**GRADE 7 MATHEMATICS**

**1. Format of the question paper**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Paper** | **Types of questions** | **Marks** | **Duration** | **Total** |
| 1 | Number, operation and Relations  Patterns, Function and Algebra  Space and Shape (Geometry)  Measurements | 45  4  32  19 | 2 hours | 100 |

**2. Number and sequence of questions**

**Question 1 : Multiple –choice**

Sub-question numbered 1.1 - 1.10

**Question 2 : Whole numbers**

Sub-question numbered 2.1 - 2.2.1

**Question 3 : Whole numbers and Exponents**

Sub-question numbered 3.1 - 3 .5

**Question 4 : Common Fractions**

Sub-question numbered 4.1 - 4.6

**Question 5 : Common Fractions and Decimal Fractions**

Sub-question numbered 5.1 - 5.3

**Question 6 : Common Fractions**

Sub-question numbered 6.1 - 6.3

**Question 7 : Function and relationships**

Sub-question numbered 7.1.1 – 7.1.4

**Question 8 : Geometry of straight lines**

Sub-question numbered 8.1 - 8.6.2

**Question 9 : Geometry of straight lines and Geometry of 2D shapes**

Sub-question numbered 9.1 - 9.5

**Question 10 : Surface area and Volume of 3D objects**

Sub-question numbered 10.1 – 10.2.3

**Question 11 : Area and perimeters of 2D shapes**

Sub-question numbered 11.1 - 11.3

All questions are set across cognitive levels and arranged from lower to higher cognitive levels.

**3. Cognitive demands of the papers**

The question paper includes questions across all cognitive levels as outlined in the

CAPS documents

The cognitive levels are in accordance with the taxonomies as derived by Bloom and Barrett.

3.1 Weighting of cognitive levels

|  |  |  |
| --- | --- | --- |
| Cognitive levels | Description | %Paper 1 |
| 1 | Knowledge | 26% |
| 2 | Routine procedure | 43% |
| 3 | Complex procedure | 21% |
| 4 | Problem solving | 10% |

3.2 Weighting of prescribed content

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Paper** | **Types of questions** | **Marks** | **Duration** | **Total** |
| 1 | Number, operation and Relations  Patterns, Function and Algebra  Space and Shape (Geometry)  Measurements | 45  4  32  19 | 2 hours | 100 |

