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# 2-Minute Series

*A compilation of foundational topics prerequisite for Civil Services*

*For the 2nd Week*

*of*

**May  
2021**

*(10th to 15th May)*

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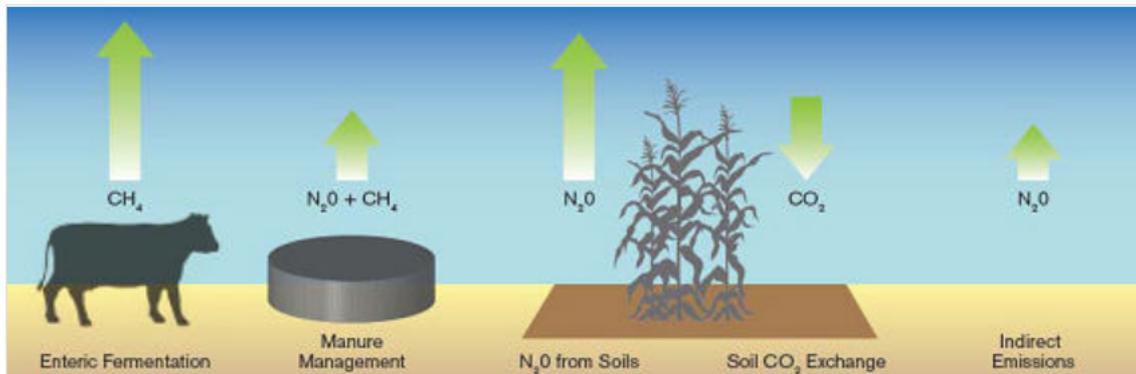
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# 1. Geography

## 1.1.Green - Ag Project

- The Union government has launched the Green-Ag Project in Mizoram, to reduce emissions from agriculture and ensure sustainable agricultural practices.



### Project Objective

- To catalyse transformative change of India's agricultural sector to support achievement of national and global environmental benefits and conservation of critical biodiversity and forest landscapes

### Project Will Be Impemented In 5 States

- Madhya Pradesh: Chambal Landscape Mizoram: Dampa Landscape
- Odisha: Similipal Landscape
- Rajasthan: Desert National Park Landscape
- Uttarakhand: Corbett-Rajaji Landscape

### Mechanism – Examples

- Institutionalization of inter sectoral mechanisms (agricultural and allied sectors) - continued mainstreaming of environmental concerns and priorities
- At least six key national and state level agricultural programmes (missions) will have been strengthened with results based environmental indicators integrated in their policy. Eg .National Mission on Sustainable Agriculture
- At least 10 community led initiatives to support conservation of globally important species such as the tigers, elephants and the Great Indian Bustard.
- Ten percent reduction in the threat index from baseline+ key sites of high biodiversity importance will be demonstrated at five target Green Landscapes
- Eg Mizoram: 13,725 (Jhum); Madhya Pradesh: 18000 ha (ravines)
- The Green-Ag project is designed to achieve multiple global environmental benefits in at least 1.8 million hectares (ha) of land in five landscapes, with mixed land-use systems.

## Objective

- It aims to bring at least 104,070 ha of farms under sustainable land and water management. [ Critical Biodiversity ]
- Ensure 49 million Carbon dioxides equivalent sequestered or reduced through sustainable land use and agricultural practices

## Implementation

- The Green-Ag Project is funded by the Global Environment Facility, while the Department of Agriculture, Cooperation, and Farmers' Welfare (DAC&FW) is the national executing agency.
- Other key players involved in its implementation are Food and Agriculture Organization (FAO) and the Union Ministry of Environment, Forest and Climate Change (MoEF&CC).

## Applications

- GS 1
- GS 2
- GS 3
- GS 4

## 2. History

### 2.1. Raja Ram Mohan Rai

- He was considered as the pioneer of modern Indian Renaissance for the remarkable reforms he brought in the 18th and 19th century
- Popularly known as the “Modern Man of India”.

