**** **SINDHI HIGH SCHOOL, HEBBAL**

**II PERIODIC TEST [2023-24]**

**SUBJECT: MATHEMATICS**

**Class: VIII Max Marks: 50**

**Date: 22.12.2023 Reading Time: 8:30 to 8:45am**

**No of Sides: 3 Writing Time: 8:45 to 10:45am**

**GENERAL INSTRUCTIONS:**

* This Question Paper has 5 Sections A-E.
* Section A has 8 MCQs carrying 1 mark each
* Section B has 6 questions carrying 02 marks each.
* Section C has 4 questions carrying 03 marks each.
* Section D has 2 question carrying 05 marks.
* Section E has 2 case based integrated units of assessment carrying 4 marks

Sub-parts of the values of 1, 1 and 2 marks each.

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|  | **Section A** |  |
|  | **Section A consists of 8 questions of 1 mark each.** |  |
| 1 | If 43 is 64 , then cube root of 64 is  a)8 b)3 c) 2 d)4 | 1 |
| 2 | The expression: a + 3a + 4b is :  a) a monomial b) a binomial c) a trinomial d) a quadrinomial | 1 |
| 3 | The multiplicative inverse of is :  a) 6-4 b) c) d) 64 | 1 |
| 4 | The one’s digit of the cube root of 46656 is:  a) 2 b) 4 c) 6 d)8 | 1 |
| 5 | (2-2 + 3-1 + 5-1) 0 is equal to:  a)2 b)3 c)1 d) 5 | 1 |
| 6 | (-2)-5 (-2)6 is equal to:  a)2 b)-2 c) -5 d) 6 | 1 |
| 7 | Subtraction of -5y2 from y2 gives, which of the following results?  a) -4y2 b)6y2 c)4y2 d)-6y2 | 1 |
| 8 | ***Directions for question 8.***  ***In question 8, Statements of Assertion(A) is followed by Reason(R). Choose the correct option.***  **Assertion :** In the expression a + b -7, -7 is a constant.  **Reason :** All algebraic expressions should have a constant.  (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).  c) Assertion (A) is true but reason (R) is false.  (d) Assertion (A) is false but reason (R) is true. |  |
|  | **Section B** |  |
|  | **Section B consists of 6 questions of 2 marks each.** |  |
| 9 | If the volume of a cube is 216 cm3, find the length of its side. | 2 |
| 10 | Evaluate the product of: (3a-2) (2a – 3) | 2 |
| 11 | Find the smallest natural number that should be divided from 53240 to form a perfect cube. | 2 |
| 12 | Evaluate and mention which is greater amongst 24 and (-2)4 | 2 |
| 13 | Determine the cube root of 13824 | 2 |
| 14 | Find the value of m : 2 m+2 = 64 | 2 |
|  | **Section C** |  |
|  | **Section C consists of 4 questions of 3 marks each.** |  |
| 15 | Supreeth makes a cuboid from chart paper of sides 15cm, 10cm, 15cm. How many such cuboids will be needed to form a cube? | 3 |
| 16 | Simplify and find the value when a =1 : (2a2+ 9) (2a2+ 5) | 3 |
| 17 | Simplify by using the laws of exponents: | 3 |
| 18 | From the sum of 5a + 2 and 5a2 + 7a − 4 subtract the sum of 3a2 − 5a and 4a − 5a2+ 7. | 3 |
|  | **SECTION D** |  |
|  | **Section D consists of 2 questions of 5 mark** |  |
| 19 | The given table shows the crop production of a state in the year 2022 and 2023. Observe the table given below and answer the given questions.   |  |  |  | | --- | --- | --- | | CROP | Harvest in 2022 (In hectare) | Increase/decrease in 2023 (in hectare) | | Bajra | 1.4 x 103 kg | kg | | Jowar | 1.7 x 106 kg | kg | | Rice | 3.7 x 103 kg | + 1000 kg | | Wheat | 5.1 x 105 kg | + 10,000 kg |   a) For which crop(s) did the production decrease?  b) Write the production of rice and wheat 2023 in their standard form.  c) Assuming the same increase in rice production each year as in 2023, how many kilogram will be harvested in 2025? | 5 |
| 20 | Laxmi has a rectangular garden that measures (3x−5) feet by (2x+8) feet.  a) Find the area of the garden.  b) She wants to put a fence around the perimeter of the garden. If each foot of fence costs Rs.5, how much will the total fencing around the garden cost? | 5 |
|  | **SECTION E** |  |
|  | **Section E consists of two Case base study questions of 4 mark** |  |
| 21 | Students of grade 8 were playing aptitude, analytical and logical related games. they had this question to solve, help them to solve this by observing the following pattern:  CLASS VIII MATHS CUBE AND CUBE ROOTS | PPT **13 = 1**  **13 + 23 = (1+2)2**  **13 + 23 + 33 = (1+2+3)2**  i) Write the next two rows  ii) Calculate the value of 13 + 23 + 33 +…+ 93 by the above pattern.  iii) Find the cube of sum of first 4 natural numbers | 4 |
| 22 | In order to calculate profits and losses, business owners use algebraic operations. A business person will use algebra to determine whether a piece of equipment does not lose its worth if it is in stock.    Algebra in Everyday Life  i) Mention all the like terms in this expression.  ii) Which is the constant term here?  iii) Find the coefficient of x2y. | 4 |

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