

# Deerwalk Aptitude Test (DAT) | August 26, 2019-BCA

## Instruction

All questions are compulsory.

There are three major sections in this paper - English, Mathematics, and IQ.

The marks wise distribution of each of the section is as follows

Section	Subject	Marks	Time [Suggested ]
A	English	30	45 Minutes
B	Mathematics	30	45 Minutes
C	IQ	20	15 Minutes

You are advised to spend the suggested time.

Please darken the most appropriate answer in the provided answer sheet.

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## Section A - English

### Paragraph I

Imagine that we stand on any ordinary seaside pier, and watch the waves striking against the iron columns of the pier. Large waves pay very little attention to the columns—they divide right and left and reunite after passing each column. But the short waves find the columns of the pier a much more formidable obstacle. When the short waves impinge on the columns, they are reflected back and spread as new ripples in all directions. To use the technical term, they are “scattered.” The columns hardly affect the long waves at all, but scatter the short ripples.

We have been watching a working model of the way in which sunlight struggles through the earth’s atmosphere. The atmosphere interposes obstacles in the form of molecules of air, tiny droplets of water, and small particles of dust, which are represented by the columns.

The waves of the sea represent the sunlight. We know that sunlight is a blend of lights of many colors—as Nature demonstrates to us when she passes it through the raindrops of a summer shower and produces a rainbow. We also know that light consists of waves, and that the different colors of light are produced by waves of different lengths, red light by long waves and blue light by short waves. The mixture of waves which constitutes sunlight has to struggle through the obstacles it meets in the atmosphere, just as the mixture of waves at the seaside has to struggle past the columns of the pier. And these obstacles treat the light waves much as the columns of the pier treat the sea-waves. The long waves which constitute red light are hardly affected, but the short waves which constitute blue light are scattered in all directions.

Thus, the different constituents of sunlight are treated in different ways as they struggle through the earth’s atmosphere. A wave of blue light may be scattered by a dust particle, and turned out of its course. After a time a second dust particle again turns it out of its course, and so on, until finally it enters our eyes by a path as zigzag as that of a flash of lightning. Consequently, the blue waves of the sunlight enter our eyes from all directions. And that is why the sky looks blue.

1. We know from experience that if we look directly at the sun, we will see red light near the sun. This observation is supported by the passage for which one of the following reasons?
  - a. It seems reasonable to assume that red light would surround the sun because the sun is basically a large fireball.
  - b. It seems reasonable to assume that the other colors of light would either cancel each other or combine to produce red.
  - c. It seems reasonable to assume that red light would not be disturbed by the atmospheric particles and would consequently reach us by a relatively direct path from the sun to our eyes.
  - d. It is not supported by the passage. The author does not say what color of light should be near the sun, and he provides no reasons that would allow us to assume that the light would be red.
2. Scientists have observed that shorter wavelength light has more energy than longer wavelength light. From this we can conclude that
  - a. Red light will exert more energy when it hits the surface of the earth than will blue light.
  - b. Lightning is caused by the collision of blue light with particles in the air.
  - c. Red light will travel faster than blue light.
  - d. Blue light has more energy than red light.

3. A scientist makes new observations and learns that water waves of shorter wavelengths spread in all directions not only because they scatter off piers but also because they interact with previously scattered short water waves. Drawing upon the analogy between water waves and light waves, we might hypothesize which of the following?
  - a. Blue light waves act like ripples that other blue light waves meet and scatter from.
  - b. Red light waves will be scattered by blue light waves like incoming long water waves are scattered by outgoing ripples.
  - c. Red light waves can scatter blue light waves, but blue light waves cannot scatter red.
  - d. The analogy between water and light waves cannot be extended to include the way in which short water waves become ripples and scatter one another.
4. Which one of the following is a reason for assuming that sunlight is constituted of waves of many colors?
  - a. The mixture of waves that make up sunlight has to struggle through a variety of obstacles in the atmosphere.
  - b. When passing through water in the atmosphere, sunlight is sometimes broken down into an array of colors.
  - c. Many different wavelengths of light enter our eyes from all directions.
  - d. The mere fact that light waves can be scattered is a reason for assuming that sunlight is constituted of waves of different colors.
5. From the information presented in the passage, what can we conclude about the color of the sky on a day with a large quantity of dust in the air?
  - a. The sky would be even bluer
  - b. The sky would be redder
  - c. The sky would not change colors
  - d. We do not have enough information to determine a change in color

