BIRLA PUBLIC SCHOOL GANGANAGAR
(A Unit of Birla Education Trust Pilani)

(A step ahead.........)

CBSE Affiliation No. 1730974

## MATHEMATICS

(Note-Accordingly CBSE Examination Guidelines)
CLASS III
BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Understanding: Questions designed to access <br> the memory and understanding of the concept. | 20 | $40 \%$ |
| Reasoning: Application of Knowledge and <br> Concepts facts, techniques and rules in a <br> different way to solve problems. | 15 | $30 \%$ |
| Analytical: Questions that help students <br> analyze, evaluate and create solutions. | 15 | $30 \%$ |

## PAPER PATTERN

Time duration- 3 Hrs.
Total Marks- 50
Subjective- 100\% (50 marks)
A. The question paper contains 4 pages.
B. Total number of questions is 25 .
C. The question paper contains three parts - Section A, B, and C.
D. Section A consists of 8 questions of 1 mark each.
E. Section B consists of 9 questions of 2 marks each.
F. Attempt any 8 questions from Section C of 3 marks each.

| Sr. No | CH. - NO. | CHAPTER NAME | 1 Mark | 2 Marks | 3 Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Ch. 1 | Where to Look From? | Ch. $1 \&$ Ch. 2 are already assessed in PT-1. |  |  |
| 2. | Ch. 2 | Fun with Number |  |  |  |
| 3. | Ch. 3 | Give and Take | 2 | 2 | 1 |
| 4. | Ch. 4 | Long and Short | 1 | 1 | 2 |
| 5. | Ch. 5 | Shapes and Designs | 2 | 2 | 1 |
| 6. | Ch. 6 | Fun with give and take | 1 | 2 | 2 |
| 7. | Ch. 7 | Time goes on | 2 | 2 | 2 |
| Total no. of questions | - $\square$ |  | 8 | 9 | 8 |
| Total marks | - | - | $8 \times 1=8$ | $9 \times 2=18$ | $\begin{gathered} 8 \mathrm{X} \\ 3=24 \end{gathered}$ |

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CLASS IV BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Understanding: Questions designed to <br> access the memory and understanding of the <br> concept. | 20 | $40 \%$ |
| Reasoning: Application of Knowledge and <br> Concepts facts, techniques and rules in a <br> different way to solve problems. | 15 | $30 \%$ |
| Analytical: Questions that help students <br> analyze, evaluate and create solutions. | 15 | $30 \%$ |

Total Marks- 50
Time duration- $\mathbf{3}$ Hrs.
Subjective- 100\% (50 marks)
A. The question paper contains 3 pages.
B. Total number of questions is 25 .
C. The question paper contains three parts- Section A, B and C.
D. Section A consists of 8 questions of 1 mark each.
E. Section B consists of 9 questions of 2 marks each.
F. Attempt any 8 questions from Section C of 3 marks each.

| Sr. No | CH. - NO. | CHAPTER NAME | 1 Mark | 2 Marks | 3 Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Ch. 1 | Building With Bricks | Ch.1 \& Ch.2 are already assessed in |  |  |
| PT-1. |  |  |  |  |  |

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CLASS V
BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Understanding- Questions designed to <br> access the memory and understanding of <br> the concept. | 20 | $40 \%$ |
| Reasoning- Application of knowledge <br> and concepts facts, techniques, and rules <br> in a different way to solve problems. | 15 | $30 \%$ |
| Analytical- Questions that help students <br> analyse, evaluate and create solutions. | 15 | $30 \%$ |

## PAPER PATTERN

Time duration- $\mathbf{3}$ Hrs.
Total Marks- 50
Subjective- 100\% ( 50 marks)
A. The question paper contains 3 pages.
B. Total number of questions is 25 .
C. The question paper contains three parts- Section A, B, and C.
D. Section A consists of 8 questions of 1 mark each.
E. Section B consists of 9 questions of 2 marks each.
F. Attempt any 8 questions from Section C of 3 marks each.

