

DEERWALK INSTITUTE OF TECHNOLOGY
DWIT B.Sc.CSIT APTITUDE TEST: PRACTICE SET 1
2015

- **MATHEMATICS - 30**
 - ARITHMETIC + GEOMETRY + ALGEBRA = 20 MARKS,
 - STATISTICS = 10 MARKS

- **ENGLISH - 45**
 - CRITICAL READING (SENTENCE COMPLETION + SHORT PASSAGE + LONG PASSAGE) = 15 MARKS
 - ESSAY = 20 MARKS
 - WRITING SKILLS(IMPROVING SENTENCES+ IDENTIFYING SENTENCE ERRORS + IMPROVING PARAGRAPHS) = 10 MARKS

- **SUBJECT TESTS - 15**
 - PHYSICS + CHEMISTRY = 15 MARKS

- **IQ - 10**

MATHEMATICS - ALGEBRA

1. If $10 + x$ is 5 more than 10, what is the value of $2x$?

- A. 5
- B. 5
- C. 10
- D. 25
- E. 50

2. Which of the following equations is satisfied by the five pairs of numbers listed in the table above?

- A. $y = x^3 + 3$
- B. $y = 3x + 3$
- C. $y = -3x + 6$
- D. $y = x^2 + 6$
- E. $y = x^2 - 7$

