<table>
<thead>
<tr>
<th>S. No.</th>
<th>News Articles</th>
<th>Page Number*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>C B D H T</td>
</tr>
<tr>
<td>1</td>
<td>Past Year Prelims Question</td>
<td>@ beginning of video</td>
</tr>
<tr>
<td>2</td>
<td>India's first bio-brick based building opened at IIT-H</td>
<td>- - - 2 -</td>
</tr>
<tr>
<td>3</td>
<td>A Hydro Onslaught The Himalayas Cannot Take (Editorial)</td>
<td>10 6 6 6 6 6</td>
</tr>
<tr>
<td>4</td>
<td>‘DNA fingerprint for crime negligible’</td>
<td>- - - 2 -</td>
</tr>
<tr>
<td>5</td>
<td>Dragon fruit a hit in Pangode</td>
<td>- - - 2 -</td>
</tr>
<tr>
<td>6</td>
<td>Long wait for a Deputy Speaker for Lok Sabha</td>
<td>12 8 8 8 8 8</td>
</tr>
<tr>
<td>7</td>
<td>North Korea rejects Chinese vaccines: UNICEF</td>
<td>15 11 11 11 11</td>
</tr>
<tr>
<td>8</td>
<td>Prelims Practice Questions</td>
<td>@ end of the video</td>
</tr>
<tr>
<td>9</td>
<td>Mains Practice Question</td>
<td></td>
</tr>
</tbody>
</table>

*C – Chennai; B – Bengaluru; D – Delhi; H – Hyderabad; T – Thiruvananthapuram
Previous Year Question – Prelims 2016

Q. Banjaras during the medieval period of Indian history were generally

(a) agriculturists  
(b) warriors  
(c) weavers  
(d) traders

The Banjaras were the most important trader-nomads. Their caravan was called tanda. Sultan Alauddin Khalji (Chapter 3) used the Banjaras to transport grain to the city markets. Emperor Jahangir wrote in his memoirs that the Banjaras carried grain on their bullocks from different areas and sold it in towns. They transported food grain for the Mughal army during military campaigns. With a large army there could be 100,000 bullocks carrying grain.
### Previous Year Question – Prelims 2016

Q. What is/are unique about ‘Kharai Camel’, a breed found in India?

1. It is capable of swimming up to three kilometres in seawater.
2. It survives by grazing on mangroves.
3. It lives in the wild and cannot be domesticated.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3
Previous Year Question – Prelims 2016

Q. The ‘Swadeshi’ and ‘Boycott’ were adopted as methods of struggle for the first time during the

(a) agitation against the Partition of Bengal
(b) Home Rule Movement
(c) Non-Cooperation Movement
(d) visit of the Simon Commission to India
Previous Year Question – Prelims 2016
Q. With reference to ‘Red Sanders’, sometimes seen in the news, consider the following statements:
1. It is a tree species found in a part of South India.
2. It is one of the most important trees in the tropical rain forest areas of South India.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Previous Year Question – Prelims 2016
Q. What was the main reason for the split in the Indian National Congress at Surat in 1907?
a) Introduction of communalism into Indian politics by Lord Minto
b) Extremists’ lack of faith in the capacity of the moderates to negotiate with the British Government
c) Foundation of Muslim League
d) Aurobindo Ghosh’s inability to be elected as the President of the Indian National Congress
Previous Year Question – Prelims 2016

Q. Consider the following statements:

1. The minimum age prescribed for any person to be a member of Panchayat is 25 years.
2. A Panchayat reconstituted after premature dissolution continues only for the remainder period.

Which of the statements given above is/are correct?

(a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

Previous Year Question – Prelims 2016

Q. There has been a persistent deficit budget year after year. Which action/actions of the following can be taken by the Government to reduce the deficit?

1. Reducing revenue expenditure  
2. Introducing new welfare schemes  
3. Rationalizing subsidies  
4. Reducing import duty

Select the correct answer using the code given below.

(a) 1 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2, 3 and 4
India’s first bio-brick based building opened at IIT-H

‘It is going to be a game changer for farmers as agricultural waste will become an income generator’

SPECIAL CORRESPONDENT

India’s first bio-brick based building was inaugurated at Indian Institute of Technology-Hyderabad (IIT-H) on Thursday by Director B.S. Murty.

A prototype of the guard cabin was designed and set up in the space allocated by IIT-H.

It is part of the Bold Unique Idea Lead Development (BUILD) project to demonstrate the strength and versatility of the material.

The sample building is made up of bio-bricks supported by a metal framework. The roof is also made of bio-bricks over PVC sheets to reduce heat. Both inside and outside walls are cement-plastered to protect the bio-bricks from rain. PhD scholar Priyabrata Rautray under his supervisor Prof. Deepak John Mathew at the Department of Design and his team have published two international conference papers on bio-bricks at IGD 2019, Delft University and ICORD 2021, IIT Mumbai.