| Sr. No | CH. - NO. | CHAPTER NAME | 1 Mark | 2 Marks | 3 Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Ch. 1 | The Fish Tail | Ch. 1 \& Ch. 2 are already assessed in PT-1. |  |  |
| 2. | Ch. 2 | Shapes and Angles |  |  |  |
| 3. | Ch. 3 | How many Squares | 2 | 2 | 1 |
| 4. | Ch. 4 | Parts and Wholes | 1 | 2 | 2 |
| 5. | Ch. 5 | Does It Look the Same | 2 | 2 | 1 |
| 6. | Ch. 6 | Be my multiple, I'll be your factor | 2 | 1 | 2 |
| 7. | Ch. 7 | Can you see the Pattern | 1 | 2 | 2 |
| Total no. of questions | - | - | 8 | 9 | 8 |
| Total marks | - |  | $8 \times 1=8$ | $9 \mathrm{X} 2=18$ | $8 \times 3=24$ |

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## CLASS VI

 BLUEPRINT| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Remembering: Exhibit memory of previously learned material by recalling <br> facts, terms, basic concepts. <br> Understanding: Demonstrate understanding of facts and ideas by organizing, <br> comparing. | 43 | $54 \%$ |
| Applying: Solve problems to new situations by applying acquired knowledge, <br> facts, techniques and rules in a different way. | 19 | $24 \%$ |
| Analysing : Examine and break information into parts by identifying motives <br> or causes. <br> Evaluating: Present and defend opinions by making judgments about <br> information, validity of ideas, or quality of work based on a set of criteria. <br> Creating: Compile information together in a different way by combining <br> elements in a new pattern or proposing alternative solutions | 18 | $20 \%$ |
|  | 80 | $100 \%$ |

## PAPER PATTERN

Time duration- 3:00 Hrs.
Subjective- 100\% (80 marks)
A. Total number of questions is 31 .
B. The question paper contains four parts A, B, C and D.
C. Section A consists of 8 questions of 1 mark each.
D. Section B consists of 9 questions of 2 marks each.
E. Attempt any 8 questions from Section C of 3 marks each.
F. Attempt any 6 questions from Section D of 5 marks each.

| Sr. No | CHAPTER NAME | 1 Mark | 2 Marks | 3 Marks | 5 Marks | Total |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 .}$ | Ch. 1- Knowing Our <br> Numbers | 02 | 01 | 01 | 01 | 12 |
| $\mathbf{2 .}$ | Ch. 2- Whole <br> Numbers | 01 | 02 | 01 |  | 6 |
| $\mathbf{3 .}$ | Ch.3-Playing With <br> Numbers | 02 | 01 | 02 | 02 | 20 |
| $\mathbf{4 .}$ | Ch.4- Basic <br> Geometrical ideas | 01 | 01 | - | 01 | 8 |
| $\mathbf{5 .}$ | Ch.5-Understanding <br> Elementary Shapes | 01 | 02 | 02 | 01 | 16 |
| $\mathbf{6 .}$ | Ch.6-Integers | 01 | 02 | 02 | 01 | 16 |
| Total no. of <br> questions |  | $\mathbf{0 8}$ | $\mathbf{0 9}$ | $\mathbf{0 8}$ | $\mathbf{0 6}$ | $\mathbf{3 1}$ |
| Total marks | $8 \times 1=$ <br> 8 | $9 \times 2=$ <br> 18 | 8 X <br> $3=24$ | $6 \times 5=30$ | 80 |  |

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CLASS VII
BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Remembering: Exhibit memory of previously learned material by recalling <br> facts, terms, basic concepts. <br> Understanding: Demonstrate understanding of facts and ideas by organizing, <br> comparing. | 43 | $54 \%$ |
| Applying: Solve problems to new situations by applying acquired knowledge, <br> facts, techniques and rules in a different way. | 19 | $24 \%$ |
| Analysing : Examine and break information into parts by identifying motives <br> or causes. <br> Evaluating: Present and defend opinions by making judgments about <br> information, validity of ideas, or quality of work based on a set of criteria. <br> Creating: Compile information together in a different way by combining <br> elements in a new pattern or proposing alternative solutions | 18 | $20 \%$ |
|  | 80 | $100 \%$ |

