

QUESTION DESIGN

Subject : Mathematics
Class : IX

Maximum marks : 80
Time : 3 Hours

The weightage or the distribution of marks over different dimensions of the question paper shall be as follows :

1. Weightage to Objective of Learning :

Sl/No	Learning Objectives	Marks	Percentage of Marks
1.1	Knowledge	30	30%
1.2	Understanding	50	50%
1.3	Application/Skill	20	20%
	Total	100	100%

2. Weightage to Contents :

Sl No.	Unit	Topic	Marks
2.1	I	Number System & Sets	08
2.2	II	Commercial Mathematics	10
2.3	III	Algebra	16
2.4	IV	Geometry	14
2.5	V	Coordinate Geometry	04
2.6	VI	Trigonometry	10
2.7	VII	Mensuration	10
2.8	VIII	Statistics and Probability	08
		Total	80

3. Weightage to Forms of Questions :

Sl/No	Form of Questions	Marks for each Qstn	No. of Question	Total Marks	Percentage of Marks
3.1	Objective	1	24	24	30%
3.2	Short Answer Type I (SA-I)	2	10	20	25%
3.3	Short Answer Type II (SA-II)	3	07	21	26.25%
3.4	Long Answer Type (LA)	5	03	15	18.75%
	Total		44	80	100%

4. Weightage to Difficulty Level of Questions :

Sl/No	Estimated Difficulty Level of Questions	Percentage of Marks
4.1	Easy	30%
4.2	Average	50%
4.3	Difficult	20%
	Total	100%

5. Scheme of Options :

All questions shall be compulsory i.e. there shall not be any overall choice in the question paper. However, internal choices have been provided in 3 questions of 3 marks each and one question of 5 marks. These choices may be given from within the same topic.

6. Scheme of Section :

There shall be no section

Note :

Theorem shall be asked from any of the following theorems only :

- (a) If a transversal intersects two parallel lines then alternate angles of each pair of interior angles are equal.
- (b) If a transversal intersects two parallel lines then each pair of consecutive interior angles are supplementary.
- (c) The angles opposite to two equal sides of a triangle are equal.
- (d) The medians of a triangle pass through the same point which divides each of the medians in the ratio 2:1
- (e) The line segment joining the mid-points of any two sides of a triangle is parallel to the third side and is half of it.
- (f) The sum of any two sides of a triangle is greater than its third side.
- (g) Parallelograms on the same base and between the same parallels are equal in area.
- (h) Equal chords of a circle subtend equal angles at the centre.
- (i) Equal chords of a circle are equidistant from the centre.

BLUE PRINT - I

Subject : Mathematics
Class : IX

Maximum Marks : 80
Time : 3 hours
No. of Paper : 1 (One)

Forms of Question Topic	KNOWLEDGE				UNDERSTANDING				APPLICATION/SKILL				TOTAL
	Obj (1m)	SA I (2m)	SA II (3m)	LA (5m)	Obj (1m)	SA I (2m)	SA II (3m)	LA (5m)	Obj (1m)	SA I (2m)	SA II (3m)	LA (5m)	
Number System and Sets	2(2)					2(1)	3(1)			1(1)			8(5)
Commercial Mathematics	2(2)				1(1)	4(2)					3(1)		10(6)
Algebra	2(2)	2(1)			1(1)		6(2)					5(1)	16(7)
Geometry	2(2)				1(1)	2(1)	3(1)		1(1)			5(1)	14(7)
Coordinate Geometry	1(1)				1(1)	2(1)							4(3)
Trigonometry	3(3)					4(2)	3(1)						10(6)
Mensuration	2(2)	2(1)						5(1)	1(1)				10(5)
Statistics and Probability	1(1)	2(1)	3(1)		2(2)								8(5)
Sub-Total	15(15)	6(3)	3(1)		6(6)	14(7)	15(5)	5(1)	3(3)		3(1)	10(2)	80(44)
	24(19)				40(19)				16(6)				

- Note:**
1. The figures in the bracket denotes the number of questions.
 2. This is only a sample blue print. The question setter may develop his/her own blue print as per the design.

BLUE PRINT - II

Subject : Mathematics
Class : IX

Maximum Marks : 80
Time : 3 hours
No. of Paper : 1 (One)

Forms of Question Topic	KNOWLEDGE				UNDERSTANDING				APPLICATION/SKILL				TOTAL
	Obj (1m)	SA I (2m)	SA II (3m)	LA (5m)	Obj (1m)	SA I (2m)	SA II (3m)	LA (5m)	Obj (1m)	SA I (2m)	SA II (3m)	LA (5m)	
Number System and Sets	1(1)		3(1)		1(1)	2(1)			1(1)				8(5)
Commercial Mathematics	1(1)	2(1)			1(1)	2(1)	3(1)		1(1)				10(6)
Algebra	1(1)			5(1)	1(1)	2(1)	3(1)		1(1)		3(1)		16(7)
Geometry	1(1)	2(1)			1(1)			5(1)	2(2)		3(1)		14(7)
Coordinate Geometry	1(1)	2(1)			1(1)								4(3)
Trigonometry	1(1)				1(1)	2(1)	3(1)		1(1)	2(1)			10(6)
Mensuration	1(1)	2(1)			1(1)			5(1)	1(1)				10(5)
Statistics and Probability	1(1)				1(1)	2(1)	3(1)		1(1)				8(5)
Sub-Total	8(8)	8(4)	3(1)	5(1)	8(8)	10(5)	12(4)	10(2)	8(8)	2(1)	6(2)		80(44)
	24(14)				40(19)				16(11)				

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