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### UNACADEMY

### ICT

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- Theory
- Explanation
- Derivation
- Example
- Shortcuts
- Previous Years Question With Solution

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13/10/2019

# Introduction To ICT and its Back Ground

ICT:- Information & Communication Technologies.

Weightage: (18-20m). ⇒ [Q's from Mobile Apps | Web | online platforms | sites]

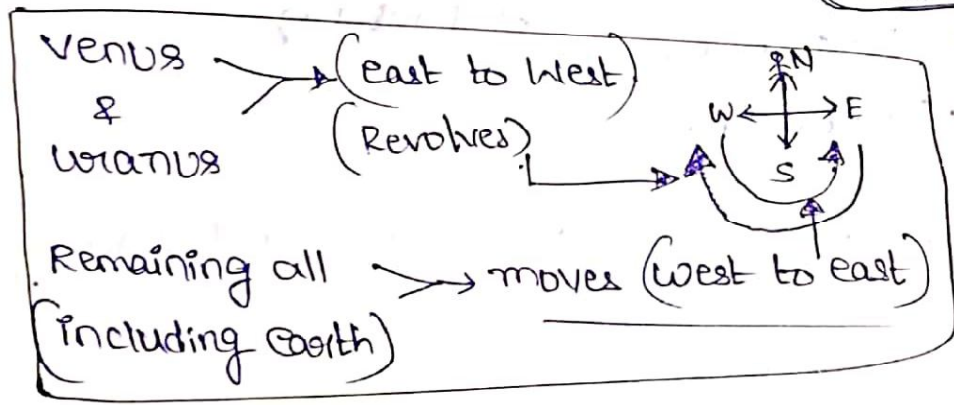
Q's from these topics.

- UMANG
  - BHIM
  - NEFT
  - RTGS
  - IMPS
  - Cryptocurrency
  - PRAGATI.
  - e-governance.
  - e-Nam.
- AI (Artificial Intelligence).
  - Hardware | software names
  - CDMA:- Code Division Multiple Access.
  - Languages
  - IEEE
  - operating frequency Range. (2G, 3G, 4G).
  - OSI Model.
  - 3D-printing
  - ✓ Digital India.
  - Digi locker.
  - FARE Tag
  - NPCI.

Mostly, Current-Affairs related ICT Q's will be asked in ESE Exam

This part covers both ICT and Current Affairs.

- 1) Mercury :- Nearest planet
- 2) Venus :- Hottest (or) Brightest (Due to Excessive GHGs)
- 3) Earth :- Life exists: That region called as: Goldilocks zone.
- 4) Mars :- → (Red Planet) [परार दुम रह था !!]  
 --- Asteroid belt (Stones moves area).
- 5) Jupiter :- Largest planet
- 6) Saturn :- Rocks / stones around saturn (gases + Asteroids): i.e why belt around.
- 7) Uranus :-
- 8) Neptune :-
- 9) Pluto :- dwarf planet (Others like Ceres, Eris, Haumea, Makemake)  
 Earlier Pluto is considered as planet, <sup>now</sup> but it is not.  
 Smallest dwarf planet



To become a planet some eligible conditions will be there like distance, orbital revolution etc.

अपने conditions एंड एंड 'pluto' एंड एंड से, एंड, प्लेनरि कंसीडर वॉल्वे एंड.

→ (Lies near by earth in which scientists searching earth like objects.)  
→ Goldilocks zone ::

→ Max<sup>m</sup> No. of moon :: (Saturn) - (82 No's)  
→ Largest moon :: - Titan. (of Saturn)  
Jupiter - (79).  
↓  
→ Largest moon of Jupiter :: Ganymede.

→ Mercury & Uranus :: - No Atmosphere.

⇒ NASA Missions | Space Craft :: Full form :: NASA

NASA: National Aeronautics and Space Administration.

Estd :: - 1958. {Estd: Established}

HQ :: - Washington D.C.; United States.

→ MESSENGER :: - Mercury

→ NEW HORIZONS :: - Pluto

→ JUNO :: - Jupiter. [JUNO: World's 1<sup>st</sup> Fully Solar Power Space Craft].

→ MAVEN :: - Mars Atmosphere & volatile evolution.

↳ :: space craft :: - Curiosity rover.

→ CASSINI - HUYGENS :: - SATURN.

(Estd: Established)

→ ASIRIS - Rex :- To study about Asteroids.

→ TESS :- NASA's Observatory. (Operational).  
(LAB).

→ Kepler :- NASA's observatory to discover earth like objects.  
↳ :- (Decommissioned Now.)

NOTE :- Exoplanet :- Planet outside our solar system.

→ ISRO :- [Space Application Centre] SAC :- Ahmedabad.

↳ Remote Sensing :- (Hyderabad)  
Centre

→ ASTROSAT :- India's first Multiwavelength Observatory.

→ India's Heaviest satellite :- GSAT-11.

⇒ India's " " Rocket :- GSLV MK III.

⇒ Chandrayan - I :- ISRO's Lunar Mission.

Launched in :- 2008

By using :- PSLV - C11.

PSLV :- Polar Satellite  
Launch vehicle

evidence found :- Ice evidence  
[Jawahar Point].

## ⇒ Chandrayaan-2 :-

Launched on :- 22<sup>nd</sup> July, 2019.

Reached on Moon :- 20<sup>th</sup> Aug, 2019. (Moon's South pole).

Aim :- Soft Landing.

Lander :- Vikram.

Rover :- Pragyaan.

Launched from :- Satish Dhawan  
Space Centre.  
[Shriharikota].