x	y
-2	-3
0	3
1	6
2	9
4	15

3. If the function f is defined by $f(x) = 3x + 4$, then $2f(x) + 4 =$

- A. $5x + 4$
- B. $5x + 8$
- C. $6x + 4$
- D. $6x + 8$
- E. $6x + 12$

4. If $x - 2^2 = 49$, then x could be

- A. -9
- B. -7
- C. 2
- D. 5
- E. 9

5. If $(2m)k = 6$, then $mk =$

- A. 3
- B. 4
- C. 5
- D. 6
- E. 12

6. If $y = 2x + 3$ and $x < 2$, which of the following represents all the possible values for y ?

- A. $y < 7$
- B. $y > 7$
- C. $y < 5$
- D. $y > 5$
- E. $5 < y < 7$

7. If the equations below are true, which of the following is the value of $y + z$?

$$3x + 2y + 2z = 19, \quad 3x + y + z = 14$$

- A. -5
- B. -4
- C. 0
- D. 4
- E. 5

8. If 13 is added to one-half of a certain number, the result is 37. What is the original number?

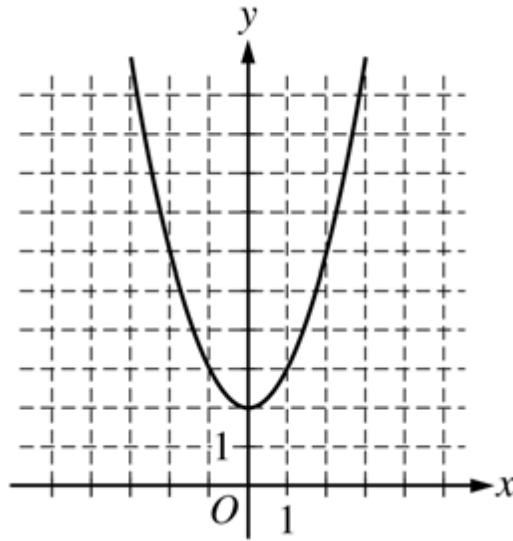
- A. 24
- B. 40
- C. 48
- D. 61
- E. 80

9. If k and m are defined by the equations below, what is the value of m when $w = 4$ and $x = 1$?

$$K = 3wx$$

$$m = (w - 1)k$$

- A. 0
- B. 3
- C. 12
- D. 24
- E. 36

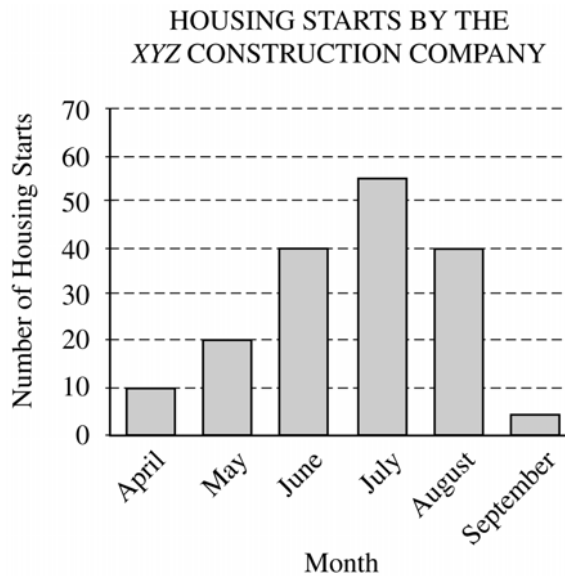


10. Which of the following could be the equation of the graph above?

- A. $y = x^2 + 2$
- B. $y = (x + 2)^2$
- C. $y = x^2 - 2$
- D. $y = (x - 2)^2$
- E. $y = 2x^2$

MATHEMATICS - STATISTICS

11. The bar graph above shows the number of houses started by the XYZ Construction Company over a 6-month period. For which of the following months was there the greatest increase over the previous month in the number of housing starts?



- A. May
- B. June
- C. July
- D. August

E. September

12. The average (arithmetic mean) of three different positive integers is 12. If the first of these integers is 9 times the second integer, what is the least possible value of the third integer?

- A. 6
- B. 4
- C. 3
- D. 2
- E. 1

13. If the average (arithmetic mean) of r and s is 20 and the average of x , y , and z is 30, what is the average of r , s , x , y , and z ?

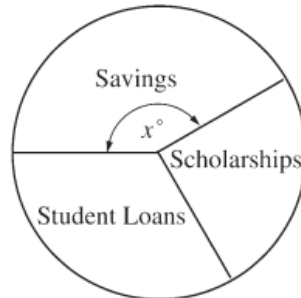
- A. 23
- B. 24
- C. 25
- D. 26
- E. 27

14. The average (arithmetic mean) of the 8 numbers listed above (80, 80, 84, 85, 88, 92, 97, 98) is 88. Of the following, which pair of numbers could be removed from the list without changing the average?

- A. 80 and 97
- B. 80 and 98
- C. 84 and 92
- D. 84 and 97
- E. 85 and 92

15. The pie chart above shows the three sources for Lana's college tuition. If $\frac{1}{4}$ of the total amount was from scholarships and $\frac{1}{3}$ was from student loans, what is the value of x ?

SOURCES OF LANA'S COLLEGE TUITION



- A. 120
- B. 130
- C. 140
- D. 150
- E. 160

16. When a coin is tossed in an experiment, the result is either a head or a tail. A head is given a point value of 1 and a tail is given a point value of 1. If the sum of the point values after 50 tosses is 14, how many of the tosses must have resulted in heads?

- A. 14
- B. 18
- C. 32
- D. 36
- E. 39

17. One number is to be selected at random from each of the lists below. What is the probability that both of the numbers selected will be less than 5?

List I	List II
2	3
4	5
7	6

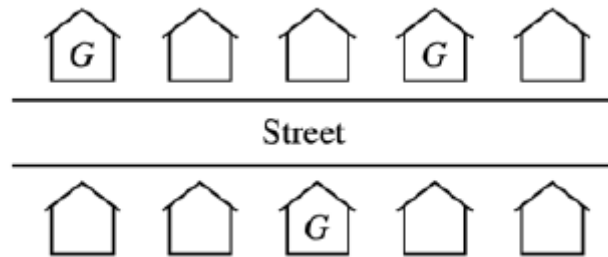
- A. 1/9
- B. 2/9
- C. 1/3
- D. 4/9
- E. 5/9

18. A group of 110 people is divided into 4 committees. If each committee contains at least 2 people, which of the following statements must be true?

- A. Each committee has at least 4 people.
- B. No 2 committees have the same number of people.
- C. No committee has more than 100 people.
- D. At least 1 committee has more than 25 people.
- E. The largest committee has 3 more people than the smallest committee.

