**DHACSS SKBZ EXAMINATION**

**MID- TERM EXAMINATION 2021**

**MATHEMATICS**

**CLASS VIl**

Max marks: 100

Time: 3 Hours

**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Roll No:\_\_\_\_\_\_ Sec: \_\_\_\_ Invigilator Sign: \_\_\_\_\_\_\_**

**Section A (OBJECTIVE) (40 Marks)**

**Q1. Fill in the blanks. ( 1 x 10 = 10 )**

1. A decimal which contains finite number of digits after decimal point is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ decimal.
2. 6b-3b= \_\_\_\_\_\_\_\_\_\_\_\_.
3. 2o = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. In \_\_\_\_\_\_\_\_\_\_\_\_ is coefficient.
5. 2.6666…. is \_\_\_\_\_\_\_\_\_\_\_\_ decimal.
6. {2,4,6,8,10} is a set of first five \_\_\_\_\_\_\_\_\_\_\_\_\_ numbers.
7. (2c)(3c) = \_\_\_\_\_\_\_\_\_.
8. A symbol having fixed numerical value is called \_\_\_\_\_\_\_\_\_\_\_\_.
9. In 4y+9, \_\_\_\_\_\_\_\_\_\_\_ is variable.
10. 6p+7p= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**b) Select the correct answer ( 1 x 10 = 10)**

i.

a) monomial b) Binomial c) Trinomial d) none

ii. \_\_\_\_\_\_\_\_\_\_ means “belongs to”

1. U b) ∈ c) ∩ d) −

iii. \_\_\_\_\_\_\_\_\_\_\_\_ is a number multiplied by variable.

1. Coefficient b) Constant c) Variable d) none

iv. am an = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. am-n b) am+n c) amxn d) am/n

v. Intersection is denoted by \_\_\_\_\_\_\_\_\_\_\_.

a) U b) ∩ c) = d) ≥

vi. {1,2,3,4} and {a,b,c,d} are \_\_\_\_\_\_\_\_\_\_\_\_\_ sets

1. disjoint b) overlapping c) null d) empty

vii. 52 = \_\_\_\_\_\_\_\_\_\_\_\_\_

1. 10 b) 5 c) 2 d) 25

viii. (-a)n is positive if n is \_\_\_\_\_\_\_\_\_\_\_.

1. 1 b) even c) odd d) 3

ix. An expression having \_\_\_\_\_\_\_\_\_ terms are called binomial.

1. one b) two c) three d) four

x. B´= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a) B – U b) U – b c) d) B – B

**c) True / False (1 x 5 = 5)**

1. − − = −
2. a x a = 2a
3. {1,2,3,4} is tabular form
4. Universal set is denoted by U.
5. an x bn = (ab)n

**d) Match the following sets in column A correctly with column B in their expanded forms (1 x 5 = 5)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Column A** |  | **Column B** |
| 1 | 24 | **A** | 36 |
| 2 | 62 | **B** | 125 |
| 3 | 53 | **C** | 64 |
| 4 | 72 | **D** | 16 |
| 5 | 43 | **E** | 49 |

1 \_\_\_\_\_\_\_\_\_\_, 2 \_\_\_\_\_\_\_\_\_\_, 3 \_\_\_\_\_\_\_\_\_\_\_, 4 \_\_\_\_\_\_\_\_\_\_\_, 5 \_\_\_\_\_\_\_\_\_\_

**e) Quick Solution. (2x5 = 10)**

i) Convert into decimal and identify terminating and non terminating.

ii) Find AUB if A= {0,1,2,3,4,5} and B= {2,4,6,8}

iii) Convert into negative exponent

iv) Convert the following decimal is rational numbers.

1. 0.6 b) 0.8

v) Simplify using product law:

**SECTION B**

**Attempt 10 questions out of 15 questions. (4 x 10 = 40)**

1. Find DUEUF if D={1,3,5,6} , E ={ 2,4,6} , F= {1,3,6,9,10}
2. Simplify using power law.
3. b)
4. Convert into positive exponent.
5. Without actual division, separate terminating and non terminating decimals.
6. Simplify using product law:
7. If U= {0,1,2,3,……10} A={1,2,3} and B= {6,9,10} then find A´ and B´.
8. Identify recurring and non recurring. a)
9. Simplify using quotient law:
10. Write the following is set builder form.
11. A={1,2,3,…..10} b) {D={1,3,5,7,9,….
12. Find the sum of. a)
13. Find the product: a)
14. Identify positive or negative.
15. c)
16. d) (-3)0
17. Subtract the second expression from the first.
18. -7ab, 12ab b) 6a + 7b, 9
19. Show that:
21. Find A-B and B-A if :

A= Set of first 6 multiples of 3 , B = set of first 6 multiples of 4.

**SECTION C**

**Attempt any two questions (2 x 10 = 20)**

Q1. a) Find the product: /5

b) Verify using product law: /5

Q2. a) Roundoff the given numbers /6

|  |  |  |  |
| --- | --- | --- | --- |
| **S/No.** | **Number** | **Upto 2 decimal places** | **Upto 3 decimal places** |
| 1 | 6.98677 |  |  |
| 2 | 15.47648 |  |  |
| 3 | 1.61538 |  |  |

b) Identify disjoint and overlapping sets. /4

1. A={2,3} B={1,4,6,8}
2. A= {10,20,30}, B= {2,4,6,…}
3. A= {a,e,i,o,u} , B={ a,b,c,d,e}
4. A={plate,jug,glass}, B={a,c,f}

Q3. a) If U= {1,2,3,….10} , A={1,2,3,5,6,7} then find A∩A´ /5

b): Simplify /5