

**SYLLABUS 2020-21**  
**SCIENCE**  
**STD - VIII**

**Prescribed Text Books :**

The living world – A book of Science & Technology (DAV Publication Division)

**Reference Book:**

Science Exemplar Problems – NCERT

**EXAMINATION SYSTEM (2020-21)**

| Exam              | Time Period Of The Test                              | Syllabus For The Test          | Marks |
|-------------------|--|--------------------------------|-------|
| PA-1              | 20 <sup>th</sup> July to 25 <sup>th</sup> July 2020  | Syllabus for PA-1              | 40    |
| PA-2/ HALF YEARLY | 19 <sup>th</sup> Sept to 28 <sup>th</sup> Sept 2020  | Syllabus for PA-2/ HALF YEARLY | 80    |
| PA-3              | 1st December to 7 <sup>th</sup> December 2020        | Syllabus for PA-3              | 40    |
| Annual Exam.      | As per the DAV Board Schedule (3rd week of February) | Whole syllabus                 | 80    |

**ASSESSMENT STRUCTURE**

| 80 Marks<br>Annual Exam | 20 Marks Internal Assessment   |  |   |
|-------------------------|--|--|---|
| Written test            | Periodic Assessment (10marks)  | C.W &H.W (5 Marks )  | Subject Enrichment Activity/Project - (5 Marks )                          |
|                         | Three <b>written tests</b> will be conducted. Average of best two tests will be taken for final marking. | <ul style="list-style-type: none"> <li>➤ Regularity. (1 Mark)</li> <li>➤ Maintenance of copy with index. (1 Mark)</li> <li>➤ Writing relevant answers. (1 Mark)</li> <li>➤ Follow up action. (1 Mark)</li> <li>➤ Task completion (1 Mark)</li> </ul> | Individual /pair/group wise experimental activity/project suggested below |

## SYLLABUS

| Sl. No. | Name of the Chapters                               | Periodic Assessment- 1<br>(40 Mark)<br>Time:1hr<br>30mins<br>(20 <sup>th</sup> July to<br>25 <sup>th</sup> July,<br>2020) | Periodic Assessment-<br>2/Half yearly<br>(80 Mark)<br>Time 3 Hrs<br>(19 <sup>th</sup> Sept to<br>28 <sup>th</sup> Sept<br>2020) | Periodic Assessment- 3<br>(40 Marks)<br>Time :1hr 30<br>mins<br>(1 <sup>st</sup> December<br>to 7 <sup>th</sup><br>December<br>2020) | Annual<br>(80 Marks)<br>Time : 3<br>Hours<br>As per the<br>DAV Board<br>Schedule<br>(3rd week of<br>February) |
|---------|--|---|---|--|---|
| 1       | Ch-1<br>The Cell: Its<br>Structure and<br>Function |   |   | ✓  | ✓   |
| 2       | Ch-2.<br>Microorganisms<br>: Friends or Foes       |   | ✓   |  | ✓   |
| 3       | Ch- 3<br>Metals and Non-<br>metals                 |   |   | ✓  | ✓   |
| 4       | Ch- 4 Force and<br>Pressure                        | ✓   | ✓   |  | ✓   |
| 5       | Ch -5 Friction                                     |   | ✓   |  | ✓   |
| 6       | Ch- 6. Sources<br>of energy                        |   | ✓   |  | ✓   |
| 7       | Ch- 7.<br>Combustion                               | ✓   | ✓   |  | ✓   |
| 8       | Ch -8.<br>Conservation<br>of Plants and<br>Animals |   | ✓   |  | ✓   |
| 9       | Ch- 9.<br>Crop Production<br>& its<br>Management   | ✓   | ✓   |  | ✓   |
| 10      | Ch-10<br>Refraction and<br>Dispersion of<br>Light  |   |   | ✓  | ✓   |
| 11      | Ch 11- The<br>Human Eye                            |   |   |  | ✓   |
| 12      | Ch12- Sound  |   |   |  | ✓   |
| 13      | Ch 13- Synthetic<br>Fibres and<br>Plastics         |   |   |  | ✓   |
| 14      | Ch 14-<br>Reproduction in<br>Animals               |   |   |  | ✓   |
| 15      | Ch 15- Reaching<br>the Age of<br>Adolescence       |   |   |  | ✓   |