#### Early Life and Education-

- He was born in Radhanagar, Hoogly District, Bengal Presidency.
- The family in which he was born, the practices such as polygamy and dowry system were widely practised, both of which Rammohan campaigned against.
- He was a great scholar of Sanskrit, Persian and English languages and also knew Arabic, Latin and Greek.
- Ram Mohan Roy's impact on modern Indian history was his revival of the pure and ethical
- He preached the unity of God, made early translations of Vedic scriptures into English, co- principles of the Vedanta school of philosophy as found in the Upanishads. founded the Calcutta Unitarian Society and founded the Brahma Samaj.
- He successfully campaigned against sati, the practice of burning widows.
- He sought to integrate Western culture with the best features of his own country's traditions. His writings also sparked interest among British and American Unitarians.

#### Christianity and the early rule of the East India Company - (1795-1828)

- During early rule of the east India company, Ram Mohan Roy acted a political agitator whilst employed by the East India Company.
- Between 1796 and 1797, He along with his other 2 friends created a religious work known as the “Maha Nirvana Tantra”(or “Book of the Great Liberation”).
- He positioned it as a religious sect to “The One True God” and for the next 2 decades this document was largely augmented. Its judicial sections were used in the law courts of the English Settlement in Bengal as Hindu Law for adjudicating upon property disputes of the zamindari.
- In 1796 , raja ran Mohan reached Calcutta and became abecame a **moneylender**, mainly to lend to the Englishmen of the Company living beyond their means.
- From 1803 until 1815, Ram Mohan served the East India Company's "Writing Service", commencing as private clerk “Munshi” to Thomas Woodroffe, Registrar of the Appellate Court at Murshidabad.
- While in Murshidabad, in 1804 Raja Ram Mohan Roy wrote Tuhfat-ul-Muwahhidin (Gift to Monotheists) in Persian with an introduction in Arabic.
- (A In 1815, he started Atmiya Sabha, a philosophical discussion circle in Kolkata .
- He was one of the first to recognise the Drain of Wealth by Britishers from India and believed that the unrestricted settlement of Europeans in India governing under free trade would help ease the economic drain crisis.

- During the next 2 decades, Ram Mohan launched his attack at the behest of the church against the bastions of Hinduism of Bengal, namely his own Kulin Brahmin priestly clan (then in control of the many temples of Bengal) and their priestly excesses.
- The Kulin excesses targeted include sati (the co-cremation of widows), polygamy, child , Marriage and Dowry
- In 1828, he launched Brahma Sabha with Devendranath Tagore.
- In 1830, he had gone to England as an envoy of the Mughal Emperor, Akbar Shah II, who invested him with the title of Raja to the court of King William IV, he went there to ensure that Lord William Bentinck's Bengal Sati Regulation, 1829 banning the practice of Sati was not overturned.
- In addition, Roy petitioned the King to increase the Mughal Emperor's allowance and perquisites. He was successful in persuading increase the stipend of the Mughal Emperor by £30,000.
- He died at Stapleton, then a village to the northeast of Bristol (now a suburb), on 27 September 1833 of meningitis and was buried in the Arncliffe Cemetery in southern Bristol.

### Social Reforms

- Roy founded the Atmiya Sabha and the Unitarian Community to fight the social evils, and to propagate social and educational reforms in India.
- He was the man who fought against superstitions, a pioneer in Indian education, and a trend setter in Bengali Prose and Indian press.
- He remarked - "The present system of Hindus is not well calculated to promote their political interests.... It is necessary that some change should take place in their religion, at least for the sake of their political advantage and social comfort."
- Other Achievements
  - ✓ Demanded property inheritance rights for women.

### Socio - Religious Reforms

- He wanted to legitimise Hindu traditions to his European acquaintances by proving that "superstitious practices which deform the Hindu religion have nothing to do with the pure spirit of its dictates"!
- Brahma Samaj believe that the most fundamental doctrines of Brahmoism are at the basis of every religion followed by a man.
  - ✓ Brahma Samaj believes in the existence of One Supreme God.
  - ✓ Brahma Samaj believe that worship of Him needs no fixed place or time. "We can adore Him at any time and at any place, provided that time and that place are calculated to compose and direct the mind towards Him."

### Publications -

- 1796 - Maha Nirvana Tantra - The book of Great Liberation
- 1805 - Tuhfat ul Mawahhidinor - A Gift to Montheists
- 1820 - The Percepts of Jesus - Guide to Peace and Happiness

- 1821 - Samvad Kaumudi - A Bengali Newspaper.
- 1822 - Mirat ul Akbar - A Persian Newspaper
- 1824 - A letter called "Prospects if Christianity in India"
- 1829 - The Universal Religion.

