



Dr. A. Q. Khan School & College, Bahria Town Phase-8, Islamabad
MODEL PAPER MATHEMATICS CLASS VIII

Time Allowed: 20 Minutes

Name: _____

Section: _____

Date: _____

Invigilator's Signature: _____

Section-A (12 Marks)

Q. No 1: Fill the relevant bubble against each question according to curriculum.

(12)

No	Question	A	B	C	D	A	B	C	D
i.	$\forall x \in R, x = x$ this property is:	Transitive	Additive	Symmetric	Reflexive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ii.	Any number in the form of non terminating and non recurring decimal is:	Irrational Number	Rational Number	Whole Number	Natural number	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iii.	If $a+b=0$ and $a=\frac{-8}{-9}$ then $b=?$	$\frac{8}{9}$	$\frac{9}{8}$	$\frac{-9}{8}$	$\frac{8}{-9}$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iv.	Habib Banks annual profit in millions is 108.76 Rounding it to the nearest whole number is:	106	109	108	107	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
v.	In measurements significant figures are all certain digits plus _____ uncertain digits?	No	One	Two	Three	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vi.	$\frac{\sqrt{625 \div 25 \times 5}}{\sqrt{625 \div 5}}$ is equal to:	10	25	5	1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vii.	Cube root of $(24 \div 8) \times 9$ is:	1	2	3	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
viii.	If n is the number of elements in any set then the number of elements in the power set can be found by the formula:	n^n	2^2	N^2	2^n	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ix.	Which diagrams were used by John Venn to represent operations on sets:	Circles	Circles and Triangle	Circles and Rectangle	Triangles and Rectangle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
x.	How many ways are there to represent the set of students in your class:	1	2	3	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
xi.	Simplified form of $(y+z)-(y-z)$ is:	$4yz$	$2y + 2z$	$2z$	$2y$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
xii.	In sets the symbol "V" is used for:	AND	OR	BOTH	NONE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



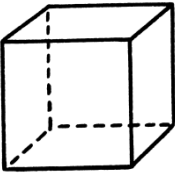
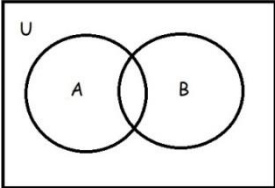
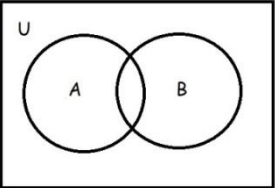
Time Allowed: 2:10Hrs.

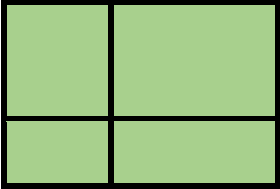
Total Marks: 48

Section-B (30 Marks)

Q. 2 Solve the following Questions

(10×3=30)