|    |   |    |    |    |    |
|----|---|----|----|----|----|
| 16 | Ch16. Electric Current and its Chemical Effects |    | ✓  |    | ✓  |
| 17 | Ch 17 -Stars and Solar System                   |    |    |    | ✓  |
| 18 | Ch 18. Earthquakes                              |    | ✓  |    | ✓  |
| 19 | Ch- 19. Pollution of Air                        |    | ✓  |    | ✓  |
| 20 | Ch 20- Pollution of Water                       |    |    |    | ✓  |
|    | <b>TOTAL MARK</b>                               | 40 | 80 | 40 | 80 |

**SUBJECT ENRICHMENT:**

**(I) Individual /pair/group wise experimental activity) -5 marks.**

1. To show liquid pressure increases with depth.
2. To show liquid pressure is transmitted equally in all directions.
3. To show force of friction increases with increase in the weight of the body.
4. To differentiate between good and poor conductors from different liquid samples.
5. To show wax vapours are present in the inner most zone of candle flame.
6. To show that luminous zone of the candle flame contains un burnt particles of carbon.
7. To observe refraction of light through a rectangular glass slab.
8. To show that metallic oxides are basic in nature.
9. To observe the refraction of light through prism.
10. To show that metals react with an acid to liberate hydrogen gas.
11. To show the displacement reaction using suitable chemicals.
12. To observe presence of atmospheric pressure with suitable activity.

**Rubrics:**

**Individual / Group experimental activity (5 Marks)**

- Understanding the concept. (1 Mark)
- Experimental setup and proper technique. (1 Mark)
- Collection of data and observation correctly (1 Mark)
- Work with precision, neatness and accuracy (1 Mark)
- Relating with theoretical knowledge through viva ( 1 mark)

**(II) Project work :**

**(Group activity, PPT)**

To make a PPT on any one of the following-

1. Wildlife sanctuary of India
2. National parks of India
3. Biosphere reserve of India
4. Endemic species.
5. Extinct species.

**Rubrics:**

- Content(1mark)
- Slide creation(1mark)
- Pictures, clip art & Back ground(1mark)
- Presentation(1mark)
- Viva (1 mark)

**OR**

### Model making

To make a 3-D model on any one of the following.

1. Plant cell
2. Animal cell
3. Bacterial cell
4. Amoeba
5. Paramecium
6. Bread mould

### Rubrics

- Depth of Knowledge(1 mark)
- Creativity(1 mark)
- Cost effectiveness. (1 mark)
- Presentation (1 mark)
- Viva (1 mark)

### Weightage to form of questions:

#### Periodic Assessment- I & Periodic Assessment- III

Duration 1hr 30 min

| Sl. No.                | Form of Questions        | VSA              | Short Answer Type (SA I) | Short Answer Type (SA II) | Long Answer type (LA) |
|------------------------|--------------------------|------------------|--------------------------|---------------------------|-----------------------|
| 1                      | Marks for each question. | 1                | 2                        | 3                         | 5                     |
| 2                      | No. of Questions         | 1                | 3                        | 6                         | 3                     |
| 3                      | Total Marks              | $1 \times 1 = 1$ | $3 \times 2 = 6$         | $6 \times 3 = 18$         | $3 \times 5 = 15$     |
| <b>TOTAL- 40 marks</b> |                          |                  |                          |                           |                       |

#### Periodic Assessment- II

Duration : 3 hrs

| Sl. No.                 | Form of Questions        | VSA              | Short Answer Type (SA I) | Short Answer Type (SA II) | Long Answer type (LA) |
|-------------------------|--------------------------|------------------|--------------------------|---------------------------|-----------------------|
| 1                       | Marks for each question. | 1                | 2                        | 3                         | 5                     |
| 2                       | No. of Questions         | 3                | 7                        | 11                        | 6                     |
| 3                       | Total Marks              | $3 \times 1 = 3$ | $7 \times 2 = 14$        | $11 \times 3 = 33$        | $6 \times 5 = 30$     |
| <b>TOTAL - 80 Marks</b> |                          |                  |                          |                           |                       |

### Important Note:

- HOTS questions will be set in all the Examinations.
- Some questions may be asked from Science Exemplar Problems (NCERT) in all the Examinations.

