 4
30. If $p$ is the sum of the integers from 51 to 150 and $r$ is the sum of integers from 151 to 250 , what is the value of $\mathrm{p}-\mathrm{r}$ ?
(A) 100,000
(B) 10,000
(C) $-100,000$
(D) $-10,000$
31. The sum of five consecutive positive odd integers is z . In terms of z , what is the sum of the smallest and largest integers?
(A) $\frac{z-27}{5}$
(B) $\frac{z+27}{5}$
(C) $\frac{2 z}{5}$
(D) $\frac{z-25}{5}$

32. In the figure above, point $B$ lies on $A D$. What is the value of $3 x$ ?
(A) 18
(B) 36
(C) 54
(D) 72

## KUAT <br> Sample Test | Quantitative Section

33. If $x>0$, which of the following is equivalent to the given expression? $\sqrt{9 x^{2}}$
(A) $3 x$
(B) $3 x^{2}$
(C) $18 x$
(D) $18 x^{4}$
34. If the average of $20,30,40,50-x, 10+2 x$ is 87 , what is the value of $x$ ?
(A) 265
(B) 275
(C) 285
(D) 295
35. Of the three hundred students at Allama Iqbal College, exactly 40 play football and 60 play basketball, and 25 play both. How many students neither play football nor basketball?
(A) 125
(B) 175
(C) 225
(D) 250
36. Find the unit digit of $7^{49}$.
(A) 7
(B) 9
(C) 3
(D) 1
37. The total weight of a tin and the cookies it contains is one kg , after $4 / 5$ of the cookies are eaten, the tin and the remaining cookies weight 0.8 kg . What is the weight of the cookies in the tin?
(A) 0.75 kg
(B) 0.25 kg
(C) 0.5 kg
(D) None of the given options.
$38.3,-9,27, \ldots . . .$.
The first term in the sequence above is 3 , and every term after the first is -3 times the preceding term. How many terms in the sequence are less than 1000 ?
(A) 6
(B) 7
(C) 8
(D)More than 9
38. 

$$
\begin{gathered}
x+2 y-3 z=92 \\
2 x-y+z=36 \\
4 x-y-2 z=12
\end{gathered}
$$

Based on the system of equations above, what is the value of $x$ ?
(A) 11
(B) 20
(C) -40
(D) -42
40.

3, 9, 27,81,.......
Each term in the sequence above is determined by multiplying the previous term by 3 . What will be the units(ones) digit of the $1,000,000,000$ th term?
(A) 1
(B) 3
(C) 6
(D) 7
41. If $4 x+3 y=20$ and $3 y-2 z=7$, what is $2 x+z$ ?
(A) 6.5
(B) 7
(C) 18
(D) 20
42. What's the probability of selecting a number in random out of the range 1-17, inclusive, and getting a prime number?
(A) $\frac{8}{17}$
(B) $\frac{7}{17}$
(C) $\frac{6}{17}$
(D) $\frac{5}{17}$
43. For a polynomial $g(x)$, the value of $g$ (3 billion) is 0.1 trillion. Which of the following must be true about $\mathrm{g}(\mathrm{x})$ ?
(A) $x+3$ billion is a factor
(B) $x-3$ billion is a factor
(C) The remainder when $g(x)$ is divided by $x-3$ billion is 0.1 trillion.
(D) None of the given options.
44. Ben can type a full report in h hours. At this rate, how many reports can he type in m minutes?
(A) $\frac{m h}{60}$
(B) $\frac{60 m}{n}$
(C) $\frac{m}{60 h}$
(D) $\frac{60 h}{m}$
45. What is the domain of $f(x)=9-x^{2}$ ?
(A) $|x|>9$
(B) $|x|<9$
(C) $|x|>3$
(D) $|\mathrm{x}| \leq 3$
46. The area of a certain rectangle is $(5+\sqrt{6}) \mathrm{cm}^{2}$. One of its sides is $(\sqrt{3}-\sqrt{2}) \mathrm{cm}$. Find the other side.
(A) $5(\sqrt{3}+1) \mathrm{cm}$
(B) $7(\sqrt{2}+\sqrt{3}) \mathrm{cm}$
(C) $14(\sqrt{6}) \mathrm{cm}$
(D) None of the given options.
47. A cylinder is inscribed in a sphere. If the radius of the sphere is 5 and the height of the cylinder is, then, what is the volume of the cylinder?
(A) $24 \pi$
(B) $48 \pi$
(C) $72 \pi$
(D) $96 \pi$
48. Find the two-digit number whose square of the sum of the digits is equal to the value when the digits are reversed.
(A) 28
(B) 46
(C) 18
(D) 21
49. A semi-circle is divided into 40 congruent pizza slice shaped parts. If the diameter of the semi-circle is 10 feet, what is the area of each wedge-shaped part?
(A) $\frac{5}{16}$
(B) $\frac{5}{8}$
(C) $\frac{5}{16} \pi$
(D) $\frac{5}{8} \pi$