## PAPER PATTERN

Time duration- 3:00 Hrs.
Subjective- 100\% (80 marks)
G. Total number of questions is 31 .
H. The question paper contains four parts A, B, C and D.
I. Section A consists of 8 questions of 1 mark each.
J. Section B consists of 9 questions of 2 marks each.
K. Attempt any 8 questions from Section C of 3 marks each.
L. Attempt any 6 questions from Section D of 5 marks each.

| Sr. No | CHAPTER NAME | 1 Mark | 2 Marks | 3 Marks | 5 Marks | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Ch. 1- Integers | 01 | - | 01 | 01 | 09 |
| 2. | Ch. 2- Fraction and Decimals | 01 | 02 | 01 |  | 08 |
| 3. | Ch.3- Data Handling | - | 02 | 01 | 02 | 17 |
| 4. | Ch.4-Simple Equations | 02 | 02 | 02 | 01 | 17 |
| 5. | Ch.5-Lines and Angles | 02 | 02 | 01 | 01 | 14 |
| 6. | Ch.6-Triangles and Its Properties | $02$ | 01 | 02 | 01 | 15 |
| Total no. of questions | - | 08 | $09$ |  | 06 | 31 |
| Total marks |  | $\begin{gathered} 8 \times 1= \\ 8 \\ \hline \end{gathered}$ | $\begin{gathered} 9 \times 2= \\ 18 \end{gathered}$ | $\begin{aligned} & \hline 8 \mathrm{X} \\ & 3=24 \\ & \hline \end{aligned}$ | $6 \times 5=30$ | 80 |

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## CLASS VIII BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Remembering: Exhibit memory of previously learned material by recalling <br> facts, terms, basic concepts. <br> Understanding: Demonstrate understanding of facts and ideas by organizing, <br> comparing. | 43 | $54 \%$ |
| Applying: Solve problems to new situations by applying acquired knowledge, <br> facts, techniques and rules in a different way. | 19 | $24 \%$ |
| Analysing : Examine and break information into parts by identifying motives <br> or causes. <br> Evaluating: Present and defend opinions by making judgments about <br> information, validity of ideas, or quality of work based on a set of criteria. <br> Creating: Compile information together in a different way by combining <br> elements in a new pattern or proposing alternative solutions | 18 | $20 \%$ |
|  | 80 | $100 \%$ |

## PAPER PATTERN

Total Marks- 80
Time duration- 3:00 Hrs.
Subjective- 100\% (80 marks)
A. Total number of questions is 31 .
B. The question paper contains four parts A, B, C and D.
C. Section A consists of 8 questions of 1 mark each.
D. Section B consists of 9 questions of 2 marks each.
E. Attempt any 8 questions from Section C of 3 marks each.
F. Attempt any 6 questions from Section D of 5 marks each.

| Sr. No | CHAPTER NAME | 1 Mark | 2 Marks | 3 Marks | 5 Marks | Total |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 .}$ | Ch. 1- Rational <br> Numbers | 01 | 02 | 01 |  | 8 |
| $\mathbf{2 .}$ | Ch. 2- Linear <br> Equations in One <br> Variable | 01 | 01 | 01 | 01 | 11 |
| $\mathbf{3 .}$ | Ch.3- Quadrilaterals | 02 | 02 | 01 | 01 | 14 |
| $\mathbf{4 .}$ | Ch.4- Data Handling | 01 | 01 | 01 | 01 | 11 |
| $\mathbf{5 .}$ | Ch.5- Square and <br> square roots | 01 | 01 | 02 | 02 | 19 |
| $\mathbf{6 .}$ | Ch.6- Cubes and cube <br> root | 02 | 02 | 02 | 01 | 17 |
| Total no. <br> of <br> questions | $\mathbf{0 8}$ | $\mathbf{0 9}$ | $\mathbf{0 8}$ | $\mathbf{0 6}$ | $\mathbf{3 1}$ |  |
| Total <br> marks |  | $8 \times 82=18$ | $8 \times 3=24$ | $6 \times 5=30$ | 80 |  |

