

**5 MAY 2019**

## 3D PRINTED HUMAN SKIN

### In news:

- Researchers at the IIT-Delhi have successfully 3D bio-printed human skin models that have certain anatomically relevant structural, mechanical and biochemical features similar to native human skin.
- The bio-printed skin model will have wide applications in testing cosmetics. It can also reduce and probably even replace testing on animals.
- The study was funded by ITC Ltd.



### About 3D printing:

- 3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file, for instance a CAD (Computer Aided Design) file.
- In an additive process an object is created by laying down successive layers of material until the object is created.
- It allows producing complex (functional) shapes using less material than traditional manufacturing methods.
- It is used in manufacturing, medical, industry and sociocultural sectors.
- Recently, Scientists at Tel Aviv University in Israel unveiled a 3D print of a heart with human tissue and vessels.

## BOKO HARAM

### Why in news?

- Days just earlier, five Nigerian soldiers were killed in an attack launched by Boko Haram.

### About Boko Haram:

- It is a jihadist terrorist organization based in north-eastern Nigeria, also active in Chad, Niger and northern Cameroon.
- It is also known as Islamic State in West Africa or the Islamic State's West Africa Province.
- It was founded by a religious fundamentalist Mohamed Yusuf in 2002.
- Its main goal was to "purify Islam in northern Nigeria".
- Boko Haram opposes not only Western education, but Western culture and modern science as well.
- From March 2015 to August 2016, the group was aligned with the Islamic State of Iraq and the Levant (ISIL).
- It started its violent attacks against the African governments from 2009.
- It has killed tens of thousands and displaced 2.3 million from their homes.
- It was ranked as the world's deadliest terror group by the Global Terrorism Index in 2015.



### NOTE



**About Religious Fundamentalism:**

- It refers to the belief of an individual or a group of individuals in the absolute authority of a sacred religious text or teachings of a particular religious leader, prophet and God.
- These fundamentalist believe that their religion is beyond any form of criticism, and should therefore also be forced upon others.

**About Global Terrorism Index:**

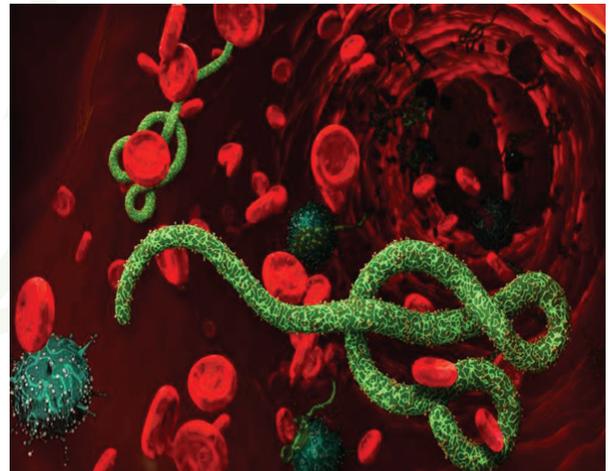
- It is a report published annually by the Sydney based think tank, Institute for Economics and Peace (IEP).
- The index provides a comprehensive summary of the key global trends and patterns in terrorism since 2000.
- The same think tank also published Global Peace Index which measures the relative position of nations' and regions' peacefulness.

**EBOLA ENDEMIC****In news:**

- More than 1,000 people have now died of Ebola in the Democratic Republic of Congo.
- The current outbreak is the second deadliest on record, after an epidemic killed more than 11,300 people in West Africa in 2014-2016.

**In Brief:**

- The central African country declared a 10th outbreak of Ebola in 40 years last August centred in the city of Beni in North Kivu province before the virus spread into the neighbouring Ituri region.
- The World Health Organisation had initially voiced hope it would be able to contain the outbreak, thanks in part to a new vaccine. But in recent weeks senior WHO officials have conceded that insecurity, scarce financial resources and local politicians turning people against health workers had seriously undermined the containment effort.

**About Ebola virus disease (EVD):**

- Ebola virus disease (EVD) is a viral hemorrhagic fever of humans and other primates caused by ebola viruses. It was first identified in 1976 in the Democratic Republic of Congo (DRC) in a village near the Ebola River, from which it takes its name.
- Transmission: The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission. Fruit bats are natural host of this virus. It spreads through contact with body fluids of infected persons such as blood, urine and saliva. It also spreads through sexual transmission.
- Symptoms: High fever, bleeding and central nervous system damage. The average EVD case fatality rate is around 50%. However, in past outbreaks case fatality rates have varied from 25% to 90%.
- Treatment: There is as yet no proven treatment available for EVD. However, a range of potential treatments including immune therapies, blood products and drug therapies are currently being evaluated. An experimental Ebola vaccine rVSV-ZEBOV is proved to highly protective against the deadly virus in a major trial in Guinea conducted in 2015.

**NOTE**

**PRELIMS BITS**

**NEWSPACE INDIA LIMITED**

**About Newspace India Limited:**

- It is a Bangalore based space company set up under the Department of Space to aid the transfer of ISRO technologies for commercial purposes.
- The company has following mandates:
  - i. transfer technology to industry for producing the commercially successful PSLV spacecraft launchers.
  - ii. Outsource assembly of small satellites and the upcoming Small Satellite Launch Vehicle (SSLV)
  - iii. To commercially exploit the R&D work done by ISRO centres and Department of Space constituents.
- The company was incorporated on March 6, 2019 with a paid up capital of Rs. 10 Crore.
- While ISRO currently has a commercial arm - Antrix Corporation Limited, which is solely involved in commercial launches of foreign satellites.

NewSpace  
**INDIA**

**ENDOBOT**

- Endobot, is a 4-wheeled robot was designed by an IIT Madras incubated startup, Solinas Integrity.
- It can identify faults and stealthy connections in pipelines, at a low cost. It captures videos and transmits a live feed to the base at the entry point and also uses laser-based techniques for examination.



**NOTE**