## KUAT <br> Sample Test | Quantitative Section

50. An analysis of the monthly incentives received by 5 salesmen: The mean and median of the incentives is Rs. 7,000 . The only mode among the observations is Rs. 12,000. Incentives paid to each salesman were in full thousands. What is the difference between the highest and the lowest incentive received by the 5 salesmen in the month?
a) Rs. 4000
b) Rs. 13,000
c) Rs. 9000
d) Rs. 11,500

## Reading Comprehension

## Directions:

The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages.

Answer the questions on the basis of what is stated or implied in the passages and in any introductory material that may be provided.

## Questions 1-5 are based on the following passage.

This passage is adapted from William Maxwell, The Folded Leaf. ©1959 by William Maxwell.

The Alcazar Restaurant was on Sheridan Road near Devon Avenue. It was long and narrow, with tables for two along the walls and tables for four.down the middle. The decoration was art moderne except for the series of murals depicting the four seasons, and the sick ferns in the front window. Lymie sat down at the second table from the cash register, and ordered his dinner. The history book, which he propped against the catsup and the glass sugar bowl, had been used by others before him.

Blank pages front and back were filled in with maps, drawings, dates, comic cartoons, and organs of the body; also with names and messages no longer clear and never absolutely legible. On nearly every other page there was some marginal notation, either in ink or in very hard pencil. And unless someone had upset a glass of water, the marks on page 177 were from tear

While Lymie read about the Peace of Paris, signed on the thirtieth of May, 1814, between France and the Allied powers, his right hand managed again and again to bring food up to his mouth. Sometimes he chewed, sometimes he swallowed the whole food that he had no idea he
was eating. The Congress of Vienna met, with some allowance for delays, early in November of the same year, and all the powers engaged in the war on either side sent plenipotentiaries. It was by far the most splendid and important assembly ever convoked to discuss and determine the affairs of Europe. The Emperor of Russia, the King of Prussia, the Kings of Bavaria, Denmark, and Wurttemberg, all were present in person at the court of the Emperor Francis I in the Austrian capital. When Lymie put down his fork and began to count them off, one by one, on the fingers of his left hand, the waitress, whose name was Irma, thought he was through eating and tried to take his plate away. He stopped her. Prince Metternich (his right thumb) presided over the Congress, and Prince Talleyrand (the index finger) represented France.

A party of four, two men and two women, came into the restaurant, all talking at once, and took possession of the center table nearest Lymie. The women had shingled hair and short tight skirts which exposed the underside of their knees when they sat down. One of the women had the face of a young boy but disguised by one trick or another (rouge, lipstick, powder, wet bangs plastered against the high forehead, and a pair of long pendant earrings) to look like a woman of thirty-five, which as a matter of fact she was. The men were older. They laughed more than there seemed any occasion for, while they were deciding between soup and shrimp cocktail, and their laughter was too loud. But it was the women's voices, the terrible not quite sober pitch of the women's voices which caused Lymie to skim over two whole pages without knowing what was on them. Fortunately he realized this and went back.

Otherwise he might never have known about the secret treaty concluded between England, France, and Austria, when the pretensions of Prussia and Russia, acting in
concert, seemed to threaten a renewal of the attack. The results of the Congress were stated clearly at the bottom of page 67 and at the top of page 68, but before Lymie got halfway through them, a coat that he recognized as his father's was hung on the hook next to his chair,

Lymie closed the book and said, "I didn't think you were coming." Time is probably no more unkind to sporting characters than it is to other people, but physical decay unsustained by respectability is somehow more noticeable. Mr. Peters' hair was turning gray and his scalp showed through on top. He had lost weight also; he no longer filled out his clothes the way he used to. His color was poor, and the flower had disappeared from his buttonhole. In its place was an American Legion button.

