

PAKISTAN INTERNATIONAL SCHOOL BURAIDAH,  
AL-QASSIM. SAUDI ARABIA.



**PHYSICS**  
**SYLLABUS**  
**CLASS VIII**  
**(Federal)**

**PAKISTAN INTERNATIONAL SCHOOL, BURAI DAH**  
**SYLLABUS BREAKUP**

**Class: VIII Subject: PHYSICS**

Number of Teaching Weeks in First Term: (1 - 14)

Number of Teaching Weeks in Second Term: (15 - 28)

Name of Text Book:

| Week No. | Chapter No. | Day   | Topic  | Book Page Numbers |
|----------|-------------|-------|--|-------------------|
| 1        | 1           | Day 1 | PHYSICAL QUANTITIES AND MEASUREMENT            | 6                 |
|          |             | Day 2 | 1.1 INTRODUCTION TO PHYSICS                    | 6                 |
|          |             | Day 3 | 1.1.1 BRANCHES OF PHYSICS                      | 7                 |
|          |             | Day 4 | 1.2 PHYSICAL AND NON-PHYSICAL QUANTITIES       | 7                 |
| 2        | 1           | Day 1 | 1.2.1 BASE AND DERIVED PHYSICAL QUANTITIES     | 8                 |
|          |             | Day 2 | 1.3 INTERNATIONAL SYSTEM OF UNITS              | 8                 |
|          |             | Day 3 | 1.3.1. SYSTEM INTERNATIONAL (SI) BASE UNITS    | 9                 |
|          |             | Day 4 | 1.3.2. SYSTEM INTERNATIONAL (SI) DERIVED UNITS | 9                 |
| 3        | 1           | Day 1 | 1.4 STANDARD FORM / SCIENTIFIC NOTATION        | 10                |
|          |             | Day 2 | 1.5 PREFIXES TO POWER OF TEN                   | 11                |
|          |             | Day 3 | 1.6 SCALARS AND VECTORS                        | 14                |
|          |             | Day 4 | 1.6.2. VECTOR QUANTITIES OR VECTORS            | 14                |
| 4        | 1           | Day 1 | FIGURE 1.3 'VECTOR REPRESENTATION              | 15                |
|          |             | Day 2 | 1.6.3. ADDING VECTOR QUANTITIES                | 16                |
|          |             | Day 3 | 1.7 MEASURING INSTRUMENTS                      | 17                |
|          |             | Day 4 | TEST   |                   |
| 5        | 1           | Day 1 | 1.7.1 METRE RULE AND MEASURING TAPE            | 17                |
|          |             | Day 2 | 1.7.2 VERNIER CALIPER                          | 18                |
|          |             | Day 3 | TAKING MEASUREMENTS WITH VERNIER CALLIPERS     | 20                |
|          |             | Day 4 | TEST   |                   |

| Week No. | Chapter No. | Day   | Topic                               | Book Page Numbers |
|----------|-------------|-------|-------------------------------------|-------------------|
| 6        | 1           | Day 1 | 1.7.3 SCREW GAUGE                   | 21                |
|          |             | Day 2 | TAKING MEASUREMENT WITH SCREW GAUGE | 22                |
|          |             | Day 3 | 1.7.4 PHYSICAL BALANCE              | 23                |
|          |             | Day 4 | TEST                                |                   |
| 7        | 1           | Day 1 | 1.7.5 MEASURING CYLINDER FIGURE     | 24                |
|          |             | Day 2 | 1.8 ERRORS                          | 25                |
|          |             | Day 3 | 1.9 PRECISION AND ACCURACY          | 26                |
|          |             | Day 4 | TEST                                |                   |
| 7        | 1           | Day 1 | 1.10 SIGNIFICANT FIGURES            | 28                |
|          |             | Day 2 | NUMERICAL RESPONSE QUESTIONS        | 34                |
|          |             | Day 3 | NUMERICAL RESPONSE QUESTIONS        | 34                |
|          |             | Day 4 | TEST                                |                   |
| 9        | 2           | Day 1 | KINEMATICS                          | 36                |
|          |             | Day 2 | 2.1 RESTAND MOTION                  | 36                |
|          |             | Day 3 | 2.1.1 TYPES OF MOTION               | 36                |
|          |             | Day 4 | TEST                                |                   |
| 10       | 2           | Day 1 | 2.1.1 TYPES OF MOTION ' :           | 37                |
|          |             | Day 2 | 2.2 DISTANCE AND DISPLACEMENT       | 39                |
|          |             | Day 3 | '2.3 SPEED AND VELOCITY             | 40                |
|          |             | Day 4 | TEST                                |                   |
| 11       | 2           | Day 1 | 2.3.2 VELOCITY                      | 44                |
|          |             | Day 2 | 2.4 ACCELERATION                    | 46                |
|          |             | Day 3 | 2.5 MOTION DUE TO GRAVITY           | 48                |
|          |             | Day 4 | TEST                                |                   |

