**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-20)**

**Type of Task: CRS**

**Level of SLO: Comprehension**

**Task:** Express the sot of first whole number into

1. Tabular form b) builder from

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| a) {0,1,2,3,4}b) {$x1x€ w ⩑x ⪯$} | Tubular formSet builder form | (01 marks)(01 marks) |

**Name and Signature**

Dr.M. Anwer

**Reviewer Comments:**

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-20)**

**Type of Task: CRS**

**Level of SLO: Comprehension**

**Task:** Shade the AUB in the following venn-diagram **(03 Marks)**

A

A B

A B

1. Tabular form b) builder from

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
|  | AUB of disjoint setsAUB of ourlepping sets AUB of sets when B⪯A | (01 marks)(01 marks)(01 marks) |

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**Reviewer Comments:**

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-21)**

**Type of Task: CRS**

**Level of SLO: Comprehension**

**Task:** Let X= { -2,0,23} Then paid” **(03 Marks)**

1. Number of elements in the pecor
2. Power of sets x.

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| a) X= {-2,0,2} Number of elements of set x=3 Number of elements of power set of x= 13=08b) P(x) = {1,{-02}, {0}, {-2,0}, {-2,2}{0,2}, {-2,0,2} |  | (01 marks)(03 marks) |

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-21)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** Let X= { -1,0,1,2} Write. Power set of x , 05= 2+3 **( Marks)**

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| a) X= {-1,0,1,2}Number of elements of set x=04 Number of power sets of x=24 = 16b) P(x) [1, {-1}, {0}, {1}, {2}, {-1,0},{ -1,1} {-1,2},{0,1}, {0,2}, {1,2}{-1,0,1}{-1,0,2}, {-1,1,2}, {0,1,2}, {-01,0,1,2}}] | Find the elements in the given set  | (01 marks)(03 marks) |

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-22)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** Let A= {-1,1,1,2}, B= {-2,-1,0,1,2,4} Find AUB, B⩑A, A-B, B-A **(05 Marks)**

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| a) AUB = {-1,01,2} U{-2,0,2,4} = {-2,-1,0,1,2,4}b) B∩A= {-2,0,2,4} {-1,0,1,2} {0,2}c) A-B= { -1,0,1,2}-{-2,0,2,4} = {-1, 1}d) B-A= { -2,0,2,4} – { -1,0,1,2} = {-2, 4}e) From 1x2 A-B ≠ B-A  | Finding AUBFinding A∩BFinding A-BFinding B-AFinding A-B ≠ B-A | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

**Name and Signature**

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-22)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** Verity the property of distributive over intersection for A= {-4,-3,-2,-1,0} B= {-3,-2,-1,0,1} C={-1,0,1,2,3} **(05 Marks)**

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| i. B∩C= { -3,-2,-1,0,1}  ∩ {-1,0,1,2,3} = {-1,0,1}A∩(B∩C)= {-4,-3,-2,-1,0} = {-1, 0}ii. A∩B= {-4,-3,-2,-1,0}  ∩ {-3,-2,-1,0,1} = { -3,-2,-1,0}[A∩B] ∩C= {-3,-2,-1,0}  ∩ -1,0,1,2,3} = {-1,0}From 1 and 2iii. A∩ (B∩C) = (A∩B) ∩C | Finding B∩CFinding A∩(B∩C)Finding AUBFinding A∩B)Verifying A∩ (B∩C) = (A∩B) ∩C | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

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**Reviewer Comments:**

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-22)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** Find the distributive property of Union for A= {-2,-1,0,1,2} B = {0,1,2,3,4} C={-3,-2,-1,0}  **(05 Marks)**

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| i. BUC= { 0,1,2,3,4} U { -3,-2,-1,0} = {-3,-2,-1,0,1,2,3,4}AU(BUC)= {-2,-1,0,1,2} U {-3,-2,-1,0,1,2,3,4} = { -3,-2,-1,0,1,2,3,4}ii) AUB= {-2,-1,0,1,2} U {0,1,2,3,4} = {-2,-1,0,1,2,3,4} [AUB] UC= {-2,-1,0,1,2,3,4} U { -3,-2,-1,0} = { -3,-2,-1,0,1,2,3,4}iii) From 1 and 2 AU(BUC)= (AUB) UC | Finding BUEFinding AU (BUC)Finding AUBFinding AUBFinding (AUB)UC | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