Apparently he himself was not aware that there had been any change. He straightened his tie self-consciously and when Irma handed him a menu, he gestured with it so that the two women at the next table would notice the diamond ring on the fourth finger of his right hand. Both of these things, and also the fact that his hands showed signs of the manicurist, one can blame on the young man who had his picture taken with a derby hat on the back of his head, and also sitting with a girl in the curve of the moon.

The young man had never for one second deserted Mr. Peters. He was always there, tugging at Mr. Peters' elbow, making him do things that were not becoming in a man of fortyfive.

1. The main purpose of the first paragraph is to
(A) introduce the passage's main character by showing his nightly habits.
(B) indicate the date the passage takes place by presenting period details.
(C) convey the passage's setting by describing a place and an object.
(D) foreshadow an event that is described in detail later in the passage.
2. Over the course of the passage, the primary focus shifts from
(A) Lymie's inner thoughts to observations made by the other characters.
(B) an exchange between strangers to a satisfying personal relationship.
(C) the physical setting of the scene to the different characters' personality traits.
(D) Lymie's experience reading a book to description of people in the restaurant.
3. The narrator indicates that Lymie finally closes the history book because
(A) his father has joined him at the table.
(B) the people at the other table are too disruptive.
(C) he has finished the chapter about the Congress.
(D) he is preparing to leave the restaurant.
4. Lymie's primary impression of the "party of four" is that
(A) they are noisy and distracting.
(B) are a refreshing change from the other customers.
(C) resemble characters from his history book.
(D) represent glamour and youth.
5. The primary impression created by the narrator's description of Mr. Peters is that
(A) he is healthy and fit.
(B) angry and menacing.
(C) nervous and hesitant.
(D) aging and shriveled.

Passage Questions 6-10 are based on the following passage and supplementary material.

This passage is adapted from Taras Grescoe, Straphanger: Saving Our Cities and Ourselves from the Automobile. © 2012 by Taras Grescoe.

And yet public transportation, in many minds, is the opposite of glamour-a squalid last resort for those with one too many impaired driving charges, too poor to afford insurance, or too decrepit to get behind the wheel of a car. In much of North America, they are right: taking transit is a depressing experience.

Anybody who has waited far too long on a street corner for the privilege of boarding a lurching, overcrowded bus, or wrestled luggage onto subways and shuttles to get to a big city airport, knows that transit on this continent tends to be underfunded, ill-maintained, and illplanned.

Given the opportunity, who wouldn't drive? Hopping in a car almost always gets you to your destination more quickly. It doesn't have to be like this. Done right, public transport can be faster, more comfortable, and cheaper than the private automobile. In Shanghai, German-made magnetic levitation trains skim over elevated tracks at 266 miles an hour, whisking people to the airport at a third of the speed of sound. In provincial French towns, electric-powered streetcars run silently on rubber tires, sliding through narrow streets along a single guide rail set into cobblestones.

From Spain to Sweden, Wi-Fi equipped high-speed trains seamlessly connect with highly ramified metro networks, allowing commuters to work on laptops as they prepare for same-day meetings in once distant capital cities. In Latin America, China, and India, working people board fast-loading buses that move like subway trains along dedicated busways, leaving the sedans and SUVs of the rich mired in dawn-to-dusk traffic jams. And some cities have
transformed their streets into cycle-path freeways, making giant strides in public health and safety and the sheer livability of their neighborhoods-in the process turning real feat was longevity. So when we picked the corner where we were going to double Dutch, we came with ropes and patience.

There is a space between the concrete and heaven where the air is sweeter and your heart beats faster. You drop down and then you jump up again and you do it over and over until the rope catches on your foot or your mother calls you home. Your legs feel powerful and heavy as they beat the ground. When you do around the world. It's like a ballet dancer's pirouette. In the rope. If you're good enough, you can do anything and be anything you want.

We'd meet at about 3:30. After we'd changed from our school clothes into our play clothes. Then we'd jump until the parents started coming home. Most of our parents worked nine to five in Manhattan, and it took them about an hour to get home. We knew it was coming up on six o'clock when we saw the first grown-up in business clothes walking down the bill from the bus stop.

Sometimes a grown-up woman, dressed in the stockings and sneakers that all our mothers wore for the long commute borne, would jump in - handbag and all - just to show us what she could do. She usually couldn't jump for very long. These women had no intention of sweating anyway.

