

# J. R. M. INTERNATIONAL SCHOOL

Achhnera Road, Sahai, Bichpuri, Agra

Session 2026-27

Holiday Homework

Class – 11<sup>th</sup> Science

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## 1. Physics:

**Que 1.** Explain friction. How friction helps us in our daily life?

**Que 2.** Explain the terms:

i) Centre of gravity

ii) Torque

iii) Couple of forces

iv) Escape velocity

v) Earth satellite

**Que 3.** Explain law of gravitation with S.I. unit of gravitation constant.

**Que 4.** Give the formula for acceleration due to gravity below and above the earth surface.

**Que 5.** How earth atmosphere help in communications?

**Que 6.** Explain conservation of momentum and derive the formula for the same.

**Que 7.** Give work energy theorem for variable force.

**Que 8.** Explain the given term:

a) Free fall

b) Solar and lunar eclipse

c) Plasticity and elasticity

d) Viscosity

**Que 9.** Differentiate among the types of forces.

**Que 10.** Derive the dimensional formula for the following terms:

i) Gravitation constant

ii) Strain

iii) Momentum

iv) Power

**Que 11.** What are electromagnetic waves? Differentiate them.

**Que 12.** What are sound waves? How sound waves are used to identify the object under water?

**Que 13.** What is artificial intelligence? Give advantage and disadvantage of artificial intelligence.

**Que 14.** Differentiate between conductor, semi-conductor and insulators.

**Que 15.** Explain the term resistivity. How it effect the flow of current in conductors?

## 2. Mathematics:

Prepare project on topic “Concept of Set theory” on milky file (Project file).

## 3. Physical Education:

Proficiency in games and sports skill of any sports and games recognized by Indian Olympic Association of Choice.

**Likely** – Volleyball, Hockey, Football, Badminton and Table Tanis etc.

## 4. English:

- Write character sketch of Khushwant Singh’s grandmother from the chapter “The Portrait of Lady” highlighting her resilience, routine and emotional depth.

**Note :** - All the work must be done in fair note book.

## 5. Biology: To prepare an assignment on given topics:

**Topic 1.** Why are living organism classifications? Mention any two defining features of life forms?

**Topic 2.** Write silent features of Kingdom Monere. Why are cyanobacteria called blue – green algae?

**Topic 3.** What is the basis of classification on Animalia? Define symmetry with example.

**Topic 4.** Why are viruses called as a connecting link between living and non-living?

### Instruction for students –

**1. Format** – Use A4 sheets, hand written, margin, page number etc.

**2. Presentation** – Neat diagram is pencil, label in pen, Underlined headings.

**3. Word limit** – Answer should be 120 – 150 words.

**4. Originality** – Write in your own words.

**5. Submission** – Staple pages properly write name, class / section, roll no. on cover page.

## Biology Topics Name Wise

Roll No.	Student's Name	Topic	Roll No.	Student's Name	Topic
01	Ishant	Topic – 1	08	Nikita Singh	Topic – 4
02	Chanchal	Topic – 2	09	Palak Indolia	Topic – 1
03	Durgesh Solanki	Topic – 3	10	Radhika	Topic – 2
04	Mahak Khan	Topic – 4	11	Saumya Singh	Topic – 3
05	Mahek Nauhwar	Topic – 1	12	Vanshika Kumari	Topic – 4
06	Manisha Singh	Topic – 2	13	Yash Kumar	Topic – 1
07	Nidhi Solanki	Topic – 3			

**Note:** Project file should be handwritten well printed and pictorial.

## 6. Chemistry:

**Unit – I and Unit – II NCERT numerical complete exercise in class notebook.**

## 7. Painting:

- Explain visual and performing art.
- Explain in detail fundamental of visual art.
- Role of art in Indian Culture.

**Note : - Do it in project file**