Launched by Using :- GSLV MK III.  
Rocket - (named) ↑

India became 4<sup>th</sup> Country after USA<sup>1</sup>, China<sup>2</sup>, Russia<sup>3</sup>,  
to Launch Lunar Mission.

↓  
Both Chandrayaan-1  
and Chandrayaan-2  
were launched  
from here.

⇒ PSLV :- Polar Satellite Launch vehicle.

⇒ GSLV :- Geosynchronous Satellite Launch vehicle.

⇒ RLVTD :- [Reusable Launch Vehicle - Technology Demonstrator]

↳ India became 4<sup>th</sup> Country to Launch RLVs.

→ Aditya-I :- ISRO's Solar Mission. (2020).

→ Artificial moon }  
Artificial sun } → China.

→ World's fastest Super Computer :- Summit [Developed by IBM, USA]

→ India's " " " :- Pratyush [Pune].

↓  
[ "Developed by CDAC"  
↓  
"Department  
Centre for Development  
of Advance Computing." ]

→ Silica Aerogel :- World's Lightest material.

(developed by ISRO)

→ GAGANYAAN :- To be launched by the year "2022".

→ ISRO's 1<sup>st</sup> Human Mission.

→ It will carry 3 Astronauts for 5 to 7 days, at an altitude of 300km. [Low Earth Orbit - LEO].

→ GSLV - MK III Rocket will be used.

→ India became <sup>(4)</sup> 4<sup>th</sup> country to launch Manned Mission after <sup>(1)</sup> USA, <sup>(2)</sup> China, <sup>(3)</sup> Russia.

→ INSIGHT :- NASA's Mission for deep interior study of Moon.

→ GAGAN :- "GPS Aided Geo Augmented Navigation System".

→ developed by ISRO & AAI.

→ Mainly used by Railways and Airports.

→ Navigation Systems :- (of Different Countries).

① GPS [Global Positioning System] - USA

↳ 31 Active Satellites. [Total :- 74 Satellites].

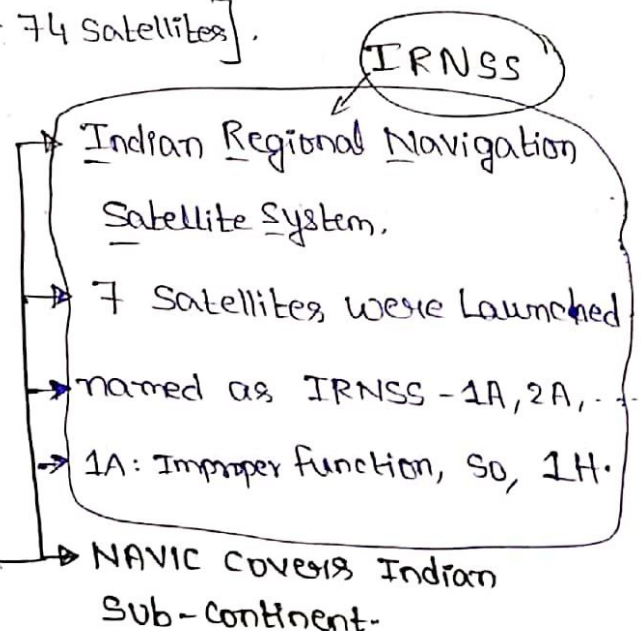
② GLONASS :- Russia

③ GALILEO :- European Union.

④ Beidou [Bei Compass] :- China.

⑤ Quasi Zenith :- Japan.

⑥ IRNSS [Bei NAVIC] :- ISRO





[atom Ekede 'Shayad: ?' (Hindi)  
Lakshana]

NOTE:-

In single launch ISRO placed 104 Satellites by using PSLV C-37,  
in 2017.

- India's 1<sup>st</sup> satellite :- 1975 [Aryabhata].
- 1<sup>st</sup> person on Moon :- Neil Armstrong [APOLLO MISSION], USA
- 1<sup>st</sup> INDIAN in space :- Squadron Leader. Rakesh Sharma.  
[MISSION SOYUZ, USSR].
- 1<sup>st</sup> Indian Woman in space :- Kalpana Chawla.
- 1<sup>st</sup> Dog in space :- Laika, (SPUTNIK-2, USSR).  
↓  
Died, (Over-Heating).

⇒ CERN :- (Location : Geneva).

↳ World's Largest Nuclear physics project, to find out fundamental  
sub-atomic particles. (electron, proton, neutron).

- under this project, Large Hadron Collider [LHC] installed in  
underground Tunnel.
- Bombardment of atoms takes place inside LHC resulting generation  
of subatomic particles like Higgs Boson (God's particle),  
chi-3p, baryons, Neutrino etc.,  
↳ Neutral nature subatomic particle ✓
- These sub-atomic particles helps scientists to understand about  
evolution of universe.

→ CERN : Members :- 22 + (4) → Associate members  
→ Including Pakistan.

In 2017 :- India became associate member of CERN.

→ India's 1<sup>st</sup> Neutrino observatory :- Themis. (Tamil Nadu).

(Noble Physics)

→ In 2016, NASA experimentally detected Gravitational Waves.

→ Under ELISA PROJECT.

Found by NASA

→ helps scientist to understand about formation of Black holes.

→ LISA Path finder detected gravitational waves.

(LASER Interferometer Space Antenna)

1916 - Einstein

→ India's 1<sup>st</sup> Gravitational wave observatory :- ~~Chennai~~, ~~Chennai~~

:- Hingoli, [Maharashtra]

→ India's 1<sup>st</sup> 5G Lab :- IIT DELHI

→ Gravitational force : Weakest force

→ Nuclear force :- strongest force.