



# OSDAV Public School, Kaithal

First Term Exams (2024-25)

Class: VII

Subject: Mathematics

SET- A

Time: 2 hrs.20 mins

M.M.: 60

General Instructions:- All questions are compulsory.

Q.N.	Questions	Marks
<b>Section A</b>		
1.	Absolute value of $\frac{-15}{29}$ is : (a) $\frac{-15}{29}$ (b) $\frac{29}{-15}$ (c) $\frac{15}{29}$ (d) $\frac{-29}{15}$	1
2.	The observation that occurs maximum number of times in a data is called: a)mean                      b)median                      c)mode                      d)range	1
3.	0.245 expressed as a rational number is – a) $\frac{245}{100}$ b) $\frac{49}{200}$ c) $\frac{245}{10}$ d) $\frac{49}{20}$	1
4.	Identity element of multiplication is: a)0                      b)1                      c)2                      d)3	1
5.	$1.5 \times 0.4 = \dots\dots\dots$ a)60                      b)0.60                      c)6.0                      d)0.06	1
6.	Value of $(\frac{-5}{9})^8 \div (\frac{-5}{9})^4$ is- a) $(\frac{-5}{9})^2$ b) $(\frac{-5}{9})^{32}$ c) $(\frac{-5}{9})^{12}$ d) $(\frac{-5}{9})^4$	1
7.	Multiplicative inverse of $\frac{-5}{11}$ is : a) $\frac{-5}{11}$ b) $\frac{-11}{5}$ c) $\frac{11}{5}$ d) $\frac{5}{11}$	1
8.	Standard form of $\frac{21}{39}$ is : a) $\frac{7}{13}$ b) $\frac{39}{21}$ c) $\frac{21}{39}$ d) $\frac{-7}{13}$	1
9.	$3.5 \times 10^{-2}$ is equal to- a)3500                      b)0.035                      c)0.0035                      d)0.00035	1
10.	Value of 30% of 150 is- a)45                      b)35                      c)25                      d)15	1
11.	Profit% or loss% are always calculated on- a)cost price                      b)selling price                      c)marked price                      d)rate of interest	1
12.	<b>Assertion:</b> Marks scored by seven students in a class are 18, 21, 21, 32, 36, 50, 93. Then the median is 32. <b>Reason:</b> When a given data is arranged in ascending or descending order, then the middle most observation is called the median of data. a) Both assertion and reason are correct and Reason is the correct explanation for assertion. b) Both assertion and reason are correct and Reason is not the correct explanation for assertion. c) Assertion is true but reason is false. d) Both assertion and reason are false.	1
<b>Section-B</b>		
13.	Find the value of x: $(\frac{5}{7})^3 \times (\frac{5}{7})^5 = (\frac{5}{7})^{4x}$	2
14.	Find two rational number between $\frac{-5}{6}$ and $\frac{3}{4}$ .	2

15.	Find the value of x , if – $\frac{7}{49} = \frac{x}{84}$	2																		
16.	In what time will a sum of money of Rs 1000 amounts to Rs 1200 at 5% per annum?	2																		
17.	The mean of 15 observations was 50.It was detected that 95 was misread as 59.Find the correct mean.	2																		
18.	By what number should $(3)^{-2}$ be multiplied so that the product may be equal to $(3)^{-4}$ ?	2																		
19.	Represent $\frac{3}{-7}$ on a number line.	2																		
<b>Section-C</b>																				
20.	In a co- educational school, 40% of the total students are boys .If there are 320 boys in the school, find the total number of students in the school. Also find the number of girls in the school.	3																		
21.	Find the mean, median and mode of the following data. 12,7,14,10,9,7,5,8,7	3																		
22.	Simplify: $[(\frac{4}{5})^2]^3 \times (\frac{4}{5})^{-3} \times 5^{-1} \times (\frac{1}{6})^0$	3																		
23.	Show that- $\frac{2}{3} \times (\frac{4}{5} - \frac{5}{2}) = (\frac{2}{3} \times \frac{4}{5}) - (\frac{2}{3} \times \frac{5}{2})$	3																		
24.	Using long division method,convert the rational number $\frac{125}{8}$ in decimal form . Also , write whether it is terminating or non terminating.	3																		
25.	Arrange the following rational numbers in ascending order: $\frac{3}{4}, \frac{5}{-12}, \frac{-7}{16}, \frac{3}{8}$	3																		
<b>Section-D</b>																				
26.	Verify that: $x + (y+z) = (x +y) + z$ $x = \frac{3}{7}, y = \frac{5}{14}, z = \frac{-8}{21}$	4																		
27.	Anuj sold two washing machines at Rs 6000 each. On one he gains 25% and on the others he loses 25%. How much does he gain or loss in whole transaction.	4																		
28.	Marks obtained by two girls of class VII A in final term exam (out of 100) as follows: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">Subjects</th> <th style="width: 15%;">English</th> <th style="width: 15%;">Hindi</th> <th style="width: 15%;">Maths</th> <th style="width: 15%;">Science</th> <th style="width: 15%;">S.Science</th> </tr> </thead> <tbody> <tr> <td>Monika</td> <td>75</td> <td>80</td> <td>95</td> <td>70</td> <td>85</td> </tr> <tr> <td>Bhavna</td> <td>72</td> <td>85</td> <td>95</td> <td>85</td> <td>85</td> </tr> </tbody> </table> Plot a double bar graph for this data.	Subjects	English	Hindi	Maths	Science	S.Science	Monika	75	80	95	70	85	Bhavna	72	85	95	85	85	4
Subjects	English	Hindi	Maths	Science	S.Science															
Monika	75	80	95	70	85															
Bhavna	72	85	95	85	85															
<b>Section-E</b>																				
29.	Shreya is calling some friends over to her place. She wanted to buy some bakery items for them. She made a list of all the items she needed to buy. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 20%;">Item</th> <th style="width: 20%;">Patties</th> <th style="width: 20%;">Muffins</th> <th style="width: 20%;">Bread Rolls</th> <th style="width: 20%;">Box Of Candles</th> </tr> </thead> <tbody> <tr> <td>Quantity required</td> <td>6</td> <td>4</td> <td>2</td> <td>1</td> </tr> </tbody> </table> Her father gave her a note of Rs 500 and she went to the bakery to buy these items. Each patties cost Rs 22.50, each muffin costs Rs 11.75, each bread roll costs Rs 17.25 and the box of candles costs Rs 54.25. i) Find the cost of all patties. ii) Find the cost of all muffins. iii) How much did Shreya pay total bill at the bakery?	Item	Patties	Muffins	Bread Rolls	Box Of Candles	Quantity required	6	4	2	1	1+1+2								
Item	Patties	Muffins	Bread Rolls	Box Of Candles																
Quantity required	6	4	2	1																