19. If the average (arithmetic mean) of t and $t + 2$ is x and if the average of t and $t - 2$ is y , what is the average of x and y ?

- A. 1
- B. $t/2$
- C. t
- D. $t + 1/2$
- E. $2t$



20. There are five houses on each side of a street, as shown in the figure above. No two houses next to each other on the same side of the street and no two houses directly across from each other on opposite sides of the street can be painted the same color. If the houses labeled G are painted gray, how many of the seven remaining houses cannot be painted gray?

- A. Two
- B. Three
- C. Four
- D. Five
- E. Six

MATHEMATICS - ARITHMETIC

21. A fruit salad is made from pineapples, pears, and peaches mixed in the ratio of 2 to 3 to 5, respectively, by weight. What fraction of the mixture by weight is pineapple?

- A. 1/5
- B. 3/10
- C. 2/5
- D. 1/2
- E. 2/3

22. If P and Q are two sets of numbers, and if every number in P is also in Q, which of the following CANNOT be true?

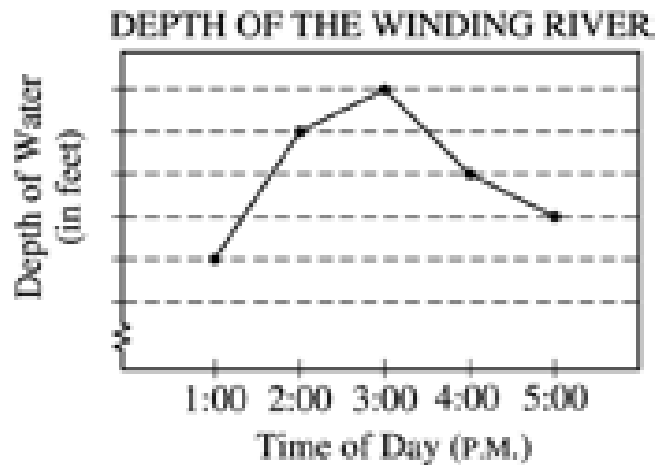
- A. 4 is in both P and Q.
- B. 5 is in neither P nor Q.
- C. 6 is in P, but not in Q.
- D. 7 is in Q, but not in P.
- E. If 8 is not in Q, then 8 is not in P.

23. What is the maximum number of rectangular blocks measuring 3 inches by 2 inches by 1 inch that can be packed into a cube-shaped box whose interior measures 6 inches on an edge?

- A. 24
- B. 28
- C. 30
- D. 36
- E. 40

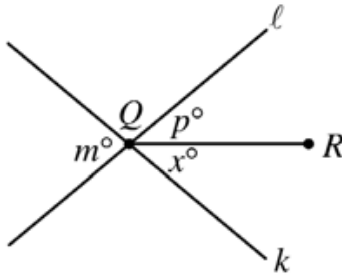
24. A boat costs x dollars, and this cost is to be shared equally by a group of people. In terms of x , how many dollars less will each person contribute if there are 4 people in the group instead of 3?

- A. $x/12$
- B. $x/4$
- C. $x/3$
- D. $7x/12$
- E. $7x$



25. On the day of a rainstorm, the depth of the water at a certain location along the Winding River was recorded hourly, and the results are indicated in the line graph above. Each unit on the vertical axis represents 1 foot. If the depth of the water decreased 10 percent from 3:00 P.M. to 4:00 P.M., what was the depth of the water at 4:00 P.M.?

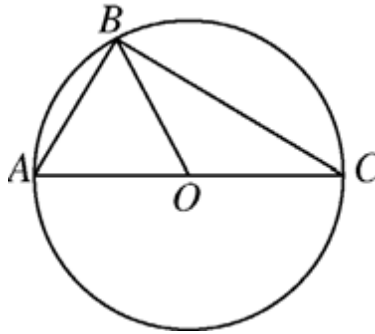
- A. 3 feet
- B. 15 feet
- C. 18 feet
- D. 20 feet
- E. 30 feet



Note: Figure not drawn to scale.