**N.B: Weightage to form of questions for Annual examination will be as per the latest guidelines of DAV Education Board.**

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## Design of Question Paper (Only for Teachers)

## MARKS DISTRIBUTION

**Periodic Assessment-I & Periodic Assessment-III (40 Marks)**

**TIME: 1hr 30min**

**Periodic Assessment-II & Annual (80 Marks)**

**TIME: 3hrs**

| Sl No. | Name of the Chapter   | Periodic Assessment - 1 (40 Mark)<br>Time:1hr30min<br>(20th July to 25 <sup>th</sup> July, 2020) | Periodic Assessment-2/<br>Half yearly (80 Mark)<br>Time: 3hrs(19 <sup>th</sup> September to 28 <sup>th</sup> September, 2020) | Periodic Assessment- -3 (40 Marks)<br>Time:1hr 30min<br>(1 <sup>st</sup> December to 7 <sup>th</sup> December, 2020) | Annual (80 Marks)<br>Time : 3 Hours<br>As per the DAV Board Schedule (3rd week of February) |
|--------|---|--|---|--|---|
| 1      | Ch-1 The Cell: Its Structure and Function( 8 Periods)         |  |   | 13   | 5   |
| 2      | Ch-2 Microorganisms: Friends or Foes ( 13 Periods)            |  | 10  |  | 4   |
| 3      | Ch-3 Metals and Non-metals ( 15 Periods)                      |  |   | 13   | 6   |
| 4      | Ch-4 Force and Pressure ( 10 Periods)                         | 14   | 8   |  | 4   |
| 5      | Ch-5 Friction ( 9 Periods)                                    |  | 7   |  | 4   |
| 6      | Ch-6 Sources of energy ( 10 Periods)                          |  | 10  |  | 3   |
| 7      | Ch- 7 Combustion ( 13 Periods)                                | 13   | 10  |  | 6   |
| 8      | Ch-8 Conservation of Plants and Animals ( 10 Periods)         |  | 8   |  | 3   |
| 9      | Ch-9 Crop Production & its Management ( 12 Periods)           | 13   | 7   |  | 3   |
| 10     | Ch-10 Refraction and Dispersion of Light ( 13 Periods)        |  |   | 14   | 5   |
| 11     | Ch-11 The Human Eye ( 8 Periods)                              |  |   |  | 3   |
| 12     | Ch-12 Sound ( 13 Periods)                                     |  |   |  | 3   |
| 13     | Ch-13 Synthetic Fibres and Plastics ( 10 Periods)             |  |   |  | 4   |
| 14     | Ch-14 Reproduction in Animals (11 Periods)                    |  |   |  | 5   |
| 15     | Ch-15 Reaching the Age of Adolescence ( 8 Periods)            |  |   |  | 5   |
| 16     | Ch-16 Electric current and its chemical effects ( 13 Periods) |  | 10  |  | 5   |
| 17     | Ch-17 Stars   |  |   |  | 3   |

|                    |  |    |    |    |    |
|--------------------|--|----|----|----|----|
|                    | and Solar System<br>(9 periods)          |    |    |    |    |
| <b>18</b>          | Ch-18 Earthquakes<br>( 5 Periods)        |    | 5  |    | 3  |
| <b>19</b>          | Ch- 19 Pollution of Air<br>( 7 Periods)  |    | 5  |    | 3  |
| <b>20</b>          | Ch-20 Pollution of Water<br>( 7 Periods) |    |    |    | 3  |
| <b>TOTAL MARKS</b> |  | 40 | 80 | 40 | 80 |