# OSDAV Public School, Kaithal

First Term Exams (2024-25)

Class: VII

Subject: Mathematics

SET- B

M.M.: 60

Time: 2 Hrs.20 mins

General Instructions:-All questions are compulsory.

Q.N.	Questions	Marks
<b>Section=A</b>		
1.	Value of 40% of 200 is- a) 40                      b)30                      c)20                      d)80	1
2.	In a transaction we get profit when - a) C.P.>S.P.              b) S.P.>C.P.              c) C.P. =S.P.              d)none of these	1
3.	Standard form of $\frac{45}{60}$ is : a) $\frac{9}{12}$ b) $\frac{3}{4}$ c) $\frac{45}{60}$ d) $\frac{-3}{4}$	1
4.	$4.5 \times 10^{-3}$ is equal to- a) 4500                      b)0.045                      c)0.0045                      d)0.00045	1
5.	Additive inverse of $\frac{-15}{17}$ is : a) $\frac{-15}{17}$ b) $\frac{-17}{15}$ c) $\frac{17}{15}$ d) $\frac{15}{17}$	1
6.	$2.5 \div 0.5 = \dots\dots\dots$ a) 5                      b)0.5                      c)0.05                      d)0.005	1
7.	Value of $(\frac{-5}{9})^8 \times (\frac{-5}{9})^4$ is- a) $(\frac{-5}{9})^2$ b) $(\frac{-5}{9})^{32}$ c) $(\frac{-5}{9})^{12}$ d) $(\frac{-5}{9})^4$	1
8.	Identity element of addition is: a)0                      b)1                      c)2                      d)3	1
9.	0.345 expressed as a rational number is – a) $\frac{345}{100}$ b) $\frac{69}{200}$ c) $\frac{345}{10}$ d) $\frac{69}{20}$	1
10.	The difference between highest and lowest observation in a data is called: a)mean                      b)median                      c)mode                      d)range	1
11.	Absolute value of $\frac{-17}{19}$ is : (a) $\frac{-17}{19}$ (b) $\frac{19}{-17}$ (c) $\frac{17}{19}$ (d) $\frac{-19}{17}$	1
12.	<b>Assertion:</b> Marks scored by seven students in a class are 18, 21, 21, 32, 36, 50, 93.Then the median is32. <b>Reason:</b> When a given data is arranged in ascending or descending order, then the middle most observation is called the median of data. a) Both assertion and reason are correct and Reason is the correct explanation for assertion. b) Both assertion and reason are correct and Reason is not the correct explanation for assertion. c) Assertion is true but reason is false. d) Both assertion and reason are false.	1
<b>Section-B</b>		
13.	By what number should $(4)^{-2}$ be multiplied so that the product may be equal to $(4)^{-3}$ ?	2
14.	In what time will a sum of money of Rs 1000 amounts to Rs 1200 at 5% per annum?	2
15.	Represent $\frac{4}{-3}$ on a number line.	2
16.	The mean of 15 observations was 50.It was detected that 95 was misread as 59.Find the	2