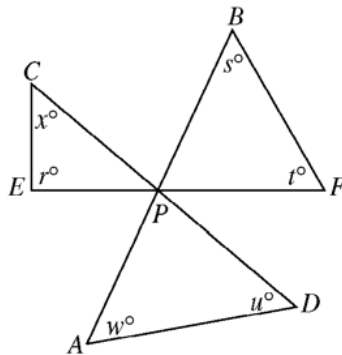
26. In the figure above, lines l and k intersect at point Q . If $m = 40$ and $p = 25$, what is the value of x ?

- A. 15
- B. 20
- C. 25
- D. 40
- E. 65



27. In the figure above, triangle ABC is inscribed in the circle with center O and diameter AC . If $AB \perp BO$, what is the degree measure of $\angle ABO$?

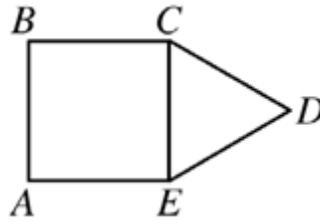
- A. 15°
- B. 30°
- C. 45°
- D. 60°
- E. 90°



Note: Figure not drawn to scale.

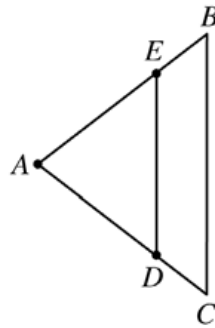
28. In the figure above, AB , CD , and EF intersect at P . If $r = 90$, $s = 50$, $t = 60$, $u = 45$, and $w = 50$, what is the value of x ?

- A. 45
- B. 50
- C. 65
- D. 75



29. It cannot be determined from the information given. In the figure above, CDE is an equilateral triangle and ABCE is a square with an area of 1. What is the perimeter of polygon ABCDE?

- A. 4
- B. 5
- C. 6
- D. 7
- E. 8



Note: Figure not drawn to scale.

30. In triangle ABC above, $AB = AC$, E is the midpoint of AB, and D is the midpoint of AC. If $AE = x$ and $ED = 4$, what is length BC?

- A. 6
- B. 8
- C. $2x$
- D. $4x$
- E. $4x^2$

ENGLISH- SENTENCE COMPLETION

31. _____, the frustrated cricketer grabbed it and rushed out of the dressing room.

- A. The lost bat having finally been found
- B. The bat which was lost having been found
- C. At finding the lost bat
- D. When he finally found the lost bat
- E. When having finally found the lost bat

32. The teacher walked around the classroom, checking the cleanliness, the books and _____ .

- A. discipline of students
- B. the discipline of student
- C. the discipline of the students
- D. the discipline of the student
- E. the discipline of a student

33. The pizzas from Pizza Hut _____ .

- A. are better than Domino's.

- B. are better than those from Domino's.
- C. compared to Domino's.
- D. are better than like Domino's.
- E. better than those from Domino's.

34. While taking a sightseeing tour of Beijing, _____

- A. the Great Wall of China was the Rita's first stop
- B. the Great wall of China was Rita's first stop
- C. Rita's first stop was The Great Wall of China
- D. Rita first stopped at the Great Wall of China
- E. Rita's first stop had been the Great Wall of China

35. Last year, one of my friends _____

- A. were absent so often that I was afraid she might be terminally ill.
- B. were absent so often that I were afraid that she might be terminally ill.
- C. was absent so often that I were afraid she might be.
- D. was absent so often that I was afraid that she might be.
- E. were absent so often; that I was afraid she might be.

36. There are some people who think that only the poor and less educated people use slang, but this idea is _____.

- A. accurate
- B. popular
- C. erroneous
- D. widespread
- E. ineffectual

37. The revolution in art has not lost its steam; it _____ on as fiercely as ever.

- A. trudges
- B. meanders
- C. edges
- D. ambles
- E. rages

ENGLISH - SHORT PASSAGE

Directions: The passages 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.