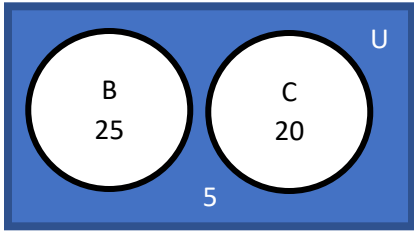
(i)	Identify the property that justifies: a) $(0.2)5=1$ b) $p=q$ hence $-\frac{2}{3}p = -\frac{2}{3}q$ c) $\sqrt{3} \times \sqrt{7} = \sqrt{7} \times \sqrt{3}$	01 + 01 + 01	OR $a=4, b=5, c=8$, then verify Distributive property of multiplication over subtraction.	03
(ii)	Students are decorating a birthday party. They purchased 20.7 feet of purple ribbon. They plan to use $\frac{1}{3}$ of the ribbon in the drawing room and $\frac{1}{2}$ of the remaining in dining room. How much ribbon will they have left over.	03	OR Find the absolute value of: $ 3x - 4x + 1 $ When $x=1, 2, 3$	01 + 01 + 01
(iii)	Find the actual difference between 5673 and 436. Also find the difference by rounding the numbers to nearest hundred.	01 + 02	OR Sidra wrote the calculation $14.62 \times 401=586.262$ Use estimation to check why Sidra was wrong.	03
(iv)	Write down the number of significant figures in the following: a) 0.00225 b) 80.00 c) 936.12	01 + 01 + 01	OR Inzamam Ul Haq batting average is calculated as 57.5752. Round this to 1 decimal place.	03
(v)	Area of a square field is 61504 cm^2 . Find the length of sides and the perimeter of the square field.	1.5 + 1.5	OR Volume of a room is 1331 ft^3 . a) Find the length of the room. b) Find the area of the floor.	1.5 + 1.5
(vi)	 If length of one side is 12cm. Find the volume of this shape.	03	OR Find $\sqrt{\frac{7}{8}}$ up to two decimal places.	03
(vii)	Draw and shade the following according to the operation mentioned:  $(A \cup B)'$	03	OR Draw and shade the following according to the operation mentioned:  $(A - B)'$	03
(viii)	$U = \{0, 1, 2, 3, \dots, 10\}$, $A = \{2, 3, 5, 7, 9\}$ $B = \{0, 2, 4, 6, 8, 10\}$ Find $(A \cap B)'$ and $A' \cup B'$	1.5 + 1.5	OR $U = \{1, 2, 3, \dots, 10\}$ $A = \{x : x \text{ is multiple of 2 less than 12}\}$ $B = \{x : x \text{ is odd number } \wedge 1 < x < 11\}$ a) Check whether A and B are disjoint or overlapping. b) Illustrate sets by Venn diagram.	1.5 + 1.5

(ix)	Divide $x^3 + 2x - 7$ by $x - 2$	03	OR	Simplify $\frac{(2a^3)^5}{3ab} \div \frac{a}{2b^2}$	03
(x)	<p>Write the polynomial that represents the area of the shaded region:</p> 	03	OR	<p>A person was offered Rs. 50,000 as starting Salary with an annual raise of Rs. 2,500</p> <p>a) Find his annual Salary for fifth year, start with Rs. 50,000</p> <p>b) Find d</p> <p>c) Find his Salary in tenth year.</p>	01 + 01 + 01

Section-C (18 Marks)

Note: Solve the following Questions

(3×6=18)

Q.3	<p>a) Separate into rational and irrational Numbers:</p> <p>i) $\frac{13}{21}$ ii) $\sqrt{17}$ iii) $\sqrt{4}$</p> <p>b) A book has 328 pages with an average of 270.3 words on each page. Estimate the number of words in the book.</p>	03+03	OR	<p>a) Write down the mathematical definition of the following properties:</p> <p>i) Reflexive Property</p> <p>ii) Symmetric Property</p> <p>iii) Transitive Property</p> <p>b) Write the number 194.8693 correct to:</p> <p>i) 3 d.p.</p> <p>ii) 3 s.f.</p> <p>iii) 5 s.f.</p>	03+03												
Q.4	<p>a) Find the square root of $\sqrt{9\frac{67}{121}}$</p> <p>b) Write the power set of letters of the word AAQIB.</p>	03+03	OR	<p>a) Find the square root of 46225 using Division Method.</p> <p>b) Evaluate by using appropriate formula:</p> <p style="text-align: center;">$(196)^2$</p>	03+03												
Q.5	<p>a) Represent C-D using Venn diagram: $C = \{x: x \in N \wedge 2 < x \leq 3\}$ $D = \{y: y \in N \wedge 3 < y \leq 8\}$</p> <p>b) Ali receives amounts according to schedule. Find amount that will be received by him on 15th turn.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Term</td> <td>1</td> <td>2</td> <td>3</td> <td>.....</td> <td>15</td> </tr> <tr> <td>Saving</td> <td>7</td> <td>12</td> <td>17</td> <td>.....</td> <td>?</td> </tr> </table>	Term	1	2	3	15	Saving	7	12	17	?	03+03	OR	<p>a) The Venn diagram shows the number of students in class 9th who study Biology and Computer Science. Find</p> <p>i) The number of students in the class.</p> <p>ii) Who study at least one subject.</p> <p>iii) Who study both subject</p>  <p>b) Write the expression: $x^2 + 4y^2 - z^2 + 4xy$ as the difference of two squares.</p>	03+03
Term	1	2	3	15												
Saving	7	12	17	?												