### Contributions in the field of Education

- In 1817, in collaboration with David Hare, he set up the Hindu College at Calcutta.
- In 1822, Roy found the Anglo-Hindu school, followed four years later (1826) by the Vedanta College; where he insisted that his teachings of monotheistic doctrines be incorporated with "modern, western curriculum".
- In 1830, he helped Rev. Alexander Duff in establishing the General Assembly's Institution (now known as Scottish Church College), by providing him with the venue vacated by Brahma Sabha and getting the first batch of students.
- He supported induction of western learning into Indian education.
- His most popular journal was the Sambad Kaumudi. It covered topics like freedom of the press, induction of Indians into high ranks of service, and separation of the executive and judiciary.
- When the English Company muzzled the press, Ram Mohan composed two memorials against this in 1829 and 1830 respectively.

### Legacy

- Roy's commitment to English education and thought sparked debate between Mahatma Gandhi and Rabindranath Tagore.
- Gandhi, objecting to Roy's devotion to English education and thought, characterized him as a "pygmy."
- Tagore, wrote a letter rejecting Gandhi's view, saying "[Roy] had the full inheritance of Indian wisdom. He was never a school boy of the West, and therefore had the dignity to be a friend of the West." [40]
- Gandhi later contrasted his own cultural pluralism with the fault he saw in Roy's, writing these well-known lines:
  - ✓ "I do not want my house to be walled in on all sides and my windows to be stuffed. I want the culture of all lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any."

## 3. Polity & Governance

### 3.1. Mines and Minerals (Development and Regulation)

#### Amendment Act 2021

- The Mines and Minerals (Development and Regulation) Amendment Act 2021 amends the Mines and Minerals (Development and Regulation) Act, 1957. The Act regulates the mining sector in India.

#### What are the main components of the Act?

- **Removal of restriction on end-use of minerals:** The 1957 Act empowers the central government to reserve any mine (other than coal, lignite, and atomic minerals) to be leased through an auction for a particular end-use (such as iron ore mine for a steel plant). Such mines are known as captive mines. The Amendment provides that no mine will be reserved for particular end-use.
- **Sale of minerals by captive mines:** The Amendment provides that captive mines (other than atomic minerals) may sell up to 50% of their annual mineral production in the open market after meeting their own needs. The central government may increase this threshold through a notification. The lessee will have to pay additional charges for mineral sold in the open market.
- **Auction by the central government in certain cases:** Under the 1957 Act, states conduct the auction of mineral concessions (other than coal, lignite, and atomic minerals). Mineral concessions include mining lease and prospecting license-cum-mining lease.
- **The Amendment empowers the central government to specify a time period for completion of the auction process in consultation with the state government.** If the state government is unable to complete the auction process within this period, the auctions may be conducted by the central government.
- **Transfer of statutory clearances:** Upon expiry of a mining lease (other than coal, lignite, and atomic minerals), mines are leased to new persons through auction. The statutory clearances issued to the previous lessee are transferred to the new lessee for a period of two years. The new lessee is required to obtain fresh clearances within these two years. The Amendment replaces this provision and instead provides that transferred statutory clearances will be valid throughout the lease period of the new lessee.
- **Extension of leases to government companies:** The 1957 Act provides that the period of mining leases granted to government companies will be prescribed by the central government. The Amendment provides that the period of mining leases of government companies (other than leases granted through auction) may be extended on payment of additional amount prescribed in the Amendment Act.
- **Conditions for lapse of mining lease:** The 1957 Act provides that a mining lease will lapse if the lessee:
  - ✓ is not able to start mining operations within two years of the grant of a lease, or
  - ✓ has discontinued mining operations for a period of two years.
- However, the lease will not lapse at the end of this period if a concession is provided by the state government upon an application by the lessee. The Amendment adds that the threshold period for lapse of the lease may be extended by the state government only once and up to one year.

## Prelims Prospective Question

### 1. Which of the following statements are incorrect about the Mines and Minerals (Development and Regulation) Amendment Act, 2021?

1. It empowers the central government to reserve any mine to be leased through an auction for a particular end-use.
2. It allows captive mines, other than atomic minerals, to sell up to 50% of their annual mineral production in the open market after meeting their own needs.