[Passage]

Modern society is referred to very often as a society based on knowledge, knowledge objectively and scientifically acquired. Perhaps in the earliest days of human life, there were some accidental successes followed by knowledge or progress through trial and error. Today, repeated trials are becoming more and more difficult as changes keep on taking place and in this context errors become costly. Scientific attempts to generate and acquire knowledge, **disperse** the same and also continuing to monitor the same have all become very important. Impressions, opinions and feelings may all be fine for platform speeches or populist thinking.

38. What according to the author is currently hindering frequent experimentation?

- A. Inactivity
- B. Revolution
- C. Transformations
- D. Repeated interruptions
- E. No interruptions

39. "Disperse" most nearly means

Click the reference button to view passage.

- A. Scatter
- B. Impart
- C. Go away / Leave
- D. Dissolve

E. Move away

[Passage]

The system of education is essentially a system of knowledge-management and promotion of knowledge based on culture and values. While it may be true that unarticulated knowledge may underlie feelings, inspirations and opinions, such knowledge subjectively generated has to be objectively verified before one initiates any major change in a system, like education. Knowledgeable people should be encouraged to share the knowledge and make their contributions. Here again, there are opinions and opinions about the extent of weightage to be given.”

40. According to the passage, how unspoken or unstated knowledge should be checked prior to bringing about any kind of change in a system?

- A. Neutrally
- B. Subjectively
- C. One-sidedly
- D. Personally
- E. Carefully

41. The system of education is essentially a system of

- A. knowledge-management and promotion of knowledge based on culture and values
- B. knowledge-management
- C. promotion of knowledge based on culture and values
- D. knowledge-management and promotion of knowledge
- E. culture and values

ENGLISH - LONG PASSAGE

Human speech is an extraordinary accomplishment: by emitting a sequence of seemingly innocuous sounds as we exhale, we can create a huge variety of ideas, images, scenarios, and emotions in the mind of the listener. Language, unlike animal calls, is infinitely variable. Moreover, words are strung together not by simple association, but rather by the use of rules. Animal calls, by contrast, are generally emitted in emotional situations, having to do with territory, mating, the discovery of food, or signaling danger. Some animal calls do have a quality also possessed by words: They refer to things. For example, vervet monkeys emit separate cries to signal the presence of a snake, a hawk, a leopard, a smaller cat, and a baboon, and when hearing these calls they act in a manner appropriate to the signaled danger. But these calls occur only in the presence of the predators they refer to. Humans, on the other hand, constantly use words in the absence of the things we are talking about, and combine them in novel ways to create new meanings. Animals do not have a true language even though they can communicate with one another by sounds and gestures. Each species has a certain number of innate signals for expressing its feelings but these are not words. All human infants laugh or cry to express their emotions without being taught. Their language must be laboriously learned, one word at a time. A baby chick hatched in an incubator and reared away from all other chickens makes the same calls and behaves the same way as chicks hatched and reared by a hen. The only noticeable difference is that young cockerels learn to crow sooner and better when they can hear an old rooster. Some apes can utter as many as thirty different sounds which a patient trainer can learn to understand. They seem to be on the verge of true speech. They also use many different facial expressions, postures and movements just like human beings smile, shrug the shoulders or point a finger. Still, these are instinctive actions - not learned. An ape reared in captivity and isolated from other apes from birth to the age of five years was able to express itself in ape language just as well as any other ape of that species. Dogs bark, growl, snarl, whine and howl. In addition, they bare their teeth, lift a paw, wag the tail, lay back their ears or raise their hackles. They are very efficient at reading their owner's intentions from his slight unconscious actions. A dog lies quietly while his master goes outside for a short errand, but comes bouncing with anticipation if an afternoon walk is intended. Contrary to the beliefs of many pet owners, a dog does not respond to the actual words spoken as much as to the tone of voice used. If you say in a cheerful voice: "I'm going to beat you", he will wag his tail. If you say "I've got a nice bone for you" in a gruff voice, he will put his tail between his legs. Dogs have a keen sense of smell and on a trip around the block they act like they were reading the evening paper. Begging, so common among domestic animals and zoo animals, is practically unknown among adult wild animals. It seems to be learned through contact with man. A horse whinnies for hay, a cat meows to have a door opened, an elephant asks for peanuts with his trunk, and a giraffe with the tip of his tongue, while a dog begs for companionship and to have his ears scratched. Captive birds such as parrots, parakeets, mynah birds, blue jays and crows can be taught to talk - sometimes only a word or two, sometimes long sentences. It is clear that these words have no meaning to the bird. Starlings, mocking birds, brown thrashers and catbirds do not have a complete set of calls of their own. Instead they sing a medley of songs copied from other birds.

