



**BK BIRLA CENTRE FOR EDUCATION**  
**SARALA BIRLA GROUP OF SCHOOLS**  
**SENIOR SECONDARY|CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL**



**MID TERM EXAMINATION , 2024**

**MATHEMATICS (041)**

Class : VIII  
 Date :21-09-2024

**MARKING SCHEME**

Duration : **3 Hrs**  
 Max. Marks : **80**

**SECTION A**

**Each question carries 1 mark. ( mcq)**

1. 49 [A]
2.  $1.496 \times 10^{11}$  [A]
3. 90 metric tonnes [B]
4. Inverse proportion [B]
5. 1 [B]
6. Both + v e and – v e [C]
7.  $3z - 3 = 3$  [C]
8. 6 [C]
9.  $2x + y = 1$  [B]
10. Rectangle [A]
11. Square [A]
12.  $360^0$  [C]
13. 2 [B]
14. 4 [C]
15. 19 [B]
16. 156 [A]
17. 1.5 [C]
18. Even [C]
19. [A]
20. [A]

**SECTION B**

21. 1

|             |     |     |
|-------------|-----|-----|
| No of words | 540 | $x$ |
| Time ( min) | 30  | 6   |

$$\frac{x}{6} = \frac{540}{30}$$

$$x = 108$$
1

22.  $5x = 4x + 40$  1  
 $5x - 4x = 40$   $\frac{1}{2}$   
 $x = 40$   $\frac{1}{2}$

**OR**

$5x - 3x = 5 - 9$  1  
 $x = -4$  1

$$x = -2$$

23.  $x + x = 180$  ----- adjacent angles 1  
 $2x = 180^0$   $\frac{1}{2}$   
 $x = 90^0$   $\frac{1}{2}$   
 Each angle is  $90^0$

24. Total outcomes = 2 1  
 $P(\text{head come up}) = \frac{1}{2}$  1

25. i) 1 ii) 4 iii) 6 iv) 5 2  
 OR  
 Prime factors of 200 =  $2 \times 2 \times 2 \times 5 \times 5$  2

### SECTION C

26.  $(\frac{1}{2} \div \frac{1}{5}) \times \frac{8}{5} = \frac{1}{2} \times \frac{5}{1} \times \frac{8}{5}$   $1 \frac{1}{2}$   
 $= 4$   $1 \frac{1}{2}$

27.  $1 \frac{1}{2}$

|                |    |     |
|----------------|----|-----|
| No of children | 24 | 20  |
| sweets         | 5  | $x$ |

$$20 \times x = 24 \times 5$$

$$x = 6$$

1  
 $\frac{1}{2}$

OR

|               |   |     |
|---------------|---|-----|
| No of persons | 3 | 4   |
| Days          | 4 | $x$ |

$$4 \times x = 3 \times 4$$

$$x = 3 \text{ days}$$

1  
 $\frac{1}{2}$

28.  $\frac{3}{4} - \frac{2}{5} + \frac{3}{10} = \frac{15}{20} - \frac{8}{20} + \frac{6}{20}$  ( LCM = 20)  $1 \frac{1}{2}$

$$= \frac{15-8+6}{20}$$

$$= \frac{13}{20}$$

$\frac{1}{2}$   
 $\frac{1}{2}$

29.  $9x - 4 = 2x + 3$  ,  
 $9x - 2x = 3 + 4$  1  
 $x = \frac{7}{7}$   
 $x = 1$   $\frac{1}{2}$

Check ,

$$9(1) - 4 = 2(1) + 3$$

$$5 = 5$$

1  
 $\frac{1}{2}$

30.  $y = 80^\circ$  Opposite angles ½
- $x + y = 180^\circ$  1
- $x = 100^\circ$  ½
- $z = 80^\circ$  Corresponding angles 1
- OR
- $x = 90^\circ$  given ½
- $x + y + 30^\circ = 180^\circ$  1
- $y = 180 - 120$  ½
- $y = 60^\circ$  ½
- $z = 60^\circ$  alternate angles ½
31.  $7744 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 11 \times 11$  1 ½
- $\sqrt{7744} = \sqrt{2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 11 \times 11}$  ½
- $= 2 \times 2 \times 2 \times 11$  ½
- $= 88$  ½
32. A) i)  $3.5 \times 10^{-5}$       ii)  $4.05 \times 10^6$       iii)  $5.6 \times 10^{-7}$  3 ( 1 + 1 + 1 )
- B) i) 352 000      ii) 0.000754 2 ( 1 + 1 )
33.  $\frac{2}{3} - \frac{1}{3} + \frac{5}{11} - \frac{3}{11} = \frac{1}{3} + \frac{2}{11}$  2
- $= \frac{11}{33} + \frac{6}{33}$  1 ½
- $= \frac{17}{33}$  1 ½
34.  $15z - 21 - 18z + 22 = 32z - 52 - 17$  2
- $-3z + 1 = 32z - 69$  1
- $-3z - 32z = -69 - 1$  1
- $z = 2$  1
- OR
- $12y - 36 - 2y + 20 + 7y + 49 = 0$  2
- $10y + 7y = -69 + 36$  1
- $17y = -33$  1
- $y = \frac{-33}{17}$  1
35. For central angle 2
- For drawing appropriate pie chart 3
- OR
- For scale and axes 1
- For correct Bar graph 4
36. i) Class X 1
- ii)  $\frac{120}{360} \times 720 = 240$  2
- iii) Class VII 1
37. i) 9 1
- ii) 6561 1
- iii) 81 ( square root of 6561) 2

38. i)  $\angle B = 120^\circ$

ii)  $360^\circ$

iii)  $120^\circ$

1

1

2

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