Around this time, I would start looking out for my mother. I'd try to make my tum last long enough so she could see me jump.
"Wait, Mom, watch me jump!" I'd say.
'I've got to start dinner," she'd say. "And I've seen you jump before. Some other time," she'd say, closing the gate behind her.

There's so much I can do. So much stuff she doesn't know. But it's always some other time with her.

Here is what I wish she knew: There is nothing better than the space between the

## KUAT

## Sample Test | Verbal Section

two ropes. The helix encircles you and protects you and there you are strong. I wish she'd let me show her. the workaday bicycle into a viable form of mass transit.

If you credit the demographers, this transit trend has legs. The "Millennials," who reached adulthood around the turn of the century and now outnumbered baby boomers, tend to favor cities over suburbs, and are far more willing than their parents to ride buses and subways. Part of the reason is their ease with iPads, MP3 players, Kindles, and smartphones: you can get some serious texting done when you're not driving, and earbuds offer effective insulation from all but the most extreme commuting annoyances. Even though there are more teenagers in the country than ever, only ten million have a driver's license (versus twelve million a generation ago). Baby boomers may have been raised in Leave It to Beaver suburbs, but as they retire, a significant contingent is favoring older cities and compact towns where they have the option of walking and riding bikes. Seniors, too, are more likely to use transit, and by 2025 , there will be 64 million Americans over the age of sixty- five. Already, dwellings in older neighborhoods in Washington, D.C., Atlanta, and Denver, especially those near light-rail or subway stations, are commanding enormous price premiums over suburban homes.

The experience of European and Asian cities shows that if you make buses, subways, and trains convenient, comfortable, fast, and safe, a surprisingly large percentage of citizens will opt to ride rather than drive.

6. What function does the third paragraph serve in the passage as a whole?
(A) It acknowledges that a practice favored by the author of the passage has some limitations.
(B) It illustrates with detail the arguments made in the first two paragraphs of the passage.
(C) It gives an overview of a problem that has not been sufficiently addressed by the experts mentioned in the passage.
(D) It advocates for abandoning a practice for which the passage as a whole provides mostly favourable data
7. Which choice does the author explicitly cite as an advantage of automobile travel in North America?
(A) Environmental impact
(B) Convenience
(C) Speed
(D) Cost
8. Which choice is supported by the data in the first figure?
(A) The number of students using public transportation is greater than the number of retirees using public transportation.
(B) The number of employed people using public transportation and the number of unemployed people using public transportation is roughly the same.
(C) People employed outside the home are less likely to use public transportation than are homemakers.
(D) Unemployed people use public transportation less often than do people employed outside the home.
9. Taken together, the two figures suggest that most people who use public transportation
(A) are employed outside the home and take public transportation to work.
(B) are employed outside the home but take public transportation primarily in order to run errands.
(C) use public transportation during the week but use their private cars on weekends.
(D) use public transportation only until they are able to afford to buy a car
10. The word "favor" used in paragraph 11 most nearly means
(A) indulge.
(B) prefer.
(C) resemble.
(D) serve.

## Sentence \& Paragraph Correction

Directions: The following passage is an early draft of an essay. Some parts of the passage need to be rewritten.

Read the passage and select the best answers for the questions that follow. Some questions are about particular sentences or parts of sentences and ask you to improve sentence structure or word choice. Other questions ask you to consider organization and development. In choosing answers, follow the requirements of standard written English.

## Questions 11-16 are based on the following passage.

Survival in the Hostile Environment of NW Rota-1 (1) Sixty miles north of Guam and more than 1,700 feet under the ocean's surface is the summit of NW Rota-1, an undersea volcano discovered in 2003. (2) Surprisingly, the volcano appears to have been continuously active; it even grew 130 feet in height between 2006 and 2009. (3) Yet despite the hostile environment created by the constant volcanic activity, life is thriving there. (4) Special adaptations are the key to survival. (5)At that depth, water pressure suppresses the explosive force of the volcano's eruptions, allowing scientists to[1]watch and observe them up close via remotely operated vehicles[2] NW Rota-1 is far below the ocean's photic zone where sunlight drives photosynthesis; [3] nevertheless, bacteria supporting a unique food web have adapted to this perpetually dark environment. The bacteria have evolved to use hydrogen sulfide instead of sunlight for the energy that drives their metabolic processes, and hydrothermal venting is the source of the chemical soup necessary to support [4] him or her. Seawater seeping into fissures in the ocean floor is heated by
underlying magma, and the heat drives chemical reactions that remove oxygen, sulfates,[5] and remove other chemicals from the water. Once the superheated water (up to $750^{\circ} \mathrm{F}$ ) rises through vents in the ocean floor, additional reactions cause minerals and compounds to precipitate onto the seafloor, where bacteria feed on them.