	correct mean.																			
17.	Find the value of x: $(\frac{3}{5})^7 \div (\frac{3}{5})^5 = (\frac{3}{5})^{4x}$	2																		
18.	Find two rational number between $\frac{-3}{5}$ and $\frac{7}{10}$ .	2																		
19.	Find the value of x , if – $\frac{10}{50} = \frac{x}{45}$	2																		
<b>Section-C</b>																				
20.	Using long division method,convert the rational number $\frac{165}{8}$ in decimal form . Also , write whether it is terminating or non terminating.	3																		
21.	Show that- $\frac{4}{7} \times (\frac{5}{7} - \frac{2}{3}) = (\frac{4}{7} \times \frac{5}{7}) - (\frac{4}{7} \times \frac{2}{3})$	3																		
22.	Arrange the following rational numbers in ascending order. $\frac{3}{7}, \frac{5}{-2}, \frac{-5}{14}, \frac{13}{21}$	3																		
23.	In a co- educational school, 40% of the total students are boys .If there are 320 boys in the school, find the total number of students in the school. Also find the number of girls in the school.	3																		
24.	Find the mean, median and mode of the following data. 10,14,26,12,12,11,12	3																		
25.	Simplify: $[(\frac{3}{5})^2]^3 \times (\frac{3}{5})^{-3} \times 5^{-1} \times (\frac{1}{8})^0$	3																		
<b>Section-D</b>																				
26.	A man sold two bed sheets at Rs600 each. On one he gains 20% and on the other he loses 25%. How much does he gain or lose in the whole transaction?	4																		
27.	Verify that: $x + (y+z) = (x +y) + z$ $x = \frac{3}{4}, y = \frac{5}{8}, z = \frac{-9}{16}$	4																		
28.	Following data gives the maximum and minimum temperature (in $^{\circ}\text{C}$ ) of the different cities on a particular day. Plot a <b>double bar graph</b> from this data:	4																		
	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>City</th> <th>Delhi</th> <th>Mumbai</th> <th>Patna</th> <th>Chandigarh</th> <th>Gurugram</th> </tr> </thead> <tbody> <tr> <td>Max. Temp.</td> <td>25</td> <td>30</td> <td>34</td> <td>25</td> <td>30</td> </tr> <tr> <td>Min. Temp.</td> <td>20</td> <td>22</td> <td>25</td> <td>20</td> <td>25</td> </tr> </tbody> </table>	City	Delhi	Mumbai	Patna	Chandigarh	Gurugram	Max. Temp.	25	30	34	25	30	Min. Temp.	20	22	25	20	25	
City	Delhi	Mumbai	Patna	Chandigarh	Gurugram															
Max. Temp.	25	30	34	25	30															
Min. Temp.	20	22	25	20	25															
<b>Section-E</b>																				
29.	Shreya is calling some friends over to her place. She wanted to buy some bakery items for them. She made a list of all the items she needed to buy. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Item</th> <th>Patties</th> <th>Muffins</th> <th>Bread Rolls</th> <th>Box Of Candles</th> </tr> </thead> <tbody> <tr> <td>Quantity required</td> <td>6</td> <td>4</td> <td>2</td> <td>1</td> </tr> </tbody> </table> <p>Her father gave her a note of Rs 500 and she went to the bakery to buy these items. Each patties cost Rs 22.50, each muffin costs Rs 11.75, each bread roll costs Rs 17.25 and the box of candles costs Rs 54.25.</p> <p>i) Find the cost of all patties.  ii) Find the cost of all muffins.  iii) How much did Shreya pay total bill at the bakery?</p>	Item	Patties	Muffins	Bread Rolls	Box Of Candles	Quantity required	6	4	2	1	1+1+2								
Item	Patties	Muffins	Bread Rolls	Box Of Candles																
Quantity required	6	4	2	1																



# OSDAV Public School, Kaithal

Half yearly Exams (2024-25)