42. The word innate most nearly means

- A. undeveloped
- B. learned
- C. artificial
- D. inherent
- E. uncoordinated

43. The author says that "...young cockerels learn to crow sooner and better when they can hear an old rooster". What does this prove?

- A. Animal communication is not inborn.
- B. Animals have to be taught how to communicate.
- C. Animals learn how to communicate faster when they are in their natural environment.
- D. Animals that are reared in isolation are better at communicating than other animals of the same species.
- E. Animals need guidance from their elders.

44. Due to his in depth knowledge of the subject the author believes that

- A. Dogs respond only to the actual words spoken by their owners.
- B. Dogs respond much to the tone of voice than the actual words spoken by their owners.
- C. Dogs respond much to the actual words spoken than the tone of voice of their owners.
- D. Dogs respond neither to the words nor to the tone of voice of their owners.
- E. Dogs respond to the manner of speech.

45. "Some apes can utter as many as thirty different sounds which a patient trainer can learn to understand" suggests that

- A. The apes have started speaking
- B. The apes can only utter sounds without meaning.
- C. The apes can utter sounds which can be understood with practice, so they seem to be on the threshold of speech.
- D. The apes can't speak.
- E. Apes speak fluently like humans.

ENGLISH – WRITING SKILLS - SENTENCE IMPROVEMENT

46. Jenna was awarded the medal not for her academic success or her skill on the soccer field, but for her being a participant in gym class.

- A. but for her being a participant in gym class
- B. the reason being for her participation in gym class
- C. the reason was her participating in gym class
- D. but for her being participation-willing in gym class
- E. but for her participation in gym class

47. If the room had been brighter, I would have been able to read for a while before bed time.

- A. If the room was brighter
- B. If the room are brighter
- C. Had the room been brighter
- D. No improvement
- E. None of the above

48. More than one person was killed in accident.

- A. were killed
- B. are killed
- C. have been killed
- D. No improvement
- E. got killed

49. I took the cycle which he bought yesterday.

- A. that he bought yesterday
- B. that which he had bought yesterday
- C. that he had bought yesterday
- D. No improvement
- E. and he is happy.

50. They are social insects, living in communities, regulated by definite laws, each member of society bearing well-defined and separate part in the work of a colony.

- A. who are living in communities
- B. living among a community
- C. who lives with a community
- D. No improvement
- E. who loved to live in community

ENGLISH – WRITING SKILLS - SENTENCE ERRORS

51. Illiteracy is an enormous problem (A) it affects (B) millions of people worldwide (C), and is an impediment to (D) social progress. No error (E).

- A.
- B.
- C.
- D.
- E.

52. The rhododendron, which (A) ornaments so many (B) English gardens, is (C) not native to (D) Europe. No error (E).

- A.
- B.
- C.
- D.
- E.

53. Shoes of those (A) kind are (B) bad for the feet; (C) low heels are (D) better. No error (E).

- A.
- B.
- C.
- D.
- E.

(1) Until recently, I never thought much about my name, or names in general, for the most part. (2) We're given our names when we're too young to say them (never mind think about them), so they're pretty easy to take for granted. (3) We understand that your "first name" is your personal name, but our "last names" are our family names. (4) But that changed for me when I met my friend Anny's mother.