Loihi shrimp-originally thought to exist only around an undersea volcano near [6] Hawaii, survive by using tiny, shear-like claws to harvest rapidly growing bacterial filaments covering rocks near NW Rota-1's hydrothermal vents. The Loihi shrimp spend most of their time grazing on the bacteria and evading another, previously unknown, species of shrimp. Shrimp of that species also graze on bacterial filaments as juveniles, [7]resulting from their ability to cope with the noxious environment around the volcano. They feed on the Loihi shrimp and other organisms that are overcome by the toxic plumes of volcanic gas and ash.

During an underwater eruption, steam quickly [8] condenses. The steam leaves only carbon dioxide bubbles and droplets of molten sulfur. This means that the water near NW Rota- 1 is more acidic than [9] that of stomach acid, presenting yet another challenge to life-forms living nearby. As the carbon dioxide level in Earth's atmosphere rises, the [10] worlds' ocean's absorb more carbon [11] dioxide. Organisms flourishing near the volcano may help biologists understand how life adjusts to very acidic conditions. In addition, NW Rota- 1 is a natural laboratory where scientists can study conditions that may be similar to those that gave rise to life on Earth and perhaps even other worlds.
11. In context, which is the best version of the underlined portion (reproduced below)?
watch and observe them up close via
remotely operated vehicles
(A) NO CHANGE
(B) watch
(C) observe to see
(D) visually watch
12. To make the paragraph most logical, sentence 5 should be placed
(A) where it is now.
(B) after sentence 1 .
(C) after sentence 2 .
(D) after sentence 3 .
13. In context, which is the best version of the underlined portion (reproduced below)?
nevertheless,_bacteria supporting a unique food web have adapted to this perpetually dark environment.
(A) NO CHANGE
(B) afterward,
(C) furthermore,
(D) similarly
14. In context, which is the best version of the underlined portion (reproduced below)?

The bacteria $\qquad$ chemical soup necessary to support [4] him or her
(A) NO CHANGE
(B) one.
(C) them.
(D) it.
15. In context, which is the best version of the underlined portion (reproduced below)?

Seawater seeping in $\qquad$ sulfates,[5] and remove other chemicals from the water.
(A) NO CHANGE
(B) it also removes
(C) also removing
(D) and
16. Which choice most effectively sets up the information in the next sentence?

## The Loihi Shrimp......[7]resulting from their ability to cope with the noxious environment around the volcano.

(A) NO CHANGE
(B) but their adaptations are not yet fully understood by the scientific community.
(C) thriving in an unusual ecosystem that also includes crabs, limpets, and barnacles.
(D) but as adults, their claws are large enough for the shrimp to be predators.

## Sentence Completion

## Directions:

For each of the following sentence completion questions, from Question 17 to Question 20, select ONE entry from given choices in a way that best completes the text. In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence-clear and precise, without awkwardness or ambiguity.
17. Dominant interests often benefit most from $\qquad$ of governmental
interference in business since they are able to take care of themselves if left alone.
(A) intensification
(B) authorization
(C) centralization
(D) improvisation
18. An investigation that is $\qquad$ can occasionally yield new facts, even notable ones, but typically the appearance of such facts is the result of a search in a definite direction.
(A) timely
(B) unguided
(C) consistent
(D) subjective
19. Far from being $\qquad$ the corporate world because of cutbacks, serious researchers are playing a growing role in innovation at many firms.
(A) immured in
(B) enchanted with
(C) banished from
(D) protected by
20. The belief that politicians might become
$\qquad$ after their election to office led to the appointment of ethics officers at various levels of government.
(A) scrupulous
(B) entrenched
(C) venal
(D) puzzled

## Close Passage

Instructions<br>Read the passage and fill in the blanks from the given options underneath.