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## CLASS IX

 BLUEPRINT| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Remembering: Exhibit memory of previously learned material by recalling <br> facts, terms, basic concepts. | 43 | $54 \%$ |
| Understanding: Demonstrate understanding of facts and ideas by organizing, <br> comparing. | 19 | $24 \%$ |
| Applying: Solve problems to new situations by applying acquired knowledge, <br> facts, techniques and rules in a different way. | 18 | $20 \%$ |
| Analysing : Examine and break information into parts by identifying motives or <br> causes. <br> Evaluating: Present and defend opinions by making judgments about <br> information, validity of ideas, or quality of work based on a set of criteria. <br> Creating: Compile information together in a different way by combining <br> elements in a new pattern or proposing alternative solutions | 18 |  |
|  | 80 | $100 \%$ |

## PAPER PATTERN <br> Total Marks- 80 <br> Time duration- 3 Hrs.

## General Instructions:

1. This Question Paper has 5 Sections A, B, C, D, and E.
2. Section A has 18 MCQ's and 02 Assertion Reason based questions of 1 mark each.
3. Section B has 5 Short Answer-I (SA-I) type questions carrying 2 marks each.
4. Section C has 6 Short Answer-II (SA-II) type questions carrying 3 marks each.
5. Section D has 4 Long Answer (LA) type questions carrying 5 marks each.
6. Section E has 3 sourced based/Case Based/passage based/integrated units of assessment (4 marks each) with sub-parts of the values of 1,1 and 2 marks each respectively.
7. Draw neat figures wherever required. Take $\pi=22 / 7$ wherever required if not stated.

| Sr. No | CHAPTER NAME | $\begin{gathered} 1 \\ \mathrm{MCQ} \\ \hline \end{gathered}$ | $\begin{gathered} 2 \\ \text { Marks } \end{gathered}$ | 3 Marks | 5 Marks | 4 Marks | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Ch-1. Number System. | 4 | 1 | 1 | 1 | $1$ | 18 |
| 2. | Ch -2. Polynomial | 4 | 2 | 1 | 1 |  | 16 |
| 3. | Ch -3. Coordinate Geometry. | 4 |  |  |  | 1 | 11 |
| 4. | Ch-4 Linear Equation in two variable. | 4 | 1 | 1 | 1 | 1 | 18 |
| 5. | Ch -5. Euclid Geometry |  |  | 1 |  |  | 5 |
| 6. | Ch -6. Lines and Angles. | $4$ |  | 1 | 1 |  | 12 |
| Total no. of questions |  | 20 | 5 | 6 | 4 | 3 | 38 |
| Total marks |  | 20 | 10 | 18 | 20 | 12 | 80 |

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CLASS X BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Remembering: Exhibit memory of previously learned material by recalling facts, <br> terms, basic concepts. <br> Understanding: Demonstrate understanding of facts and ideas by organizing, <br> comparing. | 43 | $54 \%$ |
| Applying: Solve problems to new situations by applying acquired knowledge, <br> facts, techniques and rules in a different way. | 19 | $24 \%$ |
| Analysing : Examine and break information into parts by identifying motives or <br> causes. <br> Evaluating: Present and defend opinions by making judgments about <br> information, validity of ideas, or quality of work based on a set of criteria. <br> Creating: Compile information together in a different way by combining <br> elements in a new pattern or proposing alternative solutions | 18 | $20 \%$ |
|  | 80 | $100 \%$ |

## PAPER PATTERN <br> Total Marks- 80 <br> Time duration- 3 Hrs.

## General Instructions:

1. This Question Paper has 5 Sections A, B, C, D, and E.
2. Section A has 18 MCQ's and 02 Assertion Reason based questions of 1 mark each.
3. Section B has 5 Short Answer-I (SA-I) type questions carrying 2 marks each.
4. Section C has 6 Short Answer-II (SA-II) type questions carrying 3 marks each.
5. Section D has 4 Long Answer (LA) type questions carrying 5 marks each.
6. Section E has 3 sourced based/Case Based/passage based/integrated units of assessment (4 marks each) with sub-parts of the values of 1,1 and 2 marks each respectively.
7. Draw neat figures wherever required. Take $\pi=22 / 7$ wherever required if not stated.

