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Tamagotchi Generation

A new book has predicted that by the third quarter of this century, parents will have the choice of having digital offspring, who will only exist in the digital world of metaverse. This will be the 'Tamagotchi Generation'.

- The name 'Tamagotchi' comes from the digital pet created by the Japanese toy manufacturer Bandai, which was a global rage in the 1990s and early years of this century.
- The Tamagotchi toy is an egg-shaped video game the size of a keychain, which has a screen and buttons.
- Once the pet is activated, an egg appears on the screen, and hatches into a pet for the player to raise. What the pet grows up to be depends on how it has been trained and raised by the player.
- The virtual 'Tamagotchi' children of the future can be built to look like their parents.
- Wearing high-tech gloves while handling the Tamagotchi kid might also reproduce the physical sensations of cuddling, feeding and playing with one's offspring. It is possible to choose how quickly the children grow up.
- The average lifespan of a well-cared-for Tamagochi is a mere 12 days.
- They will cost next to nothing to bring up, as they will require minimal resources. They could solve the overstated problem of overpopulation.

Reference

1. https://indianexpress.com/article/explained/everyday-explainers/tamagotchi-generation-digital-children-metaverse-explained-7949478/
2. https://www.analyticsinsight.net/stressed-about-your-child-tamagotchi-children-in-metaverse-will-obey-you-well/#:~:text=As%20a%20potential%20harbinger%20of,as%20the%20%E2%80%9CTamagotchi%20generation.%E2%80%9D
3. https://www.indiatimes.com/technology/news/tamagotchi-kids-virtual-replacement-for-children-metaverse-571064.html

PM Shri Schools

The Centre plans to set up the 'PM Shri Schools' that will aim at preparing students for the future.

- 'PM Shri Schools' will be the state-of-the-art schools that will serve as the 'laboratory of NEP 2020'.
- They will fully equip the students of the 21st-century knowledge and skills to prepare them for the future.
- The steps for preparing global citizens of the 21st century are,
    a. 5+3+3+4 approach of the NEP covering pre-school to secondary school,
    b. Emphasis on Early Childhood Care & Education Program (ECCE),
    c. Teacher training & adult education,

    d. Integration of skill development with school education and
    e. Prioritising learning in the mother tongue.
- Best practices in education coming from different states and UTs will act as a cumulative force in transforming India's youth as 'Vishwa-Manavs' (global citizens).

Reference

1. https://www.newindianexpress.com/nation/2022/jun/03/pm-shri-schools-to-prepare-kids-for-future-test-national-education-policy-2461196.html
2. https://www.hindustantimes.com/india-news/centre-to-set-up-model-schools-to-be-called-pm-shri-schools-dharmendra-pradhan-101654192819457.html

Sologamy

A 24-year-old woman from Gujarat is reportedly ready to get married to herself. She claims hers is India's first sologamy.

- Also known as 'autogamy' or 'self-marriage', Sologamy is the act of marrying oneself in a public ceremony.
- It is a symbolic ceremony of commitment to oneself. It is an act to emphasize their self-love and independence.
- Such a marriage has no legal sanction or status.
- **Origin** - It can be traced back to Linda Baker, a dental hygienist from the US, who married herself in 1993.
- In 2021, a sologamy divorce was also reported when a Brazilian model, announced she was ending her solo-marriage after just 90 days.

Reference

1. https://www.newindianexpress.com/cities/delhi/2022/jun/03/love-and-marry-thyself-here-is-what-youngsters-think-aboutsologamy-246125html
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AstroSat

Pune-based Inter-University Centre for Astronomy and Astrophysics (IUCAA) announced that AstroSat had detected 500 black hole formations in over 6 years of its operation.

- Launched in 2015, AstroSat is a multi-wavelength astronomy mission on an Indian Remote Sensing (IRS)-Class satellite in a 650-km, near-equatorial orbit.
- AstroSat is India's first dedicated multiwavelength space telescope.
- It is operated by Indian Space Research Organisation (ISRO).
- It carries 5 instruments onboard the satellite - UV Imaging Telescopes (UVIT), Large Area Xenon Proportional Counters, CZTI, Soft X-ray Telescope and a Scanning Sky Monitor.
- [The instrument behind the discovery is the Cadmium Zinc Telluride Imager (CZTI), one of the 5 gadgets on board of the AstroSat telescope.]
- It studies the celestial sources in X-ray, optical and UV spectral bands simultaneously with its 5 X-ray and UV telescopes working in tandem.
- It enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite.

- **Objectives** of AstroSat mission are:
    1. To understand high energy processes in binary star systems containing neutron stars and black holes;
    2. Estimate magnetic fields of neutron stars;
    3. Study star birth regions and high energy processes in star systems lying beyond our galaxy;
    4. Detect new briefly bright X-ray sources in the sky;
    5. Perform a limited deep field survey of the Universe in the UV region.
- The Ground Command and Control Centre for ASTROSAT is located at ISRO Telemetry, Tracking and Command Network (ISTRAC), Bangalore.
- **Related Links -** Blue Straggler Stars

Gamma-ray Bursts

- To identify a black hole formation, gamma-ray bursts (GRBs) are to be studied.
- The GRBs are bright explosions that release gamma-ray light. They are the most energetic form of light, a million times brighter than the sun.
- But they typically last for only seconds. And so much energy is put out in such a little time.
- **Production** - In some gamma bursts, there is a connection with the supernova - a bright explosion happening when a star reaches its end and forms a black hole.
- GRB also happens when two neutron stars merge. It can occur when a neutron star joins with the black hole also, in principle.
- At the end of this process, you either have a black hole or in some cases, you may be left with a high-speed, spinning, strongly magnetised neutron star, which goes by the name millisecond magnetar.
- [Millisecond refers to the spin period, and magnetar means it is very strongly magnetised.]

Reference

1. https://www.downtoearth.org.in/interviews/science-technology/isro-satellite-detected-500-black-hole-formations-in-6-years-mission-scientist-tells-us-how-they-did-it-83129
2. https://www.isro.gov.in/astrosat-0

International Liquid-Mirror Telescope

The International Liquid-Mirror Telescope (ILMT) is commissioned an altitude of 2450 m at the Devasthal Observatory of Aryabhatta Research Institute of Observational Sciences (ARIES), Uttarakhand.

- This telescope is the first liquid mirror telescope in the country and the largest in Asia.
- It is designed exclusively for astronomical observations in order to identify transient or variable objects such as supernovae, gravitational lenses, space debris, etc.
- Built by astronomers from **India, Belgium and Canada**, the novel instrument employs a 4-m-diameter rotating mirror made up of a thin film of liquid mercury to collect and focus light.
- A pool of mercury, which is a reflective liquid, is spun so that the surface curved into a parabolic shape which is ideal for focusing light.
- A thin transparent film of mylar protects the mercury from wind.
- The reflected light passes through a sophisticated multi-lens optical corrector that produces sharp images over a wide field of view.
- A large-format electronic camera located at the focus records the images.
- Liquid mirror technology said that the rotation of the earth causes the images to drift across the camera, but this motion is compensated electronically by the camera.

- This mode of operation increases observing efficiency and makes the telescope particularly sensitive to faint and diffuse objects.

Reference

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3. https://indianexpress.com/article/cities/pune/world-first-liquid-mirror-telescope-ilmt-astronomy-india-7950006/