#### Paragraph II

Most students arrive at [college] using “discrete, concrete, and absolute categories to understand people, knowledge, and values.” These students live with a dualistic view, seeing “the world in polar terms of we-right-good vs. other-wrong-bad.” These students cannot acknowledge the existence of more than one point of view toward any issue. There is one “right” way. And because these absolutes are assumed by or imposed on the individual from external authority, they cannot be personally substantiated or authenticated by experience. These students are slaves to the generalizations of their authorities. Most students break through the dualistic stage to another equally frustrating stage—multiplicity. Within this stage, students see a variety of ways to deal with any given topic or problem. However, while these students accept multiple points of view, they are unable to evaluate or justify them. To have an opinion is everyone’s right. Every assertion, every point, is valid. In their democracy they are directionless.

The third stage of development finds students living in a world of relativism. Knowledge is relative: right and wrong depend on the context. No longer recognizing the validity of each individual idea or action, relativists examine everything to find its place in an overall framework. In this stage, however, students resist decision making. Suffering the ambivalence of finding several consistent and acceptable alternatives, they are almost overwhelmed by diversity and need means for managing it.

In the final stage students manage diversity through individual commitment. Students do not deny relativism. Rather they assert an identity by forming commitments and assuming responsibility for them. They gather personal experience into a coherent framework, abstract principles to guide their actions, and use these principles to discipline and govern their thoughts and actions.

6. Consider each of the options, and select all that apply.

It can be inferred from the passage that the author would consider which of the following to be good examples of “dualistic thinking”?

  - a. People who think “there is a right way and a wrong way to do things”
  - b. Teenagers who assume they know more about “the real world” than adults do
  - c. People who back our country “right or wrong” when it goes to war
  - d. None of the above statements.

7. Students who are “dualistic” thinkers may not be able to support their beliefs convincingly because
- most of their beliefs cannot be supported by arguments.
  - they have accepted their “truths” simply because authorities have said these things are “true.”
  - they half-believe and half-disbelieve just about everything.
  - their teachers almost always think that “dualistic” thinkers are wrong.
8. Which one of the following assertions is supported by the passage?
- Committed thinkers are not very sure of their positions.
  - Relativistic thinkers have learned how to make sense out of the world and have chosen their own positions in it.
  - Multiplicity thinkers have difficulty understanding the relationships between different points of view.
  - Dualistic thinkers have thought out the reasons for taking their positions.
9. In paragraph one, the author states that in their “democracy” students in the multiplicity stage are directionless. The writer describes multiplicity students as being in a “democracy” because
- there are so many different kinds of people in a democracy.
  - in an “ideal” democracy, all people are considered equal; by extension, so are their opinions.
  - Democrats generally do not have a good sense of direction.
  - Although democracies may grant freedom, they are generally acknowledged to be less efficient than more authoritarian forms of government.
10. Which one of the following kinds of thinking is NOT described in the passage?
- People who assume that there is no right or wrong in any issue
  - People who make unreasoned commitments and stick by them
  - People who believe that right or wrong depends on the situation
  - People who commit themselves to a particular point of view after having considered several alternative concepts

**Sentence Completion:**

11. \_\_\_\_ by nature, Jones spoke very little even to his own family members.
- garrulous
  - equivocal
  - taciturn
  - arrogant
12. Many people at that time believed that spices help preserve food; however, Hall found that many marketed spices were \_\_\_\_ bacteria, moulds and yeasts.
- devoid of
  - teeming with
  - improved by
  - destroyed by
13. He was treated like a \_\_\_\_ and cast out from his community.
- ascetic
  - prodigy
  - prodigal
  - pariah
14. We live in a \_\_\_\_ age; everyone thinks that maximizing pleasure is the point of life.
- ubiquitous
  - propitious
  - sporadic
  - hedonistic