Class: VII

Subject: Mathematics

SET- A

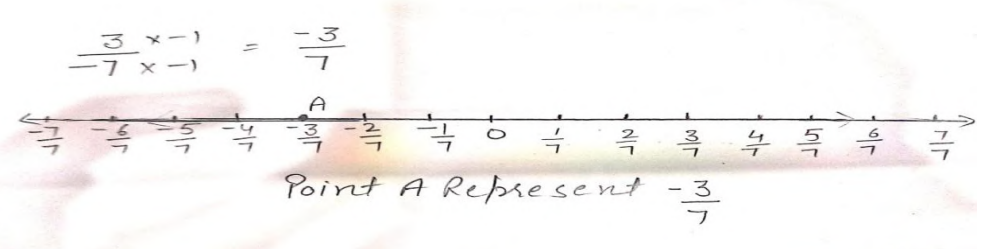
Time: 2 Hrs.20 mins

M.M.: 60

General Instructions:-

I. All questions are compulsory.

Q.N	Value points /Key points	Marks allotted to each key	Marks	
<b>Section=A</b>				
1.	(c) $\frac{15}{29}$	1	1	
2.	c)mode	1	1	
3.	b) $\frac{49}{200}$	1	1	
4.	b)1	1	1	
5.	b)0.60	1	1	
6.	d) $(\frac{-5}{9})^4$	1	1	
7.	b) $\frac{-11}{5}$	1	1	
8.	a) $\frac{7}{13}$	1	1	
9.	b)0.035	1	1	
10.	a)45	1	1	
11.	a)cost price	1	1	
12.	<b>a) Both assertion and reason are correct and Reason is the correct explanation for assertion.</b>	1	1	
<b>Section-B</b>				
13.	Find the value of x: $(\frac{5}{7})^3 \times (\frac{5}{7})^5 = (\frac{5}{7})^{4x}$ $(\frac{5}{7})^8 = (\frac{5}{7})^{4x}$ When bases are same equate the power $4x = 8$ $x = \frac{8}{4}$ $x = 2$	1  1	2	
14.	Find two rational number between $\frac{-5}{6}$ and $\frac{3}{4}$ . First number: $\frac{1}{2}(\frac{-5}{6} + \frac{3}{4})$ $= \frac{1}{2}(\frac{-10+9}{12})$ $= \frac{1}{2} \times \frac{-1}{12}$ $= \frac{-1}{24}$	Second Number: $\frac{1}{2}(\frac{-5}{6} + \frac{-1}{24})$ $= \frac{1}{2}(\frac{-20-1}{24})$ $= \frac{1}{2} \times \frac{-21}{24}$ $= \frac{-21}{48}$	1+1	2
15.	Find the value of x , if – $\frac{7}{49} = \frac{x}{84}$ By cross multiplication		2	

	$49x = 84 \times 7$ $x = \frac{84 \times 7}{49}$ $x = 12$	1+1	
16	Principal= Rs1000      Amount= Rs1200      Rate of Interest=5%p.a. Simple Interest=1200-1000 =200 Time= $\frac{S.I. \times 100}{P \times R.I.}$ Time= $\frac{200 \times 100}{1000 \times 5}$ Time =4 years	$\frac{1}{2}$ $\frac{1}{2}$  1	2
17	Mean of 15 observations =50 Sum of 15 observations =50 x 15 =750 95 was misread as 59 Correct sum of observation= 750+95-59 =786 Correct mean= $\frac{786}{15}$ =52.4	$\frac{1}{2}$  1  $\frac{1}{2}$	2
18	Let the required number = $x$ $(3)^{-2} \times x = (3)^{-4}$ $\frac{1}{9} \times x = \frac{1}{81}$ $x = \frac{1}{81} \div \frac{1}{9}$ $x = \frac{1}{81} \times \frac{9}{1}$ $x = \frac{1}{9}$	$\frac{1}{2}$ $\frac{1}{2}$  1	2
19		$\frac{1}{2}$  1 $\frac{1}{2}$	2
<b>Section-C</b>			
20	Let the total number of students= $x$ % of boys=40 Number of boys=320 40% of $x = 320$ $\frac{40}{100} \times x = 320$ $x = 320 \times \frac{100}{40}$ $x = 800$ Total number of students=800 Number of girls=800-320=480	$\frac{1}{2}$  2  $\frac{1}{2}$	3
21	Find the mean, median and mode of the following data. 12+7+14+10+9+7+5+8+7=79 Mean= $\frac{\text{sum of observations}}{\text{total number of observations}}$ Mean= $\frac{79}{9}$ =8.7... Ascending order- 5,7,7,7,8,9,10,12,14	1	3