## Mains Use

- Crucial for:
  - ✓ GS 1- Geography related part
  - ✓ GS 2- Under amendments, governance issues
  - ✓ GS 3- Industry, Ease of doing business

Examine the Mines and Minerals (Development and Regulation) Amendment Act 2021. Discuss whether it gives a lease of life to the mining sector in India.

# 4. Economy

## 4.1. What is Stock - market Bubble

### Markets rising & Recession

- After the first wave of Covid, Stock market indices reached all-time highs in 2020-21.
- This is despite that fact that there was the worst global recession since World War II.

#### The global coronavirus recession

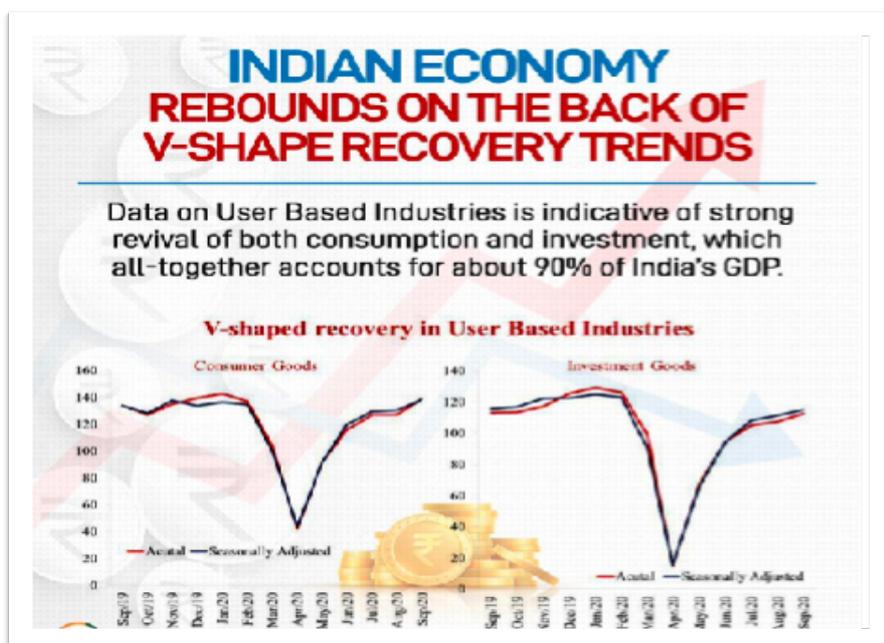
COVID-19 brought the global economy to a halt in 2020, but the IMF sees a swift rebound



Note: Data for 2026 and beyond are estimates.  
Source: International Monetary Fund World Economic Outlook

### Recovery or Bubble?

- Some market experts talk of a V-shaped recovery in Economy.
- They say this is a bull market that has long way to go.
- Others say that this rally is nothing but a bubble.



### What is a Bubble

- In economics,

- ✓ a bubble is an economic cycle that is characterized by the rapid escalation of market value, particularly in the price of assets.
- ✓ This fast inflation is followed by a quick decrease in value, or a contraction, that is sometimes referred to as a "crash" or a "bubble burst."

### **Nobel Laureate Robert Schiller's Definition of a Bubble**

- A situation in which news of price increase spurs investor enthusiasm.
- It spreads by psychological communication from person to person.
- A process starts, stories amplify to justify the price increases.
- It draws in a wider class of investors.
- Despite doubts about the real value of the investment, they are drawn to it, partly through envy of others' successes and partly through gambler's excitement.
- In short, a bubble is the stage of a market cycle where asset prices rise to irrationally high levels completely disconnected from the fundamental value of the underlying assets.
- In the process, they lure large numbers into the game in the hopes of making quick money

### **Concerns**

- Market bubbles after reaching irrationally high levels, inevitably crash.
- Investors' wealth gets destroyed and it permanently drives away vast swathes of investors away from markets.

### **In the Past**

- Dotcom bubble of 2000 and housing bubble of 2007.

### **Some Important Facts**

- It is the biggest trade bloc in history.
- RCEP was signed on 15 November 2020 at a virtual ASEAN Summit hosted by Vietnam.
- It was conceived at the 2011 ASEAN Summit in Bali, Indonesia.

### **Important Things**

- A bubble is an economic cycle that is characterized by the rapid escalation of market value, particularly in the price of assets.
- This fast inflation in share prices is followed by a quick decrease in value, or a contraction, that is sometimes referred to as a "crash" or a "bubble burst."
- Bubbles are typically attributed to a change in investor behavior.