15. Though Adam Bede is presented to us by the author as \_\_\_\_\_ fiction, there are none of the life-like meanderings of the story of Amos Barton.
- realistic
  - romantic
  - imaginative
  - educational

**Word Analogies:**

16. native : aboriginal :: naïve : \_\_\_\_\_
- learned
  - arid
  - Unsophisticated
  - tribe

17. junket : \_\_\_\_\_ :: junk : trash
- trounce
  - trip
  - refuse
  - trinket

18. \_\_\_\_\_ : festive :: funeral : somber
- tension
  - soiree
  - eulogy
  - sari

19. fetish : fixation :: slight : \_\_\_\_\_
- flirt
  - sloth
  - insult
  - confuse

20. hovel : dirty :: hub : \_\_\_\_\_
- unseen
  - prideful
  - busy
  - shovel

21. His inclination to succumb to flattery made him \_\_\_\_\_ to the \_\_\_\_\_ of people who wished to take advantage of him.
- Immune: predilection
  - prejudicial: intentions
  - susceptible: cajolery
  - resistant: blandishments

22. SELF-PORTRAIT: PAINTER
- autobiography : writer
  - soliloquy :actor
  - interpretation : reader
  - manuscript : editor

23. REJUVINATE: YOUTH

- a. re-elect : president
- b. review : play
- c. reimburse : money
- d. recuperate : disease

24. PARTICLE : SMALL

- a. water : wet
- b. weather : cold
- c. beggar : sly
- d. clown : happy

25. ARROW: ARCHER

- a. sea : sailor
- b. choir : organ
- c. song : singer
- d. needle : tailor

26. SPEECH: INTRODUCTION

- a. book : preface
- b. speaker : audience
- c. Preamble : Constitution
- d. gun : race

27. Today science, like philosophy, has been \_\_\_\_\_ in scope: each has \_\_\_\_\_ its claim to survey all existence and has accepted a province which, it great, is yet smaller than the whole.

- a. Limited: reiterated
- b. narrowed: resigned
- c. expanded: repudiated
- d. fluctuating: denied

28. Though there was much \_\_\_\_\_ among critics over whether or not the play portrayed the "real" Paul Robeson, James Earl Jones's performance was \_\_\_\_\_ deemed outstanding by audiences and critics.

- a. Commentary: silently
- b. controversy: unanimously
- c. harassment: evasively
- d. disappointment: instructively

29. Bureaucratic squabbles can tie up the government for years and \_\_\_\_\_ domestic and international problems to the point of \_\_\_\_\_.

- a. Magnify: manageability
- b. reduce: indignation
- c. intensity: crisis
- d. weaken: nonexistence

30. Even the most insulated and \_\_\_\_\_ government has to be concerned today about the popular mind; some systems may be less \_\_\_\_\_ than others, but at some point all must pay attention.

- a. Parochial: vociferous
- b. corrupt: theoretical
- c. arbitrary: sensitive
- d. obscure: reined

## Section C– Mathematics

1. If the product of two integers is odd, then sum of those two integers must be
  - a. even
  - b. odd
  - c. prime
  - d. a perfect square
  
2. If  $-7 \leq a \leq 7$  and  $0 \leq b \leq 12$ , what is the greatest possible value of  $b - a$ ?
  - a. 5
  - b. 14
  - c. 19
  - d. 0
  
3. Which of the following is the greatest?
  - a.  $\frac{15}{16}$
  - b.  $\frac{7}{9}$
  - c.  $\frac{13}{15}$
  - d.  $\frac{8}{9}$
  
4. If the length of a rectangle is increase by 50% then its area is increased by
  - a. 20%
  - b. 30%
  - c. 40%
  - d. 50%
  
