

Highlight on Computers and Information Technology- Expected Questions 2017Part-4 (Download PDF)

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We will be covering the important questions and topics for competitive examinations for 2017 related to Computer and IT policies. As per video tutorials and lectures at [YouTube@Examrace](#)

Find this video at: <https://www.youtube.com/video/Hr-ePIwWm2w>

Expected Questions on Computers and IT: IAS/NET 2017

SAW

- Single actuator wave like robot
- Tiny ingestible 3-D snake like robot
- Can visualize digestive system in real time

New Wi-Fi for superfast connectivity

Based on infrared rays

40 Gbit/sec

Developed by University of Netherlands

Comes from light antenna

Current WiFi - Radio signal of 2.5 to 5 gigahertz

E-Eye

- Pilot project started by GoI for e-surveillance
- By set of cameras installed in area especially National parks which can monitor and record the movement around it at 360 degree.
- Cameras are fitted with night vision features & can raise alarms when required.
- National Tiger Conservation Authority (NTCA) has approved the installation of these cameras in Corbett National Park.
 - Track animal movement
 - Check human trespassing

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- Control and avoid animal poaching
- Track habitat destruction, cutting of trees & grazing
- Better planning and coordination of authorities

Crime and Criminal Tracking Network System (CCTNS)

- Mission Mode Project under National e-Governance Plan of GoI, MHA started in 2009.
- Create comprehensive and integrated system to enhance efficiency and effectiveness of policing by adopting e-Governance and creation of a nationwide networking infrastructure for evolution of IT-enabled-state-of-the-art tracking system.
- Facilitate collection, storage, retrieval, analysis, transfer and sharing of data and information at the police station and between the police station and the State Headquarters.
- Help in online tracking cases and arrest criminals and speedy investigation.

Crime and Criminal Tracking Network System

Digital Addressable System

- Group of hardware devices and related software system for digitization and broadcasting of cable television.
- Integrated system by which signals are sent in encrypted form
- Achieved through Conditional Access System at subscriber end within the limits of authorization made, through the Conditional Access System and the subscriber management system by cable operators.

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- Good quality signal and least distortion in broadcasting

One Nation, One Grid, One Frequency Mission

- Under Power Grid Corporation of India Ltd.
- Power system in India divided into five regional grid systems.
- Later on it was planned from Regional self-sufficiency to National basis
- All five regions were connected and synchronized with same power frequency.
- Synchronization will help in optimal utilization of scarce natural resources by transfer of Power from Resource centric regions to Load centric regions.
- 2013: Southern Region was connected to Central Grid in Synchronous mode with Raichur - Solapur Transmission line

Super Ball Bot

- Kind of robot that has tensegrity structure
- Made of interlocking rods and cables which can twist itself to give itself motion of rolling.
- Developed by NASA for planetary explorations.
- Target considered is Saturn's moon Titan, which boasts an atmosphere which can slow the spacecraft's descent enough so that the robot can be dropped, without airbag or parachute, from 100 kilometers or more above the surface.
- Bounces to a landing on a planet, then deforms itself to roll to locations of scientific interest

Image of Super Ball Bot

BARBO

- 1st Made in India Industrial Robot
- Called Bravo robot

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- Designed at TAL's Pune factory
- Low cost power transmission
- Articulated robots: Fitted with rotary joints

Robophobia

- Fear of Robots and Automation
- Affecting IT industries in India
- IT Tsunami

Seabed Resident Event Profiler (SREP)

- Robotic platform by NIO
- Can be stationed at water depth
- Robot was tested at RV Sindhu Sadhana
- Research on Monsoon, Global Climate & Upwelling
- NIO has headquarters at Goa & regional offices at Kochi, Mumbai and Visakhapatnam

Cyber Physical Systems Program

- By DST
- Self driven cars (Google & Tesla)
- Autonomous unmanned vehicles
- Aircraft navigation systems
- Rs. 3000 crore
- National Science Foundation of USA started it in 2003

Bharat QR Code

- World's first interoperable payment acceptance solution launched by GoI - less-cash economy
- By National Payments Corporation of India (NPCI), Visa, MasterCard and American Express
- BharatQR code: Static (scan code & enter amount) and dynamic (new QR code will be generated in real time for every transaction)
- QR code (Quick Response code): 2-D (matrix) machine-readable bar code made up of black and white square