**A. Weightage to content/ subject units**

**Weightage to form of questions:**

**Periodic Assessment- I & Periodic Assessment- III**

**Duration 1hr 30min**

| Sl. No.                | Form of Questions       | VSA              | Short Answer Type (SA I) | Short Answer Type (SA II) | Long Answer type (LA) |
|------------------------|-------------------------|------------------|--------------------------|---------------------------|-----------------------|
| 1                      | Marks for each question | 1                | 2                        | 3                         | 5                     |
| 2                      | No. of Questions        | 1                | 3                        | 6                         | 3                     |
| 3                      | Total Marks             | $1 \times 1 = 1$ | $3 \times 2 = 6$         | $6 \times 3 = 18$         | $3 \times 5 = 15$     |
| <b>Total- 40 marks</b> |                         |                  |                          |                           |                       |

**Periodic Assessment- II**

**Duration : 3 hrs**

| Sl. No.                 | Form of Questions       | VSA              | Short Answer Type (SA I) | Short Answer Type (SA II) | Long Answer type (LA) |
|-------------------------|-------------------------|------------------|--------------------------|---------------------------|-----------------------|
| 1                       | Marks for each question | 1                | 2                        | 3                         | 5                     |
| 2                       | No. of Questions        | 3                | 7                        | 11                        | 6                     |
| 3                       | Total Marks             | $3 \times 1 = 3$ | $7 \times 2 = 14$        | $11 \times 3 = 33$        | $6 \times 5 = 30$     |
| <b>TOTAL : 80 Marks</b> |                         |                  |                          |                           |                       |

**SCHEME OF OPTIONS :**

- There will be no internal choice for the questions of PA I and PA III.
- There will be no choice overall. However, there would be an internal choice in three questions of 2 marks each and in three questions of 3 marks each and in three questions of 5 marks each for PA II and Annual..
- Important Note: HOTs questions will be set in all the Examinations.

**B. Difficulty level of questions for all examinations :**

| Sl. No | Objective | Percentage of marks |
|--------|-----------|---------------------|
| 1      | easy      | 25%                 |
| 2      | average   | 60%                 |
| 3      | difficult | 15%                 |

**C. Weightage to different thinking skills :**

| Sl. No. | Thinking skill | % Weightage |
|---------|----------------|-------------|
| 1.      | Knowledge      | 25 %        |
| 2.      | Understanding  | 50 %        |
| 3.      | Application    | 25 %        |
| 4.      | Total          | 100 %       |

### **Month wise Chapter distribution.**

| Month            | Physics  | Chemistry                            | Biology  |
|------------------|--|--------------------------------------|--|
| <b>April</b>     | Ch-4 Force & pressure                            | Ch 7 Combustion                      | Ch-9- Crop production & its management                                       |
| <b>June</b>      | Ch-4 Force & pressure                            | Ch 7 - Combustion                    | Ch-9- Crop production & its management                                       |
| <b>July</b>      | Ch 5- Friction                                   | Ch 6- Sources of energy              | Ch-2- Micro-Organisms: friends or foes                                       |
| <b>August</b>    | Ch16- Electric current and its effects           | Ch 19- Pollution of Air              | Ch-8- Conservation of plants & animals                                       |
| <b>September</b> | Ch 18- Earthquake<br>Revision - HALF YEARLY Exam | Revision- HALF YEARLY Exam           | Revision - HALF YEARLY Exam  |
| <b>October</b>   | Ch 10 - Refraction and Dispersion of Light       | Ch 3- Metals and Non-metals          | Ch-1- The cell -Its structure & functions                                    |
| <b>November</b>  | Ch 10 - Refraction and Dispersion of Light       | Ch 3- Metals and Non-metals          | Ch-1- The cell -Its structure & functions<br>Ch-14- Reproduction in animals. |
| <b>December</b>  | Ch 11- The Human Eye<br>Ch12 - Sound             | Ch 13- Synthetic Fibres and Plastics | Ch-14- Reproduction in animals.  |
| <b>January</b>   | Ch12- Sound<br>Ch 17- Stars and Solar System     | Ch 20- Pollution of Water            | Ch 15 Reaching the age of Adolescence  |
| <b>February</b>  | Revision for board Exam                          | Revision for board Exam              | Revision for board Exam  |

**Full signature of teachers :**

**Signature of Principal :**