5. The number of marbles slabs of the size  $20 \text{ cm} \times 30 \text{ cm}$  required to pave the floor of a square room of side 3 meter is
  - a. 100
  - b. 150
  - c. 250
  - d. 300
  
6. The average of three numbers is 100, two integers are 119 and 120 then what is the value of third number?
  - a. 1
  - b. 11
  - c. 61
  - d. 71
  
7. Aryan is 20 years older than Riman. In 10 years, Riman's age will be half that of Aryan's. What is the Riman's age?
  - a. 8
  - b. 10
  - c. 20
  - d. 25
  
8. The square root of 130321 is
  - a. 121
  - b. 231
  - c. 361
  - d. 661

9. The ratio of the ages of A and B is 3:5. If B is 8 years elder to A then what is the age of A?

- a. 12 years
- b. 14 years
- c. 16 years
- d. 18 years

10. If  $9^x - 9^{x-1} = 648$ , then find the value of  $x^x$ ?

- a. 4
- b. 9
- c. 27
- d. 64

11. If  $5a = 3b = 25$ , then  $30ab = ?$

- a. 100
- b. 150
- c. 625
- d. 1250

12. In a class of 50 students, 18 take music, 26 take art, and 2 take both art and music. How many students in the class are not enrolled in either music or art?

- a. 6
- b. 8
- c. 10
- d. 12

13. The value of the expression  $16x^2 + 24x + 9$  for  $x = -3/4$  is

- a. 2
- b. 1
- c. 0
- d. -1

14. Radius of the circle given by  $x^2 + y^2 + 4x - 6y + 4 = 0$  is

- a. 2
- b. 3
- c. 4
- d. 5

15. If  $x\#y = x + 2y$ , then the value of  $(2\#5)\#3$  is

- a. 25
- b. 18
- c. 15
- d. 10

16. Look at the sequence : 7,10,8,11,9,12,... .What number should come next?

- a. 7
- b. 10
- c. 12
- d. 13

17. If  $A = \begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$  and  $B = \begin{bmatrix} 3 & 2 \\ 1 & 4 \end{bmatrix}$  then the transpose of  $AB$  is given by

- a.  $\begin{bmatrix} 6 & 10 \\ 14 & 20 \end{bmatrix}$
- b.  $\begin{bmatrix} 6 & 14 \\ 10 & 20 \end{bmatrix}$
- c.  $\begin{bmatrix} 10 & 6 \\ 14 & 20 \end{bmatrix}$
- d.  $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

18. A bag contains 5 black and 6 red balls. In how many ways 2 black and 3 red balls can be selected?

- a. 200
- b. 400
- c. 120
- d. 180

19. If you roll two dice, what is the probability of sum total of 5?

- a.  $1/6$
- b.  $1/9$
- c.  $1/18$
- d.  $1/36$

20. Due to drop of 30% in price of mobile sets of a shop there was an increase in sales by 20%. What is the effect on the mobile shop

- a. 20% fall
- b. 18% fall
- c. 16% fall
- d. 10% fall

21. The difference between simple and compound interest of a certain sum in 2 years at 12% p.a. is Rs. 216. The sum is

- a. Rs. 13500
- b. Rs. 14000
- c. Rs. 15000
- d. Rs. 16000

22. What will be the derivative of  $2x^2+3x - 6$ ?

- a.  $2x+3$
- b.  $4x-3$
- c.  $3x+4$
- d. None of the above

23. Sashi started a business investing Rs. 75,000. After 3 months, Shikha joined with capital of Rs. 60,000. If at the end of the year total profit was Rs. 16,000 then what was Shikha's share in it?

