Sukkur IBA University

Merit-Quality-Excellence

SAMPLE TEST PAPER

(OGDCL National Talent Hunt Program)

PART-I (ENGLISH)   **50 QUESTIONS**
PART-II (MATHEMATICS)   **50 QUESTIONS**

SYLLABUS OF THE TEST:

PART-I (ENGLISH)

- o Reading Comprehension
- o Vocabulary Synonym
- o Vocabulary Antonym
- o Use of Preposition
- o Error Detection
- o Use of Verbs
- o Use of Pair of Words
- o Use of Tenses

PART-II (MATHEMATICS)

- o Real Number System
- o Algebraic Expressions
- o Linear and Quadratic Equations
- o Absolute Value and Linear Inequalities
- o Relations and Functions
- o Systems of Equations
- o Word Problems and Applications
- o Area, Perimeter, Circumference, Volume
- o Fractions, Decimals, Percent
- o Ratio, Proportion, Variation, Unit Rate

PART-I
(ENGLISH)

READING COMPREHENSION

Read the following passage carefully and answer the questions set below it.

Can we see that the earth is a globe? Yes, we can, when we watch a ship that sails out to sea. If we watch closely, we see the ship begin to disappear. The bottom of the ship disappears first, and then the ship seems to sink lower and lower, until we can only see the top of the ship, and then we see nothing at all. What is hiding the ship from us? It is the earth. Stick a pin most of the way into an orange, and slowly turn the orange away from you. You will see the pin disappear, just as a ship does on the earth.

1. This story is mainly about -
A. the shape of the earth.
B. traveling to the New World.
C. sailing ships in the old days.
D. the shapes of fruits, such as oranges.

2. The ship in this story -
A. probably sank to the bottom of the ocean.
B. was going farther and farther away.
C. was actually a toy.
D. was a sailing ship.

3. A globe is shaped like -
A. a box.
B. a pyramid.
C. an orange.
D. an ice cream cone.

VOCABULARY: SYNONYMS

1. Their diet is often grossly unbalanced.
   A. Completely   B. nearly   C. often   D. frequently

2. The whole thing is a vicious circle.
   A. severe   B. very bad   C. dangerous   D. critical

VOCABULARY: ANTONYMS

1. The people must then go hungry.
A. well-kept   B. well cared for   C. well looked after   D. well fed

2. A particular country might be generous.
A. miserly   B. moderate   C. extravagant   D. frugal

USE OF PREPOSITION

1. The committee regrets that it cannot accede _____ your request for a month's paid leave.
A. for   B. to   C. in   D. with

2. Our college is affiliated _____ the University of Sindh.
A. with   B.to   C. for   D. in

ERROR DETECTION

1. George <u>has not</u> completed <u>the assignment</u> <u>yet</u> and Maria <u>hasn't neither.</u>
                  A   B   C   D

2. <u>The sun</u> <u>rose</u> <u>before</u> I <u>got up.</u>
     A   B   C   D

USE OF VERBS

1. Lucy is a good girl and …………………………..for a brother.
A. long   B. longs   C. is longing   D. longed

2. Mango is fruit that I………………………….
A. am always liking   B. have been always liking
C. have always liked   D. have been always liked

USE OF PAIRS OF WORDS:

1. Some wicked …………….. made ……………………of their idol.
A. fun, fans   B. fan, fun   C. fans, fun   D. fans, funs

2. The male child who is the only………… to the property has long, smooth, golden………….
A. hare, heir   B. heir, hare   C. hairs, hare   D. heir, hair

USE OF TENSES

1. I wish I were young forever.
A. Present indefinite tense   B. Present perfect tense
C. Past indefinite tense   D. Past perfect tense

2. Death toll of the earthquake victims is feared to have increased.
A. Past indefinite tense   B. Past perfect tense
C. Present indefinite tense   D. Present perfect tense

PART-II
MATHEMATICS

Real Number System

1. Which set contains the number π?

A. integers   B. rational numbers   C. natural numbers   D. irrational numbers

2. The diameter of a red blood cell is approximately 0.00074 centimeter. Expressed in scientific notation, this number is

A. 7.4×10^{-4} cm   B. 7.4×10^4 cm   C. 74×10^{-3} cm   D. 74×10^3 cm

3. If x and y are any two whole numbers, which statement is always true?

A. $xy = yx$ B. $\dfrac{x}{y} = \dfrac{y}{x}$ C. $x - y = y - x$ D. $x + 3y = y + 3x$
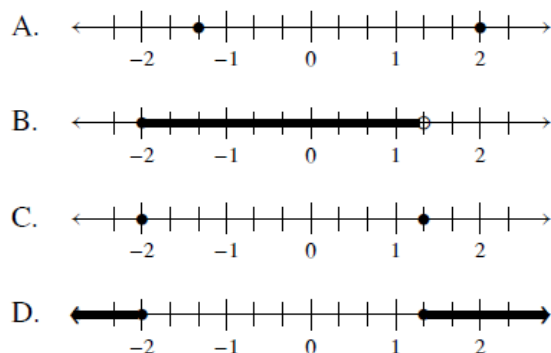
Algebraic Expressions