	Median = 8 Mode = 7	1 1	
22	Simplify: $\left[\left(\frac{4}{5}\right)^2\right]^3 \times \left(\frac{4}{5}\right)^{-3} \times 5^{-1} \times \left(\frac{1}{6}\right)^0$ $= \left(\frac{4}{5}\right)^6 \times \left(\frac{4}{5}\right)^{-3} \times \frac{1}{5} \times 1$ $= \left(\frac{4}{5}\right)^{6+(-3)} \times \frac{1}{5} \times 1$ $= \left(\frac{4}{5}\right)^3 \times \frac{1}{5} \times 1$ $= \frac{64}{625}$	2 1	3
23	Show that- $\frac{2}{3} \times \left(\frac{4}{5} - \frac{5}{2}\right) = \left(\frac{2}{3} \times \frac{4}{5}\right) - \left(\frac{2}{3} \times \frac{5}{2}\right)$ L.H.S. $= \frac{2}{3} \times \left(\frac{8-25}{10}\right)$ $= \frac{2}{3} \times \frac{-17}{10}$ $= \frac{-17}{15}$ R.H.S. $= \frac{8}{15} - \frac{5}{3}$ $= \frac{8-25}{15}$ $= \frac{-17}{15}$ L.H.S. = R.H.S. Hence Shown	$1\frac{1}{2} + 1$ $\frac{1}{2}$	3
24	$\begin{array}{r} 8 \overline{) 125000} \quad (15.625 \\ - 8 \downarrow \\ \hline 45 \\ - 40 \downarrow \\ \hline 050 \\ - 48 \downarrow \\ \hline 20 \\ - 16 \downarrow \\ \hline 40 \\ - 40 \downarrow \\ \hline 0 \end{array}$ Decimal form = 15.625 It is a terminating decimal representation	2+1	3
25	$\frac{3}{4}, \frac{5}{-12}, \frac{-7}{16}, \frac{3}{8}$ $\frac{3 \times 12}{4}, \frac{-5 \times 4}{12}, \frac{-7 \times 3}{16}, \frac{3 \times 6}{8}$ $\frac{36}{48}, \frac{-20}{48}, \frac{-21}{48}, \frac{18}{48}$ $\frac{36}{48}, \frac{-20}{48}, \frac{-21}{48}, \frac{18}{48}$ $\frac{-7}{16}, \frac{5}{-12}, \frac{3}{8}, \frac{3}{4} \text{ Ans}$	$\frac{1}{2}$ $1\frac{1}{2}$ 1	3

Section-D

26	<p>Verify that: <math>x + (y+z) = (x+y) + z</math>  <math>x = \frac{3}{7}, y = \frac{5}{14}, z = \frac{-8}{21}</math></p> $\begin{array}{ l} \hline x + (y+z) \\ \hline \frac{3}{7} + \left(\frac{5}{14} + \frac{-8}{21}\right) \\ \frac{3}{7} + \left(\frac{5 \times 3}{14 \times 3} - \frac{8 \times 2}{21 \times 2}\right) \\ \frac{3}{7} + \left(\frac{15}{42} - \frac{16}{42}\right) \\ \frac{3}{7} + \frac{-1}{42} \\ \frac{3 \times 6}{7 \times 6} - \frac{1 \times 1}{42 \times 1} \\ \frac{18}{42} - \frac{1}{42} \\ \frac{17}{42} \\ \hline \end{array}$ $\begin{array}{ l} \hline (x+y) + z \\ \hline \left(\frac{3}{7} + \frac{5}{14}\right) + \frac{-8}{21} \\ \left(\frac{3 \times 2}{7 \times 2} + \frac{5 \times 1}{14 \times 1}\right) - \frac{8}{21} \\ \left(\frac{6}{14} + \frac{5}{14}\right) - \frac{8}{21} \\ \frac{11}{14} - \frac{8 \times 2}{21 \times 2} \\ \frac{33}{42} - \frac{16}{42} \\ \frac{17}{42} \\ \hline \end{array}$ <p><math>\frac{17}{42} = \frac{17}{42}</math> Hence verified</p>	2+2	4
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27	<p>S.P. of one washing machine= Rs 6000          Profit %=25%  <math>C.P. = 6000 \times \frac{100}{100+25}</math>  <math>C.P. = 6000 \times \frac{100}{125}</math>          C.P.=4800          S.P. of other washing machine= Rs 6000          Loss%=25%  <math>C.P. = 6000 \times \frac{100}{100-25}</math>  <math>C.P. = 6000 \times \frac{100}{75}</math>          C.P.=8000          Total cost price=4800+8000=12800          Total selling price=6000+6000=12000          Loss =12800-12000= Rs800</p>	<p>1 ½  1  ½ ½ ½</p>	4
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28	<p>Marks obtained by two girls of class VII A in final term exam (out of 100) as follows:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>English</th> <th>Hindi</th> <th>Maths</th> <th>Science</th> <th>S.Science</th> </tr> </thead> <tbody> <tr> <td>Monika</td> <td>75</td> <td>80</td> <td>95</td> <td>70</td> <td>85</td> </tr> <tr> <td>Bhavna</td> <td>72</td> <td>85</td> <td>95</td> <td>85</td> <td>85</td> </tr> </tbody> </table>	Subject	English	Hindi	Maths	Science	S.Science	Monika	75	80	95	70	85	Bhavna	72	85	95	85	85	<p>1+ ½ +2 ½</p>	4
Subject	English	Hindi	Maths	Science	S.Science																
Monika	75	80	95	70	85																
Bhavna	72	85	95	85	85																

Section-E

29	<p>If cost of 1 patty=Rs 22.50          Then cost of 6 patties=22.50x6          =Rs135          If cost of 1 muffin=Rs 11.75          Then cost of 4 muffins=11.75x4          =Rs 47          If cost of 1 bread roll=Rs17.25          Then cost of 2 bread roll=17.25x2          =Rs34.50</p>	<p>1  1  1</p>	1+1+2
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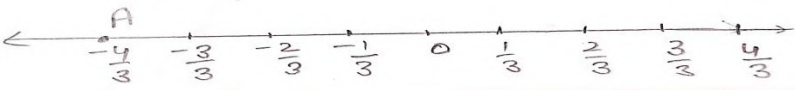