| Week No. | Chapter No. | Day   | Topic                               | Book Page Numbers |
|----------|-------------|-------|-------------------------------------|-------------------|
| 12       | 2           | Day 1 | 2.6 GRAPHICALANALYSIS OF MOTION     | 49                |
|          |             | Day 2 | 2.6.1DISTANCE-TIME GRAPH            | 50                |
|          |             | Day 3 | 2.6.2 SPEED - TIME GRAPH            | 53                |
|          |             | Day 4 | TEST                                |                   |
| 13       | 2           | Day 1 | 2.6.2 SPEED - TIME GRAPH            | 54                |
|          |             | Day 2 | 2.6.2 SPEED - TIME GRAPH            | 55                |
|          |             | Day 3 | SHORT RESPONSE QUESTIONS            | 58                |
|          |             | Day 4 | TEST                                |                   |
| 14       | 2           | Day 1 | NUMERICAL RESPONSE QUESTIONS        | 60                |
|          |             | Day 2 | NUMERICAL RESPONSE QUESTIONS        | 60                |
|          |             | Day 3 | NUMERICAL RESPONSE QUESTIONS        | 60                |
|          |             | Day 4 | TEST                                |                   |
| 15       | 3           | Day 1 | DYNAMICS -                          | 62                |
|          |             | Day 2 | 3.1.1 TYPES OF FORCES FIGURE 3.2    | 62                |
|          |             | Day 3 | 3.1.2 FUNDAMENTAL FORCES IN NATURE  | 63                |
|          |             | Day 4 | TEST                                |                   |
| 16       | 3           | Day 1 | 3.1.4 CONCEPT OF NET FORCE          | 66                |
|          |             | Day 2 | 3.2.1 NEWTON'S FIRST LAW OF MOTION  | 68                |
|          |             | Day 3 | 3.2.2 NEWTON'S SECOND LAW OF MOTION | 71                |
|          |             | Day 4 | TEST                                |                   |
| 17       | 3           | Day 1 | 3.2.3 NEWTON'S THIRD LAW OF MOTION  | 73                |
|          |             | Day 2 | 3.3 MASS AND WEIGHT                 | 75                |
|          |             | Day 3 | 3.4 GRAVITATIONAL FIELD             | 76                |
|          |             | Day 4 | TEST                                |                   |

| Week No. | Chapter No. | Day   | Topic                          | Book Page Numbers |
|----------|-------------|-------|--------------------------------|-------------------|
| 18       | 3           | Day 1 | 3.5 MOMENTUM                   | 77                |
|          |             | Day 2 | NUMERICAL RESPONSE QUESTIONS   | 84                |
|          |             | Day 3 | NUMERICAL RESPONSE QUESTIONS   | 84                |
|          |             | Day 4 | TEST                           |                   |
| 19       | 4           | Day 1 | DYNAMICS - 1i                  | 88                |
|          |             | Day 2 | 4.1 FORCES ON BODIES           | 88                |
|          |             | Day 3 | 4.2 MOMENT OF A FORCE          | 88                |
|          |             | Day 4 | TEST                           |                   |
| 20       | 4           | Day 1 | 4.3 CENTER OF MASS             | 92                |
|          |             | Day 2 | 4.4 EQUILIBRIUM                | 94                |
|          |             | Day 3 | 4.4.2 PRINCIPLE OF MOMENTS     | 95                |
|          |             | Day 4 | TEST                           |                   |
| 21       | 4           | Day 1 | 4.4.3 TYPES OF EQUILIBRIUM     | 96                |
|          |             | Day 2 | 4.5 STABILITY                  | 97                |
|          |             | Day 3 | 4.6 FRICTION                   | 100               |
|          |             | Day 4 | TEST                           |                   |
| 22       | 4           | Day 1 | 4.6.6 FRICTIONAL DISSIPATION   | 104               |
|          |             | Day 2 | 4.7 CENTRIPETAL FORCE          | 105               |
|          |             | Day 3 | 4.8 ORBITAL MOTION             | 107               |
|          |             | Day 4 | TEST                           |                   |
| 23       | 4           | Day 1 | 4.9 PLANETARY DATA             | 109               |
|          |             | Day 2 | , NUMERICAL RESPONSE QUESTIONS | 114               |
|          |             | Day 3 | , NUMERICAL RESPONSE QUESTIONS | 114               |
|          |             | Day 4 | TEST                           |                   |

| Week No. | Chapter No. | Day   | Topic   | Book Page Numbers |
|----------|-------------|-------|---|-------------------|
| 24       | 5           | Day 1 | PRESSURE AND DEFORMATION IN SOLIDS                          | 116               |
|          |             | Day 2 | 5.1 ELASTICITY  | 116               |
|          |             | Day 3 | 5.1.1 HOOKE'S LAW   | 117               |
|          |             | Day 4 | TEST  |                   |
| 25       | 5           | Day 1 | 5.2 PRESSURE  | 120               |
|          |             | Day 2 | 5.3 ATMOSPHERIC PRESSURE                                    | 122               |
|          |             | Day 3 | 5.3.1 MEASUREMENT OF ATMOSPHERIC PRESSURE                   | 123               |
|          |             | Day 4 | TEST  |                   |
| 26       | 5           | Day 1 | 5.3.2 ATMOSPHERIC PRESSURE AND HEIGHT FROM SURFACE OF EARTH | 124               |
|          |             | Day 2 | 5.2.3 ATMOSPHERIC PRESSURE AND WEATHER                      | 125               |
|          |             | Day 3 | 5.2.4 APPLICATIONS OF ATMOSPHERIC PRESSURE                  | 126               |
|          |             | Day 4 | TEST  |                   |
| 27       | 5           | Day 1 | 5.4 LIQUID PRESSURE   | 126               |
|          |             | Day 2 | 5.5 MANOMETER   | 127               |
|          |             | Day 3 | 2.0 PASCAL'S PRINCIPLE                                      | 129               |
|          |             | Day 4 | TEST  |                   |
| 28       | 5           | Day 1 | 5.7.1 HYDRAULIC LIFT  | 130               |
|          |             | Day 2 | NUMERICAL RESPONSE QUESTIONS                                | 136               |
|          |             | Day 3 | NUMERICAL RESPONSE QUESTIONS                                | 136               |
|          |             | Day 4 | TEST  |                   |