The research team received a ‘Special Recognition Trophy’ for sustainable housing at Rural Innovators Start-Up Conclave 2019 organised by National Institute of Rural Development and Panchayati Raj (NIRDPR) Hyderabad.

In April this year, Priyabrata and his team were awarded the ‘Indian Patent’ for the bio-brick material and the manufacturing technology. Congratulating Priyabrata and his team on completion of the bio-bricks project, Prof. Murty said, “BUILD project is one of the amazing initiatives IIT-H has taken during the pandemic. BUILD objective is to bring out the best innovative and unique idea our students have and provide them the necessary support to convert their idea into reality. Many such incredible ideas were supported to promote innovation and service to the society at large. It is a perfect illustration of ‘Wealth from Waste’ and we would be submitting a proposal for promoting its wider adoption by the rural community to the Ministry of Agriculture & Farmers Welfare.”

“This innovation is going to be a game changer for farmers as their agricultural waste will become an income generator for them. Also, this will give employment to them during their lean period,” said Prof. Deepak John Mathew.

“I am happy to complete this project. I sincerely hope farmers adopt this technology to build their homes. I would like to dedicate this accomplishment to my father, whom I lost last year due to the pandemic,” said Rautray.

Bio-brick

- New type of brick made from bio-waste.
  - Sugarcane bagasse, wheat husk, paddy and wheat hey or straw stubbles, leftover wood etc.
  - Also known as agro-waste based brick.

Image source: https://www.hindustantimes.com/
Manufacturing process

Select dry agro-waste and chop

Preparing lime-based slurry

Mix chopped agro-waste

Preparing lime-based slurry

Pour into moulds & ram with wooden block

Homogenous mixture

Pour into moulds & ram with wooden block

Homogenous mixture

Pour into moulds & ram with wooden block

Homogenous mixture

Remove moulds

Air dry for 15 to 20 days

Covered by a rigid skin (carbonate lime)

Benefits

• Very cheap and simple production process.
• Mitigates or eliminates pollution.
• Sustainable and reduces carbon footprint.
  ✓ Naturally dried and doesn’t use controlled or machine drying.
  ✓ No decomposition of the material - absorbed carbon dioxide stays locked.
  ✓ Act as a carbon sink.
  ✓ Eco-friendly.
• Good insulation to heat and sound - low thermal conductivity.

• Time taken - approx. a month - to air dry and attain working strength.
• Cannot be used directly to build load-bearing structures - not strong as burnt clay bricks
  ✓ Have less compressive strength compared to fired clay bricks or concrete blocks.
• Research needed to evaluate end-of-life usages.
• Almost same time to manufacture bio-bricks like the traditional fired clay bricks.

• Light in weight.
  ✓ Can be effectively used in framed structure as non-load bearing walls.

  ✓ Low-cost housing with combination of wooden/metal structural frame works.

• Reuse – Could be pulverised and mixed with new bio-mass to make new bio-bricks.

• Income generator for farmers.
### Part A—Preliminary Examination

**Paper I - (200 marks)**
- Current events of national and international importance.
- General issues on Environmental ecology, Bio-diversity and Climate Change - that do not require subject specialization.

### Part B—Main Examination

**PAPER-III**

General Studies- II: Governance, Constitution, Polity, Social Justice and International relations.
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

**PAPER-IV**

- Conservation, environmental pollution and degradation, environmental impact assessment.
- Disaster and disaster management.

### Criticisms - Affidavit

#### Recommendations - Against the core mandate
- To conserve the natural environment.

#### Conceal - Ministry’s own observations and admissions
- Earlier 2014 - Hydroelectric projects did aggravate the 2013 flood.

#### Conceal - Prime Minister’s Office Policy Decisions
- Cancel - projects that have not reached 50%
- No newer hydropower projects on the Ganga.
- Decision’s logic - Contradicting.
  - Devastating impact - Government insists on pursuing due to the money spent on them.

### Background Issue

- **Issue** - Ministry of Environment, Forest and Climate Change filed an affidavit - Hydropower Projects in the Himalayan Region.
- **Recommendation** - Construction of 7 partially constructed hydroelectric projects.
• Repeated Disasters - State of Uttarakhand.
• Findings - Increasing Anthropogenic pressure acted as both a direct or an indirect contributor.

Expert committees - pointed out the same.
• First expert body - Ravi Chopra.
  ✓ Adverse environmental risks posed by such structures and their role in aggravating the disaster.
• Formation - Various committees one after the other until it got approval for these projects with some design changes.