### **Hyman P. Minsky's five stages of a bubble**

- Displacement
  - ✓ This stage takes place when investors start to notice a new paradigm, like a new product or technology, or historically low interest rates. This can be basically anything that gets their attention.

- Boom

✓ Prices start to rise. Then, they get even more momentum as more investors enter the market. This sets up the stage for the boom. There is an overall sense of failing to jump in, causing even more people to start buying assets.

- Euphoria

✓ When euphoria hits and asset prices skyrocket, it could be said that caution on the part of investors is mostly thrown out the window.

- Profit-Taking

✓ Figuring out when the bubble will burst isn't easy; once a bubble has burst, it will not inflate again. But anyone who can identify the early warning signs will make money by selling off positions.

- Panic

✓ Asset prices change course and drop (sometimes as rapidly as they rose). Investors want to liquidate them at any price. Asset prices decline as supply outshines demand.

## 5. Environment & Ecology

### 5.1. Beema Bamboo

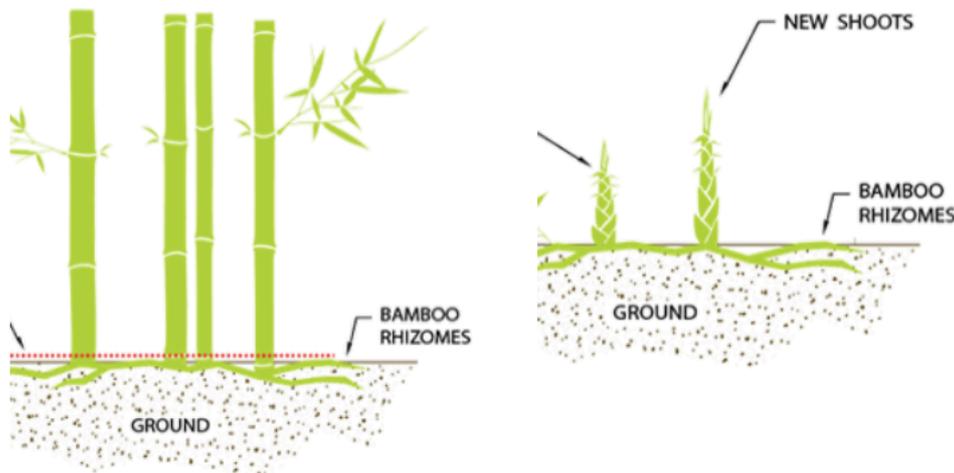
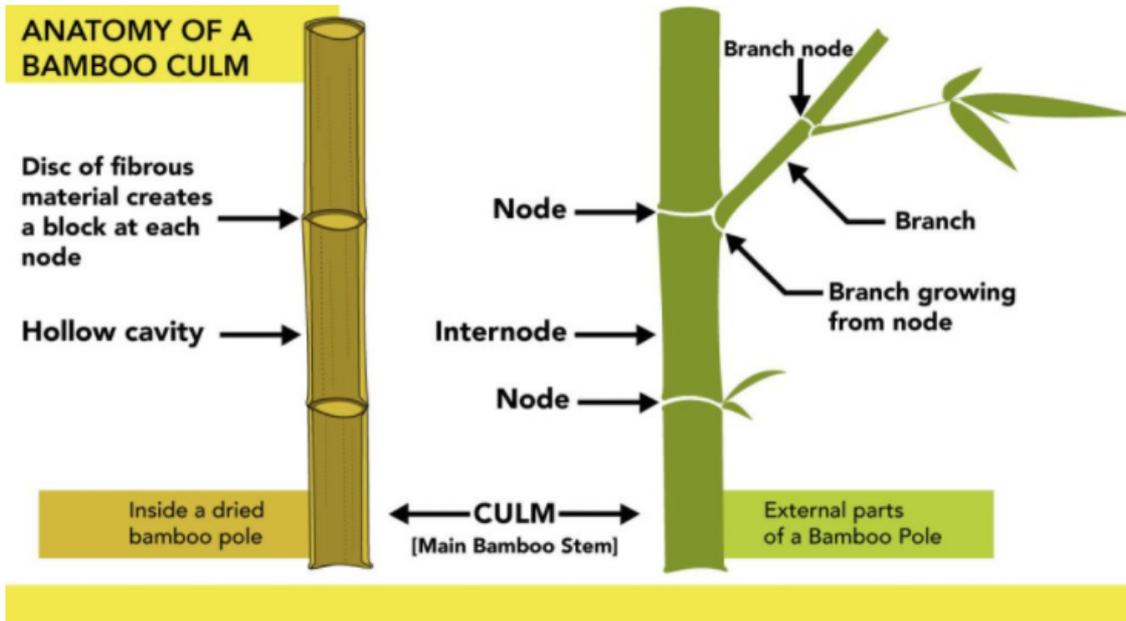
#### Introduction