1. What is the sum of $\dfrac{-x+7}{2x+4}$ and $\dfrac{2x+5}{2x+4}$

A. $\dfrac{x+12}{2x+4}$ B. $\dfrac{3x+12}{2x+4}$ C. $\dfrac{x+12}{4x+8}$ D. $\dfrac{3x+12}{4x+8}$

2. If Ann correctly factors an expression that is the difference of two perfect squares, her factors could be

A. $(2x+y)(x-2y)$ B. $(2x+3y)(2x-3y)$ C. $(x-4)(x-4)$ D. $(2y-5)(y-5)$

Linear and Quadratic Equations

1. Which value of x is the solution of the equation $\dfrac{1}{7} + \dfrac{2x}{3} = \dfrac{15x-3}{21}$?

A. 6   B. 0   C. $\dfrac{4}{13}$ D. $\dfrac{6}{29}$

2. If $\dfrac{a}{x} + 1 = \dfrac{c}{x}$, which is an expression for x in terms of c and a?

A. $x = c + a$ B. $x = c - a$ C. $x = a - c$ D. $x = a + c + 1$

Absolute Value and Linear Inequalities

1. Which is a graph of the solution set of $|3x+1| = 5$?

A.

B.

C.

D.

2. Which number is *not* a member of the solution set of the inequality $4x \geq 18$?

   A. 4.4   B. 4.5   C. 4.6   D. 4.7

Relations and Functions

1. The domain for $f(x) = x^2 - 3$ is $0 \leq x < 4$. The smallest value in the range of $f(x)$ is

   A. 0   B. 16   C. -3 D. 4

2. If $f(x) = |x^3 - 3|$, then $f(-1)$ is equivalent to

   A. 0   B. 2   C. -2 D. 4

Systems of Equations

1. Which ordered pair is the solution to this system of equations?

$$y = x + 4$$
$$x + y = 2$$

   A. $(1, 5)$ B. $(0, 2)$ C. $(-1, 3)$ D. $(-4, 0)$

Word Problems and Applications

1. The formula for converting temperatures in degrees Celsius to degrees Fahrenheit is $F = \frac{9}{5}C + 32$. If the temperature is $20°$C, what is the temperature in degrees Fahrenheit?

   A. 68   B. 43.1   C. 33.8   D. 4

2. Larry has 7 more dimes than nickels, for a total value of $1.45. If n represents the number of nickels, which equation could be used to find the number of nickels Larry has?
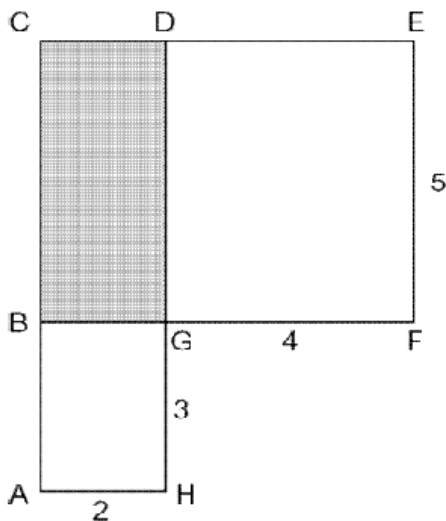
   A. $n + (n + 7) = 145$ B. $5n + 5(n + 7) = 145$ C. $5n + 10(n + 7) = 145$ D. $15(n + n + 7) = 145$

Area, Perimeter, Circumference, Volume

1. A garden in the shape of an equilateral triangle has sides whose lengths are 10 meters. What is the area of the garden?

   A. $25 \, \text{m}^2$ B. $25\sqrt{3} \, \text{m}^2$ C. $50 \, \text{m}^2$ D. $50\sqrt{3} \, \text{m}^2$

2. In the accompanying figure, $ACDH$ and $BCEF$ are rectangles. $AH = 2$, $GH = 3$, $GF = 4$, and $FE = 5$. What is the area of $BCDG$?

A. 6   B. 8   C. 10   D. 20

Fractions, Decimals, Percent

1. It takes a snail 500 hours to travel 15 miles. At this rate, how many hours will it take the snail to travel 6 miles?

     A. 0.18   B. 5.56   C. 150   D. 200

2. A baseball player successfully hits the ball 30% of the time. If he gets 450 chances to hit the ball in a season, what is the total number of times that he will successfully hit the ball?

     A. 30   B. 135   C. 420   D. 1500

Ratio, Proportion, Variation, Unit Rate

1. Rashawn bought a CD that cost $18.99 and paid $20.51, including sales tax. What was the rate of the sales tax?

     A. 5%   B. 2%   C. 3%   D. 8%

2. A cake recipe calls for 1.5 cups of milk and 3 cups of flour. Seth made a mistake and used 5 cups of flour. How many cups of milk should he use to keep the proportions correct?

     A. 1.75   B. 2   C. 2.25   D. 2.5