



## Colour Blindness

**For Prelims:** Supreme Court Judgement, Film and Television Institute of India, Colour blindness

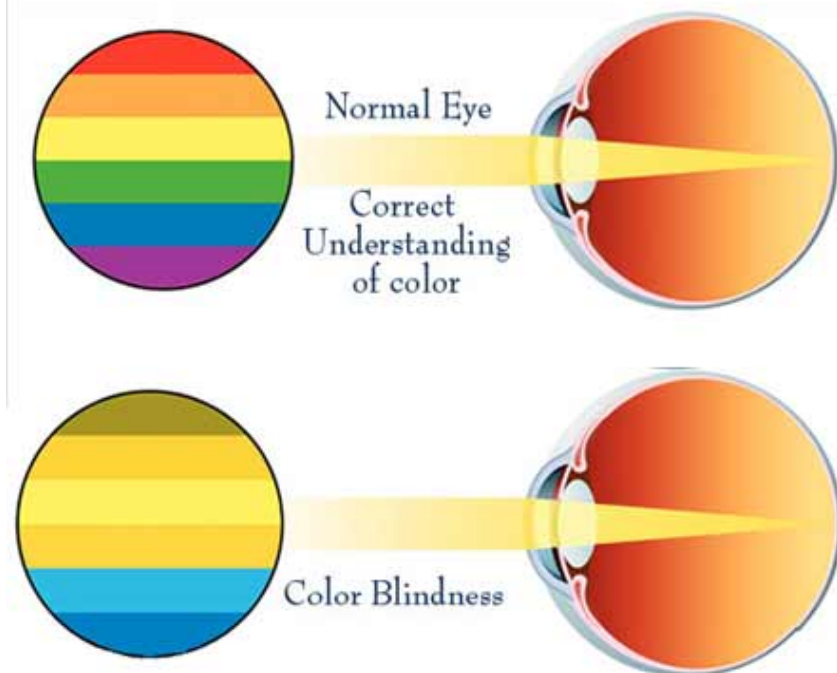
**For Mains:** Colour blindness, Health

### Why in News

Recently, the [Supreme Court](#) has directed the **Film and Television Institute of India (FTII)** not to exclude candidates suffering from **colour blindness** from its **courses on film making and editing** and **asked it to make changes to its curriculum instead.**

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## Color Blindness



**What is Colour Blindness?**

- **About:** Colour blindness is the **inability to see colours in the normal way**. Colour blind individuals often **cannot distinguish between certain colours** — usually **greens and reds**, and sometimes **blues** as well.
  - It is also known as **colour deficiency**.
- **Anatomy:** Two types of cells in the **retina detect light**:
  - **Rods:** These help in distinguishing between **light and dark**.
  - **Cones:** These help in detecting **colour**.
  - There are three types of cones that see colour — **red, green, and blue** — and our brains use the information from these cells to perceive colour.
  - Colour blindness can be the result of the **absence of one or more of these cone cells, or their failure to work properly**.
- **Different Kinds:** Colour blindness may be of **different kinds and degrees**.
  - In a situation where **all three cone cells** are present **but one of them is malfunctioning**, mild colour blindness may occur.
  - **Mildly colour blind people** often see all colours properly only when the light is good.
  - In the most **severe kind** of colour blindness, **vision is black-and-white**, that is, everything appears as a **shade of grey**. This is not very common.
- **Causes:**
  - **Congenital Colour Blindness:** Most colour blind people are **born with the condition (congenital colour blindness)**. Congenital colour vision deficiencies are **usually passed on genetically**.
    - This type of Colour blindness **generally affects both eyes**, and the condition remains roughly the **same for as long as the individual is alive**.
  - **Medical Conditions:** A problem with colour vision that arises later in **life could be the result of disease, trauma, or ingested toxins**.
    - If colour blindness arises **out of disease, one eye may be affected differently** from the other, and the difficulty could worsen over time.
    - Medical conditions that **may increase the risk of getting colour blindness** include **glaucoma, diabetes, Alzheimer's, Parkinson's, alcoholism, leukaemia, and sickle-cell anaemia**.
- **Treatment:** Colour blindness cannot as **yet be treated or reversed**.
  - However, it can be **corrected to some extent by wearing special contact lenses or colour filter glasses**.
  - There is some research that suggests **gene replacement therapy** can help modify the condition.
- **Gender Differentiation:** **Men** suffer from a **higher incidence of colour blindness** than **women**.
  - Around the world, **every tenth male is estimated to have some form of colour deficiency**.
  - Men of Northern European descent are considered to be especially vulnerable.
- **Restriction in Jobs:** Colour blindness impairs in some ways the **ability to do certain kinds of jobs**, such as being a **pilot or joining the armed forces**.
  - However, it depends on the severity of the colour blindness, and the **rules in place in different jurisdictions**.
  - There are an **estimated 300 million people in the world** with colour vision deficiency.
- **Initiative Taken by Government:** In June 2020, India's **Ministry of Road Transport and Highways** amended the **Central Motor Vehicles Rules 1989** to enable citizens with mild to medium colour blindness **to obtain a driver's licence**.

## What is the Film and Television Institute of India?

- The **Film and Television Institute of India (FTII)** was set up by the Government of India in 1960, in the premises of the erstwhile **Prabhat Studios in Pune**.
- Prabhat Studio was a pioneer in the **business of filmmaking** and shifted to Pune from Kolhapur in 1933.
- It is an autonomous body under the Union **Ministry of Information and Broadcasting**.

**Source: IE**

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