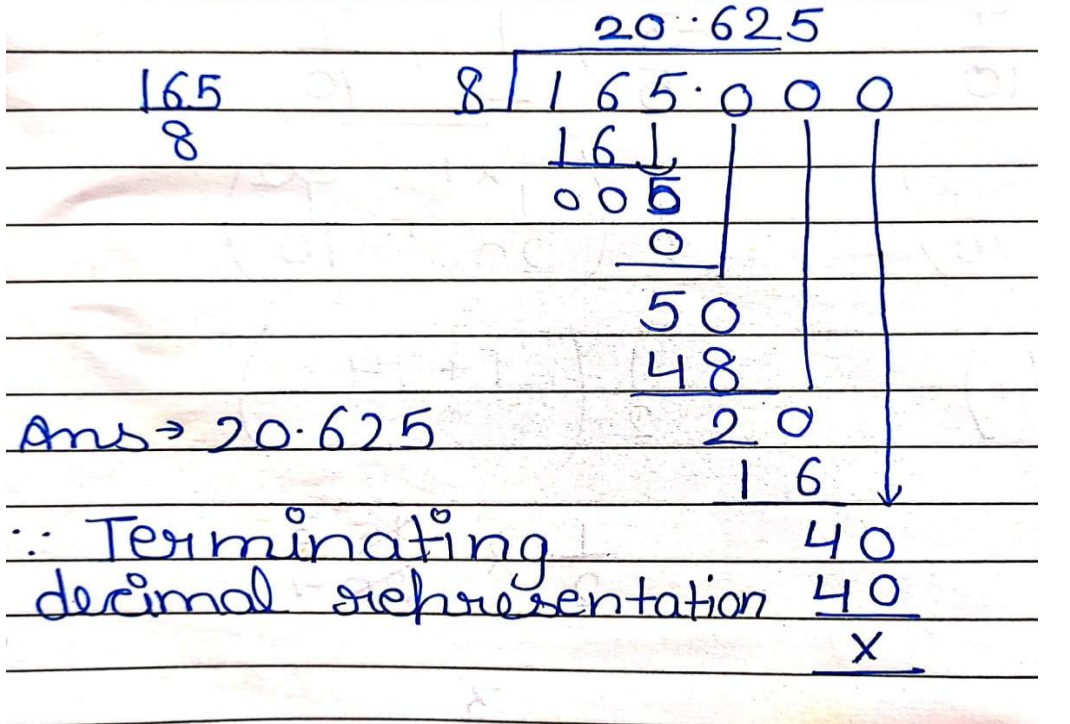
	Total bill= $135+47+34.50+54.25$ =Rs270.75	1	
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General Instructions:-

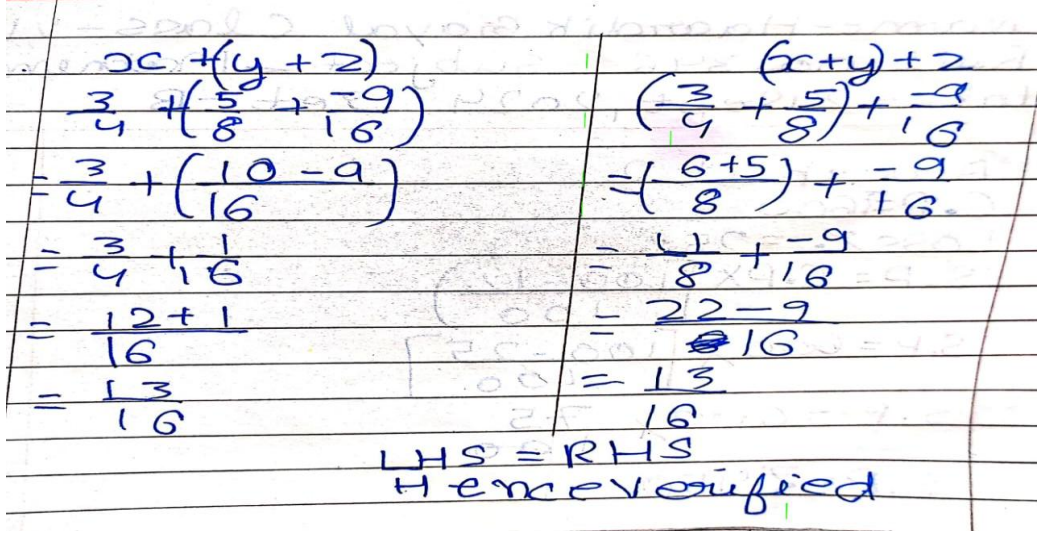
I. All questions are compulsory.

