ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Sub: Arithmetic **Class: 7** **Date: 28. 04.20**

Duration: 40 min **Worksheet Solution 14** **Full Marks: 15**

SET THEORY

Choose the Correct options:

1. {x: x is an integer neither positive nor negative} is
a) Empty set
b) Non- empty set
c) Finite set
d) Both b and c

2. {x: x is a real number between 1 and 2} is an
a) Infinite set
b) Finite set
c) Empty set
d) None of the mentioned

3. Write set {1, 5, 15, 25,…} in set-builder form :
a) {x: either x=1 or x=5n, where n is a real number}
b) {x: either x=1 or x=5n, where n is a integer}
c) {x: either x=1 or x=5n, where n is an odd natural number}
d) {x: x=5n, where n is a natural number}

4. Express {x: x= n/ (n+1), n is a natural number less than 7} in roster form:
a) {½, ⅔, ⅘, ⅙}
b) {½, ⅔, ¾, ⅘, ⅚, ⅙, ⅞}
c) {½, ⅔, ¾, ⅘, ⅚, ⅙}
d) Infinite set

5. {x: x ∈ N and x is prime} then it is:
a) Infinite set
b) Finite set
c) Empty set
d) Not a set

6. Convert set {x: x is a positive prime number which divides 72} in roster form:
a) {2, 3, 5}
b) {2, 3, 6}
c) {2, 3}
d) {∅}

7. A _____ is an ordered collection of objects.
a) Relation
b) Function
c) Set
d) Proposition

8. The set O of odd positive integers less than 10 can be expressed by _____
a) {1, 2, 3}
b) {1, 3, 5, 7, 9}
c) {1, 2, 5, 9}
d) {1, 5, 7, 9, 11}

9. Which of the following two sets are equal?
a) A = {1, 2} and B = {1}
b) A = {1, 2} and B = {1, 2, 3}
c) A = {1, 2, 3} and B = {2, 1, 3}

d) A = {1, 2, 4} and B = {1, 2, 3}

10. The set of positive integers is _____

a) Infinite

b) Finite

c) Subset

d) Empty

11. The members of the set S = {x | x is the square of an integer and x < 100} is _____

a) {0, 2, 4, 5, 9, 58, 49, 56, 99, 12}

b) {0, 1, 4, 9, 16, 25, 36, 49, 64, 81}

c) {1, 4, 9, 16, 25, 36, 64, 81, 85, 99}

d) {0, 1, 4, 9, 16, 25, 36, 49, 64, 121}

12. Which of the following is EQUIVALENT to {c,r,e,a,t,e}

a) {4}

b) {5}

c) {L,O,V,E}

d) {f,a,i,t,h}

13. Which of the following is EQUAL to {t,e,4}?

a) {4,4,t,e}

b) {3}

c) {1,1,2}

d) {t,e,4,f}

14. If P = {p: p is a prime numbers less than 10}, then P is

a) {2,3,5,7}

b) { 1,2,3,5,7}

c) {2,3,5,7,9}

d) {1,2,3,5,7,9}

15 . Which of the following are well-defined sets?

a) All the colours in the rainbow.

b) All the points that lie on a straight line.

c) All the honest members in the family.

d) All the tall boys of the school.