The man who made and lost a fortune (21)
$\qquad$ kitchen furniture is_ back in business again. 37-year-old Timothy Lindlaw is now designing (22) $\qquad$ for offices - from the director's suite to the secretariat office. Lindlaw always had a lot of good ideas. After he (23)
$\qquad$ a highly successful computer business for two years, he started his second business in a small garage, selling and installing kitchen furniture. He (24) $\qquad$ his first million pounds by the time he was thirty. Then he went to earn over five million in three years. But, after (25) $\qquad$ with the managers of his company, he suddenly dismissed them. Within six months the business had gone bankrupt. And so (26) $\qquad$ Lindlaw. "I had made five million pounds before things (27) $\qquad$ to go wrong," he said, 'I was just unlucky to lose it later. All companies (28) $\qquad$ through
good times - and through bad times. Now (29)
$\qquad$ several lessons which I'll never forget." He said that he (30) $\qquad$ to call his new company 'Office-Fit' and was already very successful. Lindlaw said that it was a market worth hundreds of millions. He added that, until he started, no one had ever thought of designing and supplying furniture for whole business companies, according to their individual requirements.
21. In context, select the best possible option for the given blank 21 in the passage?
(A) manufacture
(B) manufacturing
(C) to manufacture
(D) manufactured
22. In context, select the best possible option for the given blank 22 in the passage?
(A) furniture
(B) furnitures
(C) some furnitures
(D) a furniture
23. In context, select the best possible option for the given blank 23 in the passage?
(A) has run
(B) runs
(C) was running
(D) had run
24. In context, select the best possible option for the given blank 24 in the passage?
(A) has made
(B) used to make
(C) had made
(D) would make
25. In context, select the best possible option for the given blank 25 in the passage?
(A) quarrel
(B) quarrelling
(C) quarreled
(D) have quarreled

## KUAT <br> Sample Test | Verbal Section

26. In context, select the best possible option for the given blank 26 in the passage?
(A) has
(B) does
(C) did
(D) had
27. In context, select the best possible option for the given blank 27 in the passage?
(A) have begun
(B) began
(C) begin
(D) would begin
28. In context, select the best possible option for the given blank 28 in the passage?
(A) went
(B) have gone
(C) had gone
(D) go
29. In context, select the best possible option for the given blank 29 in the passage?
(A) I learn
(B) I've learnt
(C) I learn't
(D) I'd learnt
30. In context, select the best possible option for the given blank 30 in the passage?
(A) had decided
(B) was deciding
(C) decided
(D) has decided

## INSTRUCTIONS:

The essay gives you an opportunity to show how effectively you can develop and express ideas. You should therefore take care to develop your point of view, present your ideas logically and clearly, and use language precisely.

You will be given 30 minutes to plan and compose a response. An off-topic response will receive a score of ZERO.

Think carefully about the issue presented in the following excerpt and the assignment below.
" Factors causing brain drain in Pakistan"
Assignment: Write a response in which you discuss the extent to which you agree or disagree with the recommendation and explain your reasoning for the position you take. In developing and supporting your position, describe specific circumstances in which adopting the recommendation would or would not be advantageous and explain how these examples shape your position

## Quantitative Section

Q.1) B
Q.2) D
Q.3) C
Q.4) D
Q.5) C
Q.6) D
Q.7) $A$
Q.8) C
Q.9) $D$
Q.10) A
Q.11) B
Q.12) A
Q.13) D
Q.14) C
Q.15) B
Q.16) C
Q.17) A
Q.18) D
Q.19) B
Q.20) B
Q.21) C
Q.22) B
Q.23) C
Q.24) C
Q.25) D
Q.26) A
Q.27) C
Q.28) A
Q.29) D
Q.30) D
Q.31) C
Q.32) C
Q.33) A
Q.34) C
Q.35) C
Q.36) A
Q.37) B
Q.38) D
Q.39) B
Q.40) A
Q.41) A
Q.42) B
Q.43) C
Q.44) C
Q.45) D
Q.46) D
Q.47) D
Q.48) C
Q.49) C
Q.50) D

## KUAT - KSBL Management Admission Test

| Verbal Section |  |
| :---: | :---: |
| Q.1) C |  |
| Q.2) D | Q.16) D |
| Q.3) A | Q.17) D |
| Q.4) A | Q.18) D |
| Q.5) D | Q.19) A |
| Q.6) A | Q.20) C |
| Q.7) C | Q.21) B |
| Q.8) A | Q.22) A |
| Q.9) A | Q.23) D |
| Q.10) B | Q.24) C |
| Q.11) B | Q.25) B |
| Q.12) B | Q.26) D |
| Q.13) A | Q27) B |
| Q.14) C | Q.28) D |
| Q.15) D | Q.29) B |
|  | Q.30) D |