(5) Anny is Korean. (6) Her last name is Lee. (7) Of course, her mother's last name is also Lee. (8) But in the point in time when I met Ms. Lee, I realized how subjective the "first" and "last" distinction is. (9) She introduced herself to me as "Lee Eun-Hye," and I was a bit confused. (10) On the one hand, I had already known that Asian names can be reversed. On the other, I had expected her to use the western style, since she has lived in the United States for so long. (11) That made me wonder whether or not I would feel comfortable changing the order of my name.

ENGLISH – WRITING SKILLS - IMPROVING PARAGRAPH

54. Which of the following is the best version of sentence 3 (reproduced below)?

We understand that your "first name" is your personal name, but our "last names" are our family names.

- A. You understand that your "first name" is your personal name, but your "last name" is the one of your family.
- B. We understand that our "first names" are our personal names while our "last names" are our family names.
- C. We understand that, although our "first names" are our personal names, your "last name" is your family name.
- D. One would understand one's personal name is a "first name" but one's family name is one's "last name."
- E. Your "first name," you understand, is your personal name; nonetheless, your "last name" is your family name.

55. Which of the following best replaces the phrase "in the point in time when" in sentence 8?

- A. at the moment
- B. until

- C. at the point in time when
- D. after
- E. during

ESSAY

Please select any one of the three topics.

- Messi is unarguably the world's best footballer.
- A typical day in my life
- Tomorrow, I will design a ' _____ ' game.

IQ

56. Which number does not belong?

4	32	144
17	28	122
18	64	188
322	14	202

- A. 4
 - B. 32
 - C. 17
 - D. 322
 - E. 14
57. 1. Which number should come next in this series?
25, 24, 22, 19, 15
- A. 4
 - B. 5
 - C. 10
 - D. 14
 - E. 21
58. The day before the day before yesterday is three days after Saturday. What day is it today?
- A. Monday
 - B. Tuesday
 - C. Wednesday
 - D. Thursday
 - E. Friday
59. At the end of a banquet 10 people shake hands with each other. How many handshakes will there be in total?
- A. 100
 - B. 20
 - C. 45
 - D. 50
 - E. 90
60. Which one of the sets of letters below can be arranged into a five letter English word.
- A. A T R U N
 - B. P O D E B
 - C. E T T S A
 - D. M O H A T
 - E. E T L R N
61. Please enter the missing figure: 4, 5, 8, 17, 44,
- A. 80
 - B. 125
 - C. 112

- D. 60
 - E. 84
62. If it takes 2 hours to drive to City A and the city is 120km away, what speed was the vehicle travelling at?
- A. 1
 - B. 2
 - C. 3
 - D. 4
 - E. 5
63. Rearrange the letters of the name SOCRATES to give two other eight letter words. What will be the first letter of both words?
- A. T
 - B. S
 - C. C
 - D. E
 - E. R
64. What number should appear next in this sequence: 2, 6,14,30,62,126?
- A. 154
 - B. 254
 - C. 256
 - D. 260
 - E. 272
65. I am a large animal. Change one letter and I am a dwelling. Change another letter and I am a very small animal. Remove one letter and I am a river. Finally change one letter and I am an electrical device. What did I finally become?
- A. BULB
 - B. FUSE
 - C. WIRE
 - D. PLUG
 - E. LED

ANSWER KEY

QN	ANS										
MATHEMATICS											
1	C	2	B	3	E	4	E	5	A	6	A
7	E	8	C	9	E	10	A	11	B	12	A
13	D	14	C	15	D	16	C	17	B	18	D
19	C	20	E	21	A	22	C	23	D	24	A
25	C	26	A	27	D	28	C	29	B	30	B
ENGLISH											
CRITICAL READING											
31	A	32	C	33	B	34	B	35	D	36	C
37	E	38	C	39	B	40	A	41	A	42	D
43	C	44	B	45	C						
WRITING SKILLS											
46	E	47	C	48	A	49	C	50	D	51	B
52	E	53	A	54	B	55	D				
IQ											
56	C	57	C	58	E	59	C	60	C	61	B
62	B	63	C	64	B	65	B				