Q.N.	Questions	Marks
<b>Section=A</b>		
1.	d)80	1 1
2.	b) S.P.>C.P.	1 1
3.	b) $\frac{3}{4}$	1 1
4.	c)0.0045	1 1
5.	d) $\frac{15}{17}$	1 1
6.	a)5	1 1
7.	c) $(\frac{-5}{9})^{12}$	1 1
8.	a)0	1 1
9.	b) $\frac{69}{200}$	1 1
10.	d)range	1 1
11.	(c) $\frac{17}{19}$	1 1
12.	<b>a) Both assertion and reason are correct and Reason is the correct explanation for assertion.</b>	1 1
<b>Section-B</b>		
13.	Let the required number =X $(4)^{-2} \times X = (4)^{-3}$ $\frac{1}{16} \times X = \frac{1}{64}$ $X = \frac{1}{64} \div \frac{1}{16}$ $X = \frac{1}{64} \times \frac{16}{1}$ $X = \frac{1}{4}$	1/2 2 1/2 1
14.	Principal= Rs1000      Amount= Rs1200      Rate of Interest=5%p.a. Simple Interest=1200-1000 =200 Time= $\frac{S.I. \times 100}{P \times R.I.}$ Time= $\frac{200 \times 100}{1000 \times 5}$ Time =4 years	1/2 2 1/2 1
15.	Represent $\frac{4}{-3}$ on a number line. $\frac{4}{-3} \times \frac{-1}{-1} = -\frac{4}{3}$  Point A represent $-\frac{4}{3}$	2

16.	<p>Mean of 15 observations = 50  Sum of 15 observations = <math>50 \times 15</math>  = 750</p> <p>95 was misread as 59  Correct sum of observation = <math>750 + 95 - 59</math>  = 786</p> <p>Correct mean = <math>\frac{786}{15}</math>  = 52.4</p>	$\frac{1}{2}$  1  $\frac{1}{2}$	2
17.	<p>Find the value of x:  <math>(\frac{3}{5})^7 \div (\frac{3}{5})^5 = (\frac{3}{5})^{4x}</math>  <math>(\frac{3}{5})^2 = (\frac{3}{5})^{4x}</math>  When bases are same equate the power  <math>4x = 2</math>  <math>x = \frac{2}{4}</math>  <math>x = \frac{1}{2}</math></p>	1  1	2
18.	<p>First number:                      Second Number:</p> $\frac{1}{2} \left( \frac{-3}{5} + \frac{7}{10} \right)$ $= \frac{1}{2} \left( \frac{-6+7}{10} \right)$ $= \frac{1}{2} \times \frac{1}{10}$ $= \frac{1}{20}$ $\frac{1}{2} \left( \frac{7}{10} + \frac{1}{20} \right)$ $= \frac{1}{2} \left( \frac{14+1}{20} \right)$ $= \frac{1}{2} \times \frac{15}{20}$ $= \frac{3}{8}$	1+ 1	2
19.	<p>Find the value of x, if –  <math>\frac{10}{50} = \frac{x}{45}</math>  By cross multiplication  <math>50 \times x = 45 \times 10</math>  <math>x = \frac{45 \times 10}{50}</math>  <math>x = 9</math></p>	1  1	2
Section-C			
20.	 <p style="text-align: center;"><u>20.625</u></p> $\begin{array}{r} 8 \overline{) 165.000} \\ \underline{16} \phantom{00} \\ 00 \phantom{0} \\ \underline{0} \phantom{0} \\ 50 \\ \underline{48} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$ <p>Ans <math>\rightarrow</math> 20.625</p> <p><math>\therefore</math> Terminating decimal representation</p>	2+ 1	3

21.	$\frac{4}{7} \times \left( \frac{5^{x^3}}{7} - \frac{2^x}{3} \right) = \left( \frac{4}{7} \times \frac{5}{7} \right) - \left( \frac{4}{7} \times \frac{2}{3} \right)$ $\frac{4}{7} \times \left( \frac{15 - 14}{21} \right) \qquad \frac{20^{x^3}}{49} \qquad \frac{8^{x^7}}{21}$ $\frac{4}{7} \times \frac{1}{21} \qquad \frac{60 - 56}{147}$ $\frac{4}{147} \qquad \frac{4}{147}$ <p style="text-align: center;">L.H.S = R.H.S Hence Shown</p>	1 $\frac{1}{2}$ +1 $\frac{1}{2}$	3
22.	<p>Arrange the following rational numbers in ascending order.</p> $\frac{3}{7}, \frac{5}{-2}, \frac{-5}{14}, \frac{13}{21}$ $\frac{3}{7}, \frac{5}{-2}, \frac{-5}{14}, \frac{13}{21}$ $\frac{3 \times 6}{7}, \frac{-5 \times 21}{2}, \frac{-5 \times 3}{14}, \frac{13 \times 2}{21}$ $\frac{18}{7}, \frac{-105}{2}, \frac{-15}{14}, \frac{26}{21}$ <p style="text-align: center;">Lcm = 42</p> $\frac{18 \times 6}{42} = \frac{108}{42}$ $\frac{-105 \times 2}{42} = \frac{-210}{42}$ $\frac{-15 \times 3}{42} = \frac{-45}{42}$ $\frac{26 \times 2}{42} = \frac{52}{42}$ <p>A.O <math>\Rightarrow \frac{-210}{42}, \frac{-45}{42}, \frac{52}{42}, \frac{108}{42}</math></p> <p>Ans: A.O <math>\Rightarrow \frac{-210}{42}, \frac{-45}{42}, \frac{52}{42}, \frac{108}{42}</math></p>	$\frac{1}{2}$  $\frac{1}{2}$  1	3
23.	<p>Let the total number of students = <math>X</math></p> <p>% of boys = 40</p> <p>Number of boys = 320</p> <p>40% of <math>X = 320</math></p> $\frac{40}{100} \times X = 320$ $X = 320 \times \frac{100}{40}$ $X = 800$ <p>Total number of students = 800</p> <p>Number of girls = <math>800 - 320 = 480</math></p>	$\frac{1}{2}$  2  $\frac{1}{2}$	3
24.			

