

**SPECIAL EVALUATION (FIRST TERM) – 2022**

**Time: 02 Hours**

**GRADE 08 – Mathematics**

**Part - I**

* **Answer all part I questions on this paper itself.**

01. Write the next two terms of the given number pattern,

1 , 4 , 9 , 16 , \_\_\_\_\_\_ , \_\_\_\_\_\_

02. Find the value.

(+ 2) + (- 1) =

03. Write the additive inverse of the following,

(+ 5) =

(- ) =

04. Find the perimeter,

2 cm

5 cm

7 cm

05. Find the value of *x*,

A

B

C

65o

*x* o

O

06. Write the triangular numbers from 1 to 10,

07. Find the value using the number line,

(+ 2) – (+ 3) = \_\_\_\_\_\_\_\_\_\_\_\_

- 3

- 2

- 1

0

1

2

3

08. A rectangle of breadth 7 cm is made from a metal frame that is in the shape of an equilateral triangle of side 18 cm. Find the length of the rectangle.

18 cm

09. Find the 19th term of the number pattern of the general term 2n – 1,

10. What is the complement of 35o ?

11. In the given angle

A

B

C

O

i. Name the common arm

ii. Name the common vertex

12. Fill in the blanks.

= (+6)

13. Draw all axes of symmetry in the given square,

14. i. The complement of 60o angle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii. The supplement of 60o angle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. Express in grams,

2 g 325 mg

16. Simplify

0.32 x 0.4 =

P

Q

R

17. PQR triangle is,

i. An equilateral triangle

ii. A scalene triangle

iii. An isosceles triangle

18. An angle of magnitude 180o is known as a \_\_\_\_\_\_\_\_ angle

19. The number of olives a brother has is 5 more than twice the number of olives his sister has. If the number of olives the sister has is 5, find the number of olives the brother has,

20. Fill in the blanks.

(+ 3) x x 0

= (- 3) x 0

=

***(2 x 20 = 40 Marks)***

**Part II**

* **Answer the first question and another 04 questions only.**

01. In the number pattern,

1 , 3 , 5 , 7 , \_\_\_\_\_\_\_

i. Write the next two terms.

ii. Fill in the blanks to obtain the general term of the above number pattern.

Term Multiple of 2 – 1 Number

1 1 x 2 – 1 1

2 2 x 2 -1 3

3 3 x 2 – 1

4 4 x - 1

n

iii. What is the 9th term of the above number pattern?

iv. Which term is 45 of it ?

v. Write the first four terms of the number pattern of multiples of 4, starting from 4 and written in ascending order

***(16 Marks)***

02. Find the perimeter of the following figures.

4 cm

5 cm

i. ii.

6 cm

4 cm

4 cm

4 cm

6 cm

5 cm

20 cm

iii.

ii. The side length of a square shaped picture frame is 8 cm. Find its perimeter.

iii. The length of a rectangular shaped play ground is twice its breadth. If its perimeter is 300 m. Find the length of it.

***(11 Marks)***

03. i. Write the types of the angles for the following,

90o =

30o =

165o =

180o =

210o =

310o =

y o

*x* o

50 o

O

100 o

A

B

C

D

E

ii.

AB and CD lines intersect each other at point O.

**(a).** Find the value of *x*

**(b).** Find the value of y

**(c).** Name the supplementary angle of AC

**(d).** Name a pair of vertically opposite angles.

**(e).** Name two pairs of adjacent angles.

***(11 Marks)***

04. Fill in the blanks.

i. (+ 9) + = (+ 7)

ii. (- 5) – (- 3) =

iii. = =

iv. Simplify the following using the number line.

**(a).** (- 2) - (- 4) =

- 7

- 6

- 5

- 4

- 3

- 2

- 1

0

1

2

3

4

5

**(b).** (+ 2) + (+ 5) =

- 4

- 3

- 2

- 1

0

1

2

3

4

5

6

7

8

***(11 Marks)***

05. (A). i. Simplify,

4*x* (*x* - 5) - 2*x* (*x* + 8)

ii. If *x* = 2 , y = 1 and z = -2, find the value of 2*x* - 3y + 5z

iii. Simplify,

(3*a* (- 1b

(B). i. Write 576 as a product of its prime factors.

ii. Hence, find the value of

***(11 Marks)***

06. (A). Recall the memory of the lesson “Solids”

i. How many Platonic Solids are there?

ii. Name two Platonic Solids.

iii. Write the “Euler’s Relationship”

(B). i. Simplify,

t kg

23 59

+ 4 997

ii. Simplify,

27 t 434 kg 11

***(11 Marks)***