

**DELHI PUBLIC SCHOOL, JAMMU**  
**HOLIDAYS HOMEWORK**  
**SESSION 2021-22**  
**CLASS XII**  
**SUBJECT: PHYSICS**

Q- Prepare a **Report** on any one of the following topics.

***General Guidelines:***

- The topic chosen should be from any of the topics from XII class curriculum. Some of them are listed below:
  - (i) Electromagnetic Induction
  - (ii) Diffraction of light
  - (iii) Interference of light
  - (iv) Polarisation of light using two polaroids
  - (v) Light Dependent Resistor
  - (vi) Electroscope
  - (vii) Eddy currents
  - (viii) Transformer
  - (ix) Logic gates
  - (x) Rectifier
  - (xi) Photo diode
- You can also choose any one from the suggested investigatory projects recommended by the CBSE.
- Report should be neat , hand written on A4 sized sheets, should not be less than 10 pages in any case and should be according to the format mentioned below.
  - ❖ Name of the Topic selected
  - ❖ Detailed Theory of the topic
  - ❖ Related diagrams
  - ❖ Applications in various fields( list good number of applications of the topic chosen and explain any two of them in detail .You can use pictures also to demonstrate applications)
  - ❖ Bibliography ( books referred or any online material used )
- Cover page must be designed by the student which should reflect the Topic of the report, Name , Class, Section and Roll no. and should be typed .
- Some of the links related to topics are also provided to facilitate you in learning .

## **Electromagnetic Induction**

1. <https://impulse.schaffner.com/en/emi-filtering-in-medical-devices>
2. <https://leadertechinc.com/blog/application-emi-shielding-technology-defense-systems/>
3. <https://opentextbc.ca/universityphysicsv2openstax/chapter/applications-of-electromagnetic-induction/>

**Diffraction and interference of light** : <https://openstax.org/books/physics/pages/17-2-applications-of-diffraction-interference-and-coherence>

**Polarization of light** : <https://www.elte.hu/en/content/physical-and-biological-applications-of-polarized-light-in-environmental-optics.s.191>

## **Eddy currents**

<https://www.twi-global.com/technical-knowledge/faqs/faq-what-are-the-applications-and-capabilities-of-eddy-currents>

## **Photodiode**

<http://www.osioptoelectronics.com/application-notes/an-photodiode-parameters-characteristics.pdf>

## **Logic gates**

<https://www.electrical4u.com/some-common-applications-of-logic-gates/>

## **Rectifier**

[https://www.google.com/search?rlz=1C1CHBD\\_en\\_924\\_924&lei=UvmwYO\\_2CYTZz7sP1YqJ0AE&q=applications%20of%20rectifiers%20in%20daily%20life&ved=2ahUKEwjv59fCxuzwAhWE7HMBHVVFahOQsKwBKAB6BAg3EAE](https://www.google.com/search?rlz=1C1CHBD_en_924_924&lei=UvmwYO_2CYTZz7sP1YqJ0AE&q=applications%20of%20rectifiers%20in%20daily%20life&ved=2ahUKEwjv59fCxuzwAhWE7HMBHVVFahOQsKwBKAB6BAg3EAE)

## **Light Dependent Resistor**

<https://www.semiconductorforu.com/applications-ldr-light-dependent-resistors/>

## **Note –**

1. Holidays Send your Homework by e-mail to your respective Subject Teacher by 13th of July, 2021. Your submission will carry 4 marks.( 2 marks- Subject Relevance & Research, 2 marks- Handwriting).
2. Practice for your Homework/ Project Presentation (5-6mins) to be held during virtual class after holidays. It will carry 6 marks (2 marks- Confidence, 2 marks- Subject Clarity, 2 marks- Presentation Skills).
3. The schedule for presentation will be shared later.The teacher may ask 1 or 2 questions during the presentation.

<b>Class/Section</b>	<b>Name of the Sub Teacher:</b>	<b>e-mail ID</b>
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