	<p>10, 11, 12, 12, 12, 14, 26</p> <p>Mean :-</p> <p>Sum of observation = 10 + 11 + 12 + 12 + 12 + 14 + 26 = 97</p> <p>No. of observation = 7</p> <p>Mean = <math>\frac{97}{7} = 13.857142</math></p> <p>Mean = 13.857142 → Ans</p> <p>Median :-</p> <p>10, 11, 12, (12), 12, 14, 26</p> <p>Median = 12 → Ans</p> <p>Mode :-</p> <p>12 occurs max. 3 times</p> <p>Mode = 12</p>	1 1 1	
25.	<p>Simplify:</p> $\left[\left(\frac{3}{5}\right)^2\right]^3 \times \left(\frac{3}{5}\right)^{-3} \times 5^{-1} \times \left(\frac{1}{8}\right)^0$ $= \left(\frac{3}{5}\right)^6 \times \left(\frac{3}{5}\right)^{-3} \times \frac{1}{5} \times 1$ $= \left(\frac{3}{5}\right)^{6+(-3)} \times \frac{1}{5} \times 1$ $= \left(\frac{3}{5}\right)^3 \times \frac{1}{5} \times 1$ $= \frac{27}{625}$	3 2 1	
Section-D			
26.	<p>S.P. of one bed sheet = Rs 600</p> <p>Profit % = 20%</p> $C.P. = 600 \times \frac{100}{100+20}$ $C.P. = 600 \times \frac{100}{120}$ <p>C.P. = 500</p> <p>S.P. of other bed sheet = Rs 600</p> <p>Loss % = 25%</p> $C.P. = 600 \times \frac{100}{100-25}$ $C.P. = 600 \times \frac{100}{75}$ <p>C.P. = 800</p> <p>Total cost price = 500 + 800 = 1300</p> <p>Total selling price = 600 + 600 = 1200</p> <p>Loss = 1300 - 1200 = Rs 100</p>	4 1/2 1 1/2 1/2 1/2	

27.		2+ 2	4																		
28.	<p>Following data gives the maximum and minimum temperature (in <math>^{\circ}\text{C}</math>) of the different cities on a particular day. Plot a double bar graph from this data:</p> <table border="1" data-bbox="220 757 1310 869"> <thead> <tr> <th>City</th> <th>Delhi</th> <th>Mumbai</th> <th>Patna</th> <th>Chandigarh</th> <th>Gurugram</th> </tr> </thead> <tbody> <tr> <td>Max. Temp.</td> <td>25</td> <td>30</td> <td>34</td> <td>25</td> <td>30</td> </tr> <tr> <td>Min. Temp.</td> <td>20</td> <td>22</td> <td>25</td> <td>20</td> <td>25</td> </tr> </tbody> </table>	City	Delhi	Mumbai	Patna	Chandigarh	Gurugram	Max. Temp.	25	30	34	25	30	Min. Temp.	20	22	25	20	25	$\frac{1}{2}$ +1 +2 $\frac{1}{2}$	4
City	Delhi	Mumbai	Patna	Chandigarh	Gurugram																
Max. Temp.	25	30	34	25	30																
Min. Temp.	20	22	25	20	25																
Section-E																					
29.	<p>If cost of 1 patty=Rs 22.50 Then cost of 6 patties=<math>22.50 \times 6</math> =Rs135</p> <p>If cost of 1 muffin=Rs 11.75 Then cost of 4 muffins=<math>11.75 \times 4</math> =Rs 47</p> <p>If cost of 1 bread roll=Rs17.25 Then cost of 2 bread roll=<math>17.25 \times 2</math> =Rs34.50</p> <p>Total bill=<math>135+47+34.50+54.25</math> =Rs270.75</p>	1  1  1  1	1+1+2																		