Why hydro power projects are not a viable option in the Himalayas?

Sustainability of the dams
• Hydropower - Excess availability of water.
• Glaciers - sustains the drainage network within the mountain chain.
• Climate change - Impacts of global warming trends.
• Temperatures - projected to rise.
• Retreating glaciers and the alternating phases of floods and drought - impact the seasonal flows of rivers.
• Intergovernmental Panel on Climate Change - fragile mountainous ecological regimes.

Impacts on Human Settlements
• High-capital intensive ventures - Negative impact over the local communities and their livelihoods.

Lack of Efficiency
• Loss of water and forests - Below efficiency and end up rendering the area fragile.
• Cost of electricity - Phenomenally high and likely to have no much buyers as well.

Problem
• Intense anthropogenic activities and the increase in hydroelectric projects has got more negatives than positives.

Conclusion
• Government Initiatives
  ✓ To refrain from the construction of such hydroelectric projects.
  ✓ To declare the upper reaches of all the headstreams of Ganga as eco-sensitive zones.
DNA fingerprinting

• Kind of laboratory technique - Establish a link between the biological evidence and a suspect in a criminal investigation

• Initial procedure - To obtain a sample of cells, which contain DNA
  ✓ Samples of skin, hair or blood cells
• DNA - Extracted from the obtained cells and purified under this technique.

• Comparison - Secured sample with the DNA sample from a suspect.

• Matching - Evidence came from that suspect
• Not matching - Evidence cannot have come from the suspect.

Source: DNA Fingerprinting (genome.gov)
Applications

- Forensics and legal disputes
  ✓ Solve crimes
  ✓ To determine paternity
- Matching the tissues of organ donors with those of people who need transplants.
- To identify diseases that are passed down through your family.
- Help to find cures for hereditary conditions.

Dragon fruit a hit in Pangode

Local body encouraging all households to grow at least a plant

SPECIAL CORRESPONDENT

The dragon fruit, the latest addition to the State’s fruit basket, is creating ripples at Thamnichal in the Pangode gram panchayat.

E. Vijayan, a farmer, started growing the fruit on an experimental basis, but scaled it up to commercial levels after a good harvest. Today, the dragon fruit farm at Thamnichal covers 15 acres and has different varieties.

On its part, the Pangode panchayat is hoping to become the first ‘dragon fruit panchayat’ in the State. The local body is encouraging every household to grow at least one plant. Cultivation has been kicked off in several wards, according to the district administration.

Suitable climate

Native to the Americas, the dragon fruit had become a hit with farmers in Kerala who discovered that the climate in the State is suitable for its cultivation. With the fruit gaining popularity here, the State Horticulture Mission is now offering a per-hectare subsidy of ₹30,000 for its cultivation.

A big attraction for farmers is that the plant is easy to grow.

A seven-foot column with a strong stem is fixed on the ground so that the dragon fruit vines can climb up. Up to six harvests are possible in a year on a single plant. A three-year-old plant produces around 25 fruits.

A single fruit weighs, on an average, 400 gm. Incidence of pest attacks on the plant is relatively low, which is a boon for farmers.

On rooftops too

The dragon fruit can also be grown in rooftop gardens. According to the district administration, numerous visitors drop in at the Thamnichal farm to check out the fruit and savour the distinct taste.
News – The Pangode panchayat is hoping to become the first ‘dragon fruit panchayat’ in the State.

✓ The local body is encouraging every household to grow at least one plant.

Source: https://news.cgtn.com/

Characteristics

• Belongs to the climbing cacti family.
• Grows well in dry areas.
• Native to Central America.
• Epiphytic nature – grows best in soil with a high level of organic materials.
✓ Epiphyte – also called air plant, any plant that grows upon another plant or object merely for physical support.

• A seven-foot column with a tyre atop it is fixed on the ground so that the dragon fruit vines can climb up.
• Flowers bloom only at night – “moonflower” or “Lady of the Night”.
• The plants can have between four to six fruiting cycles in one year on a single plant.
• A three-year-old plant produces around 25 fruits.
• It can be propagated by seed or by stem cuttings.
Distribution

- Grows in tropical regions of the world.
- Commercially cultivated and widely distributed throughout the tropics and some temperate regions, including South-East Asia, China, Israel, Africa, Australia, North America, tropical South America and the West Indies.

Source: https://www.cabi.org/
### News
- Petition says that keeping the post of Deputy Speaker of the Lok Sabha vacant is a violation of Article 93 of the Constitution.

### Election of Deputy Speaker
- Elected by Lok Sabha from amongst its members.
- Elected after the election of the Speaker has taken place.
- The date of election of the Deputy speaker is fixed by the Speaker.
- Remains in office usually during the life of the Lok Sabha.