**DESIGN DRID FOR FORMAL TASKS : TESTS/EXAMINATIONS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MATHEMATICS : 2016** | | | **GRADE : 7** | | | |
| **TYPES OF TASK ANALYSIS** | | | **EXAMINATION** | | | |
| **DATE** | | | **Jun-16** | | | |
| **Questions & Topics** | | | **Cognitive levels** | | | |
| **Questions** | **Topics** | **Total** | **Knowledge** | **Routine** | **Complex** | **Problem  solving** |
| **1** | **Multiple Choice (Variety of cognitive levels)** | **10** |  |  |  |  |
| 1.1 |  | 1 |  |  |  |
| 1.2 |  |  | 1 |  |  |
| 1.3 |  | 1 |  |  |  |
| 1.4 |  |  | 1 |  |  |
| 1.5 |  | 1 |  |  |  |
| 1.6 |  |  | 1 |  |  |
| 1.7 |  | 1 |  |  |  |
| 1.8 |  | 1 |  |  |  |
| 1.9 |  | 1 |  |  |  |
| 1.10 |  |  | 1 |  |  |
| **2** | **Whole numbers** | **4** |  |  |  |  |
| 2.1 |  |  | 2 |  |  |
| 2.2.1 |  | 2 |  |  |  |
| **3** | **Whole numbers and Exponents** | **11** |  |  |  |  |
| 3.1 |  |  | 2 |  |  |
| 3.2 |  | 2 |  |  |  |
| 3.3 |  |  | 4 |  |  |
| 3.4 |  | 1 |  |  |  |
| 3.5 |  |  | 2 |  |  |
| **4** | **Common Fractions** | **6** |  |  |  |  |
| 4.1 |  | 1 |  |  |  |
| 4.2 |  | 1 |  |  |  |
| 4.3 |  |  | 1 |  |  |
| 4.4 |  |  |  | 3 |  |
| **5** | **Common Fractions and  Decimal Fractions** | **8** |  |  |  |  |
| 5.1.1 |  |  | 1 |  |  |
| 5.1.2 |  |  | 1 |  |  |
| 5.1.3 |  | 2 |  |  |  |
| 5.2.1 |  |  | 1 |  |  |
| 5.2.2 |  |  | 1 |  |  |
| 5.3 |  |  |  | 2 |  |
| **6** | **Common Fractions** | **10** |  |  |  |  |
| 6.1.1 |  | 1 |  |  |  |
| 6.1.2 |  | 1 |  |  |  |
| 6.2.1 |  |  |  | 2 |  |
| 6.2.2 |  |  |  | 3 |  |
| 6.3 |  |  |  | 3 |  |
| **7** | **Function and relationships** | **4** |  |  |  |  |
| 7.1.1 |  | 1 |  |  |  |
| 7.1.2 |  | 1 |  |  |  |
| 7.1.3 |  |  |  | 1 |  |
| 7.1.4 |  |  |  | 1 |  |
| **8** | **Geometry of straight lines** | **18** |  |  |  |  |
| 8.1.1 |  |  | 1 |  |  |
| 8.1.2 |  |  | 1 |  |  |
| 8.1.3 |  |  | 1 |  |  |
| 8.1.4 |  |  | 1 |  |  |
| 8.1.5 |  |  | 1 |  |  |
| 8.2.1 |  | 1 |  |  |  |
| 8.2.2 |  | 1 |  |  |  |
| 8.3.1 |  | 1 |  |  |  |
| 8.3.2 |  |  |  |  | 4 |
| 8.4.1 |  | 1 |  |  |  |
| 8.4.2 |  | 1 |  |  |  |
| 8.4.3 |  | 1 |  |  |  |
| 8.5 |  |  | 1 |  |  |
| 8.6.1 |  |  |  | 1 |  |
| 8.6.2 |  |  |  | 1 |  |
| **9** | **Geometry of straight lines and  Geometry of 2D shapes** | **10** |  |  |  |  |
| 9.1 |  |  | 1 |  |  |
| 9.2 |  |  | 1 |  |  |
| 9.3.1 |  |  |  | 1 |  |
| 9.3.2 |  |  |  | 1 |  |
| 9.4 |  |  | 3 |  |  |
| 9.5 |  |  | 3 |  |  |
| **10** | **Surface area and  Volume of 3D objects** | **11** |  |  |  |  |
| 10.1.1 |  | 1 |  |  |  |
| 10.1.2 |  |  | 1 |  |  |
| 10.1.3 |  |  | 1 |  |  |
| 10.2.1 |  |  |  |  | 2 |
| 10.2.2 |  |  |  |  | 4 |
| 10.2.3 |  |  |  | 2 |  |
| **11** | **Area and perimeters of  2D shapes** | **8** |  |  |  |  |
| 11.1 |  |  | 2 |  |  |
| 11.2 |  |  | 2 |  |  |
| 11.3 |  |  | 4 |  |  |
| **TOTAL MARKS** | | **100** | **26** | **43** | **21** | **10** |
| **TOTAL PERCENTAGE** | | **100** | **26%** | **43%** | **21%** | **10%** |

4. General information

* Learners will have answer in the space provided.
* Adhere to examination instructions.
* Ensure that learners answer all the questions.

5. Marking guidelines

* Marks are only awarded for a correct answer. Therefore, no half-mark

should be awarded. e.g (full mark/)

* No marks will be awarded for incorrect answers.
* Refer to the memorandum for marking.