| Sr. No | CHAPTER NAME | 1 MCQ | 2 Marks | 3 Marks | 5 Marks | 4 Marks | Total |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 .}$ | Ch -1 Real Number | 3 |  | 1 |  | 1 | 10 |
| $\mathbf{2 .}$ | Ch -2 Polynomial | 3 | 1 | 1 | 1 |  | 13 |
| $\mathbf{3 .}$ | Ch -3 Linear Equation <br> in two variable | 2 |  | 1 | 1 | 1 | 14 |
| $\mathbf{4 .}$ | Ch -4 Quadratic <br> equation | 3 | 1 | 1 | 1 |  | 13 |
| $\mathbf{5 .}$ | Ch -5 Arithmetic <br> progression | 3 | 1 | 1 | 1 |  | 13 |
| $\mathbf{6 .}$ | Ch - 6 Triangle | 3 | 1 | 1 |  | 1 | 8 |
| $\mathbf{7 .}$ | Ch - Coordinate <br> Geometry | 3 | 1 |  |  | 1 | 9 |
| Total no. <br> of <br> questions |  | 20 | 5 | 6 | 4 | 3 | 38 |
| Total <br> marks |  | 20 | 10 | 12 | 20 | 12 | 80 |
|  |  |  |  |  |  |  |  |

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## CLASS XI BLUEPRINT

| Category of question | Marks | Percentage |
| :--- | :---: | :---: |
| Remembering: Exhibit memory of previously learned material by recalling <br> facts, terms, basic concepts. <br> Understanding: Demonstrate understanding of facts and ideas by organizing, <br> comparing. | 43 | $54 \%$ |
| Applying: Solve problems to new situations by applying acquired knowledge, <br> facts, techniques and rules in a different way. | 19 | $24 \%$ |
| Analysing : Examine and break information into parts by identifying motives or <br> causes. <br> Evaluating: Present and defend opinions by making judgments about <br> information, validity of ideas, or quality of work based on a set of criteria. <br> Creating: Compile information together in a different way by combining elements <br> in a new pattern or proposing alternative solutions | 18 | $20 \%$ |
| Total | 80 | $100 \%$ |

## PAPER PATTERN

Time duration- 3 Hrs.

## General Instructions :

1. This Question paper contains - five sections A,B,C,D and E. Each section is compulsory. However, there is some internal choice in some questions.
2. Section A has 18 MCQ's and 02 Assertion Reason based questions of 1 mark each.
3. Section B has 5 Very Short Answer (VSA) questions of 2 marks each.
4. Section C has 6 Short Answer (SA) questions of 3 marks each.
5. Section D has 4 Long Answer (LA) questions of 5 marks each.
6. Section E has 3 source based/case based/passage based/integrated units of assessment.
7. Internal Choice is provided in 2 questions in Section-B, 2 questions in Section-C, 2 Questions in Section-D.

You have to attempt only one alternative in all such questions.

| Sr. No | CHAPTER NAME | 1 MCQ | 2 Marks | 3 Marks | 5 Marks | 4 Marks | Total |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 .}$ | Ch-1 Set | 3 | 1 | 1 |  | 1 | 8 |
| 2. | Ch-2 Relation and <br> Function | 3 | 1 | 1 |  | 12 |  |
| $\mathbf{3 .}$ | Ch - 4 Complex number <br> and Quadratic Equation | 3 | 1 | 1 | 1 |  | 13 |
| 4. | Ch- 6 Permutation and <br> Combination | 3 | 1 |  | 1 | 1 | 14 |
| $\mathbf{5 .}$ | Ch - 8 Sequence and <br> Series | 3 | 1 | 1 | 1 |  | 13 |
| $\mathbf{6 .}$ | Ch - 9 Straigh Line | 3 |  | 1 | 1 |  | 11 |
| 7. | Ch-10 Conic Section | 2 |  |  |  | 1 | 9 |
| Total no. <br> of <br> questions | 20 | 5 | 6 | 4 | 3 | 38 |  |
| Total <br> marks |  | 20 | 10 | 18 | 20 | 12 | 80 |