### Vacancy
| 1. If he ceases to be a member of the Lok Sabha; |
| 2. If he resigns by writing to the Speaker; and |
| 3. If he is removed by a resolution passed by a majority of all the then members of the Lok Sabha. Such a resolution can be moved only after giving 14 days' advance notice. |

### Functions
- Performs the duties of the Speaker's office when it is vacant.
- Acts as the Speaker when the speaker is absent from the sitting of the House.
- Presides over the joint sitting of both the Houses of Parliament, in case the Speaker is absent from such a sitting.
- Directly responsible to the House - Deputy Speaker is not subordinate to the Speaker.

### Powers
- Automatically becomes chairman of parliamentary committee whenever appointed.
- Can only exercise a casting vote in the case of a tie.
- When the Speaker presides over the House - the Deputy Speaker is like any other ordinary member of the House. (can speak in the House, participate in its proceedings and vote on any question before the House).
North Korea rejects Chinese vaccines: UNICEF

AGENCE FRANCE-PRESSE

Seoul

North Korea has rejected around three million doses of a Chinese COVID-19 vaccine, suggesting they should be given to countries in greater need, UNICEF said on Thursday.

The impoverished North was the first country to impose a strict lockdown when it sealed its border in January last year to stop the virus spreading from neighbouring China, where it first emerged before sweeping the world.

Pyongyang insists it has yet to see any cases of the virus – a claim that analysts doubt – but it has paid a huge economic price for the blockade, with the regime admitting in June it was tackling a "food crisis".

Regardless, the isolated country told UNICEF—which distributes vaccines under the COVID-19 Vaccine Global Access (Covax) programme for low-income countries—that the Chinese-made vaccines could be given to others, UNICEF said.

North Korea's Public Health Ministry has communicated that the 2.97 million Sinovac doses being offered to DPR Korea may be relocated to severely affected countries in view of the limited supply and surge in some countries, a UNICEF spokesperson told AFP.

Pyongyang would "continue to communicate" with COVAX "to receive COVID-19 vaccines in the coming months", they added.

In July, a South Korean think tank affiliated with Seoul’s spy agency said Pyongyang had also rejected shipments of AstraZeneca's vaccine offered by the Covax scheme, apparently over concerns about side effects.

The Institute for National Security Strategy added at the time that the North was not equipped with sufficient cold chain storage for the Pfizer and Moderna vaccines.

UNICEF


• Works in 190 countries and territories.

• Main objective - save children’s lives, defend their rights, and help them fulfil their potential.

News

• North Korea has rejected around three million doses of a Chinese COVID-19 vaccine

• Functions of UNICEF

✓ UNICEF works to ensure the child survival - Reduce child mortality.

✓ Education to every children.

✓ Reduce child poverty and shield girls and boys from its lifelong consequences.

✓ Work to ensure gender equality - empower girls and women, and to ensure their full participation in political, social, and economic systems.
Reports and Indices released by UNICEF

- Report on Regular Resources
- The state of the World's Children reports
- Averting a lost Covid Generation Report
- Multiple Indicator Cluster Survey
- Sustainability Index and Flourishing Index (WHO, UNICEF & THE LANCET)
- State of Food Security and Nutrition in the World (FAO, IFAD, UNICEF, WFP, WHO)

Practice Question – Prelims

Q. Consider the following statements:

1. The institutions of Speaker and Deputy Speaker originated in India under the provisions of the under Indian Councils Act of 1909 (Morley-Minto Reforms).

2. Since the 11th Lok Sabha, there has been a consensus that the Speaker comes from the ruling party and the post of Deputy Speaker goes to the main opposition party.

Which of the above statements is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Practice Question – Prelims

Q. DNA Fingerprinting finds applications in which of the following?

1. To help solve crimes and to determine paternity

2. To find cures for hereditary conditions

3. To match the tissues of organ donors with those who need transplants.

Choose the correct answer from the codes given below:

(a) 2 and 3 only
(b) 1 and 2 only
(c) 3 only
(d) 1, 2 and 3
**Practice Question – Prelims**

Q. Which of the following statements is **incorrect** with reference to Bio-bricks, recently seen in news?

a) It is made from sugarcane bagasse, paddy stubbles and leftover wood.

b) It **can be used directly to build load-bearing structures**.

c) It is eco-friendly and acts as a carbon sink.

d) It provides good insulation to heat and sound.

**Practice Question – Mains**

GS – II/III

Q. Despite the need to press on with the conservation and protection in the already fragile and vulnerable Ganga-Himalayan basin, there is an increasing anthropogenic pressure. Discuss.

(250 Words, 15 Marks)