**Name and Signature**

Dr.M. Anwer

**Reviewer Comments:**

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-23)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** Prove (i) (A∩B) = A1UB1 , (ii) (AUB)1 = A1∩B1 for U= { 1,2,3…..12} X= {2,3,5,7,11}, y= {1,3,5,7,9,11}  **(05 Marks)**

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| i. XUY= { 2,3,5,7,11}  U { 1,3,5,7,9,11} = {1,2,3,7,9,11}(XUY)1= U-XUY) = {1,2,3…..,12}={1,2,3,5,7,9,11}={4,6,8,10,12}ii. X1 = U –x = { 1,2,3……12}  -{2,3,5,7,11}= 1,4,6,8,9,10,12}Y1= U-Y= {1,2,3,……,12}- {1,3,5,7,9,11}= 2,4,6,8,10,12}X1 ∩Y1= { 1,4,6,8,9,10,12}  ∩ { 2,4,6,8,10,12} = { 4,6,8,10,12}iii. From 1 and 2 (XUY)1= X1∩y1 | Finding XUYFinding (XUY)1Finding X1Finding Y1Finding X1 ∩Y1 | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-23)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** Prove De- Morgan law foreign set U= { x/x€ N˄ x≤ 10} x={First four natural number} y= { x/x€ E˄2 ≤x=8}  **(05 Marks)**

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| i. X∩Y= { 1,2,3,4} ∩ {2,4,6,8} = {2,4}(X∩Y)1 = U-(X∩Y)= {1,2,3…10} – {2,4}= { 1,3,5,67,8,9,10}ii. X1= U-X= {1,2,3…..10} – {1,2,3,4} = {5,6,7,8,9,10}Y1= U-Y= {1,2,3,…..10}- {2,4,6,8} = {1,3,5,7,9,10}X1UY1= {5,6,7,8,9,10} U {1,3,5,7,910} = {1,3,5,6,7,8,9,10}iii. From 1 and 2 (X∩Y)1= X1 U Y1 | Finding X∩YFinding (X∩Y)1Finding X1Finding Y1Finding (X ∩Y1 ) | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

**Name and Signature**

Dr.M. Anwer

**Reviewer Comments:**

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**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-24)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** The formative/subjects of 30 students in class 8 is shown in the venn diagram. **(05 Marks)**

30

M=20

SC=15

i. n(MUS)

ii. n (M∩S)

iii. n (M)

M= Math

S=Scia

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| i. n (MUS) = 20 Studentsii. (M∩S)= 15 Studentsiii. n(M)1 = U-M = 30-20 = 10 Students | Finding the number of student interested in bothFinding the student only interested bothFinding the number of student which are not interest in Mathematics. | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

**Name and Signature**

Dr.M. Anwer

**Reviewer Comments:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-24)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** In the Class Application of Student 30, students are interested to play Application cricket 20 football and remaining are interested to play both. **(05 Marks)**

i. Draw ven diagram

ii. Find a : n (cuf)

 b: n (C∩F)

C: n(C1)

D: (F1)

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| i.10F50c=2010ii. a) n (CUF) = 40 b) N (C∩F) = 10 c) n (c1) = 20 d) n (F1) = 30 |  | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

**Name and Signature**

Dr.M. Anwer

**Reviewer Comments:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name and Signature Reviewer**

**Mathematics**

**Subject: Mathematics**

**Domain: A-Number and Operation**

**Grade:**-8

**Unit:** 5-Sets

**Type of Assessment: Summative & Formative**

**SLO: ( M-08-A-24)**

**Type of Task: ERQ**

**Level of SLO: Comprehension**

**Task:** In the Class Application of Student 30, students are interested to play Application cricket 20 football and remaining are interested to play both. **(05 Marks)**

i. Draw ven diagram

ii. Find a : n (cuf)

 b: n (C∩F)

C: n(C1)

D: (F1)

**Level of Item: Comprehension**

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
|  |  | (01 marks)(01 marks)(01 marks)(01 marks)(01 marks) |

**Name and Signature**

Dr.M. Anwer

**Reviewer Comments:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name and Signature Reviewer**