- a. Rs. 4500
- b. Rs. 5000
- c. Rs. 5500
- d. Rs. 6000

24. Find the odd man out: 1, 3, 9, 12, 19, 29

- a. 12
- b. 9
- c. 3
- d. 1

25. A train is running at the speed of 60 km/hr crosses a pole in 9 sec. What is the length of the train?
- 120 m
  - 150 m
  - 185 m
  - 190 m
26. Anil spent 25% of his pocket money, and has Rs. 125 left. How much had he at first?
- Rs. 120
  - Rs. 144.45
  - Rs. 166.66
  - Rs. 175. 67
27. If the radius of a circle is decreased by 50%. What is the decrease percentage in area?
- 75%
  - 80%
  - 85%
  - None of the above
28. The average of the first five multiple of 7 is
- 7
  - 14
  - 21
  - 28
29. If  $(10x + 3y) : (5x + 2y) = 9 : 5$ , then  $x : y$  is
- 3:5
  - 5:3
  - 2:5
  - 1:2
30. What is the greatest prime factor of  $(2^4)^2 - 1$ ?
- 3
  - 5
  - 11
  - 17

### Section D – IQ

1. RQP, ONM, LKJ, \_\_\_\_\_, FED

- IHG
- CAB
- JKL
- GHI

2. Find the letter in the 22nd position when the alphabets are written in alphabetical order from the right.

- G
- D
- E
- F

3. Look at this series: 36, 34, 30, 28, 24, ... What number should come next?

- a. 20
- b. 22
- c. 23
- d. 26

4. Which word does NOT belong with the others?

- a. tyre
- b. steering wheel
- c. engine
- d. car

5. Cup is to coffee as bowl is to

- a. dish
- b. soup
- c. spoon
- d. food

6. All the trees in the park are flowering trees.

Some of the trees in the park are dogwoods.

All dogwoods in the park are flowering trees.

If the first two statements are true, the third statement is

- a. true
- b. false
- c. uncertain
- d. Not Sure

7. Find the statement that must be true according to the given information.

Vincent has a paper route. Each morning, he delivers 37 newspapers to customers in his neighborhood. It takes Vincent 50 minutes to deliver all the papers. If Vincent is sick or has other plans, his friend Thomas, who lives on the same street, will sometimes deliver the papers for him.

- a. Vincent and Thomas live in the same neighborhood.
- b. It takes Thomas more than 50 minutes to deliver the papers.
- c. It is dark outside when Vincent begins his deliveries.
- d. Thomas would like to have his own paper route.

8. Choose the correct figure



- a. 1
- b. 2
- c. 3
- d. 4& 5

9. Telephone : Cable :: Radio : ?

- a. Microphone
- b. Electricity
- c. Wire
- d. Wireless

10. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D?

- a. Granddaughter
- b. Grandfather
- c. Great grandmother
- d. Grandmother

11. Find the highest common factor of 36 and 84.

- a. 4
- b. 6
- c. 12
- d. 18

12. The average age of a group of 10 students was 12. The average age increased by 2 years when two new students joined the group. What is the average age of the two new students who joined the group?

- a. 25
- b. 24
- c. 25.5
- d. 26

13. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

- a. 4 years
- b. 8 years
- c. 10 years
- d. None of these

14. Select the odd one out.

- a. China : Beijing
- b. France : Paris
- c. United Kingdom : London
- d. United States of America : New York

15. Giraffe : calf :: Fly : ?

- a. maggot
- b. fry / fingerling
- c. chick
- d. calf

16. Statement : For better production of crops, farmers must switch over to organic fertilizers from chemical fertilizers.

Argument :

I. Almost all farmers use chemical fertilizers.

II. Organic fertilizers are easily available to farmers.

- a. If only I is implicit.
- b. If only II is implicit.
- c. If either I or II is implicit.
- d. If neither I nor II is implicit.

17. Yard is to inch as quart is to

- a. gallon
- b. ounce
- c. milk
- d. liquid

18. Look at this series: 22, 21, 23, 22, 24, 23, ... What number should come next?

- a. 22
- b. 24
- c. 25
- d. 26

19. Which word does NOT belong with the others?

- a. tulip
- b. rose
- c. bud
- d. daisy

20. DKY, FJW, HIU, JHS what comes next?

- a. MFR
- b. LGQ
- c. KHR
- d. HIP