- BEEMA BAMBOO is a superior clone, selected for high biomass yielding out of Bambusa balcooa.
- It is the product of continuous research effort for over 8 years by Dr N. Barathi, of GrowMore Biotech.
- The Tamil Nadu Agricultural University (TNAU) has designed an 'oxygen park' within its premises at Coimbatore with Beema Bamboo.

#### Features

- It is a superior clone, selected from Bambusa balcooa, a higher biomass yielding bamboo species. This bamboo clone has been developed by the conventional breeding method.
- This species is considered to be one of the fastest-growing plants.
- It grows one-and-a-half feet per day under tropical conditions.
- It is thorn-less and sterile.
- It is said to be the best 'carbon sink' to mitigate carbon dioxide emissions.
- A fully-grown bamboo tree may generate over 300 kilograms of oxygen annually and it may be sufficient for one person for one year.
- A four-year-old bamboo may absorb over 400 kg of carbon dioxide per annum from the surrounding areas.
- Bamboo raised on one acre can sequester 80 tonnes of carbon dioxide annually.
- The plants developed through tissue culture are free from pest and disease, vigorous and superior
- and they can grow in the field for more than hundred years without any replanting.
- It is said that if managed by following the silvicultural methods, irrigation practices and fertiliser package as prescribed by Grow more Biotech Ltd, it may yield higher biomass.
- Beema Bamboo is not a product of genetically modified organisms.
- In this case, new culms only grow around the mother shoot and hence it is non-invasive.
- A culm is the hollow stem of a grass or cereal plant, especially that bearing the flower.
- As it is sterile, this bamboo does not produce any seed and does not die also for several hundred years and keeps growing without death.
- As a result, this particular bamboo species can be able to establish permanent green cover.
- Since the plants are produced through tissue culture, the culms grow almost solid and adapt to different soil and climatic conditions.
- After every harvest cycle, it re-grows and does not require replanting for decades.

- As its rhizome and root formation provide a strong foundation, the plant becomes robust against natural forces and plays a major role in mitigating global warming and climate change.



## Uses

- The bamboo's calorific value is equal to that of coal.
- Cement industries are buying this bamboo species for their boilers.
- Bamboo fibre is used by the textile industry for making fabric and garments.
- The Beema Bamboo can be an excellent choice for making the earth greener and mitigating climate change.

## 6. Science & Technology

### 6.1. Mucormycosis (Black Fungus)

- It is a very rare infection caused by exposure to a group of moulds called mucormycetes that are found throughout the natural environment (soil, plants, manure, decaying fruits and vegetables)
- It affects the sinuses, lungs, skin and brain and can be life-threatening for people who are on medication for other conditions, especially diabetes, that reduce their ability to fight environmental pathogens
- The sinuses or lungs of such individuals get affected after fungal spores are inhaled from the air
- Warning signs include fever, headache, coughing, breathlessness, blood vomits and altered mental status
- Patients suffering from the fungal infection typically have symptoms of stuffy and bleeding nose; swelling of and pain in the eye; drooping of eyelids; and blurred and finally, loss of vision. There could be black patches of skin around the nose
- Relation with COVID-19
- Doctors believe mucormycosis, which has an overall mortality rate of 50%, may be being triggered by the use of steroids which are being used as a life-saving treatment for severe and critically ill covid-19 patients
- Steroids reduce inflammation in the lungs for Covid-19 and appear to help stop some of the damage that can happen when the body's immune system goes into overdrive to fight off coronavirus
- But they also reduce immunity and push up blood sugar levels in both diabetics and non-diabetic Covid-19 patients.
- It's thought that this drop in immunity could be triggering these cases of mucormycosis