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Daily MCQs: 09/03/2023

1. Which of the following wildlife sanctuaries is/are embraced by the Western Ghats?

1. Eravikulam National Park
2. Nagarahole National Park
3. Sanjay Gandhi National Park
4. Namdapha National Park

Select the correct answer using the code given below

- A. 1 and 2 only
- B. 1 and 3 only
- C. 1, 2 and 3 only
- D. 3 and 4 only

2. Consider the following statements about Nitrogen fixation.

1. It is a process where Nitrogen in an inert form is converted to an organic form.
2. Nitrogen fixation is done by microorganisms such as Rhizobium, Azospirillum, Cyanobacteria, etc.

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

3. Maldharis are a tribal herdsmen community in

- A. Meghalaya
- B. Chhattisgarh
- C. Jharkhand
- D. Gujarat

4. With reference to the Polar Satellite Launch Vehicle (PSLV), consider the following statements.

1. It is a three-stage system comprising a combination of solid and liquid-fuelled rocket stages.
2. PSLV does not have the payload capacity for launching satellites into Polar Sun Synchronous Orbit.

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

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5. With reference to the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, consider the following statements.

1. It addresses the issue of workplace sexual harassment faced by women in private institutions and government organisations.
2. Unorganised sectors are outside the ambit of the Act.
3. Every employer is required to constitute an Internal Complaints Committee at each office or branch with 50 or more employees.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

Solutions:

1. Answer: C

Sol:

- **Eravikulam National Park** is located along the western ghats in the Idukki district of **Kerala**.
- It consists of high altitude grasslands interspersed with sholas. **Anamudi**, the highest peak in south India and Lakkom water fall is located inside this park. Perennial rivers in the park merge to form tributaries of the Periyar river and the Cauvery river.
- The park includes the largest surviving population of **Nilgiri tahr** and other species such as lion tailed macaques, Leopard, Tiger, Gaur, Indian muntjac, Sambar deer, Golden jackal, Wild dog and Dhole.

- Nagarhole National Park also known as Rajiv Gandhi National Park is located in the two districts of **Karnataka**, namely Mysore and Kodagu. Spread in an area of 247 square-miles, the park was initially a hunting reserve for the royals of **Wodeyar dynasty**, one time rulers of Kingdom of Mysore.
- Sloth Bears, Leopards, Tigers, Wild Dogs, Sambar, Four-Horned Antelopes, Spotted Deer, Barking Deer, Elephant and Wild Boars are some of the easily spotted animals of this park.
- The park was established as a wildlife sanctuary in 1955 and was upgraded into a national park in 1988. The park was declared as the 37th Tiger reserve in 1999.

- Previously known as '**Borivali National Park**', Sanjay Gandhi National Park was established in 1969 in **Mumbai, Maharashtra**. This park comprises a large protected area and extends over 104 square km.
- It is home to more than 254 species of birds, 40 species of mammals, 78 species of reptiles and amphibians, 150 species of butterflies and over a staggering 1,300 species of plants.

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- Situated within the national park is a archeological complex of some 160 rock-cut caves popularly known as the '**Kanheri Caves**'. The caves are carved from basalt rock and date from the 1st century BCE to the 10th century CE.
- **Namdapha National park** is in **Arunachal Pradesh**. The area lies close to the **Indo-Myanmar-China trijunction**.
- Namdapha is in fact the name of a river which originates from Daphabum (Dapha is the name of hill, Bum means peak of hill) and meets Noa-Dehing river. This river flows right across in a North-South direction of the National Park and hence the name Namdapha has been given.
- Other wildlife sanctuaries embraced in the Western Ghats - Agasthyamala Biosphere Reserve, Aralam Wildlife Sanctuary, Bandipur National Park, Bhadra Wildlife Sanctuary, Bhimashankar Wildlife Sanctuary, Bhimgad Wildlife Sanctuary, Cotigao Wildlife Sanctuary, Dandeli Wildlife Sanctuary, Shendurney Wildlife Sanctuary, Koyna Wildlife Sanctuary, etc.

2. Answer: C

Sol:

- Atmospheric nitrogen occurs primarily in an inert form (N_2) that few organisms can use; therefore it must be converted to an organic – or fixed – form in a process called nitrogen fixation. Hence **Statement 1 is correct**.
- Most atmospheric nitrogen is 'fixed' through **biological processes**.
- First, nitrogen is deposited from the atmosphere into soils and surface waters, mainly through precipitation.
- Once in the soils and surface waters, nitrogen undergoes a set of changes: its two nitrogen atoms separate and combine with hydrogen to form ammonia (NH_4^+).
- This is done by **microorganisms** that live in symbiotic relationships and also certain **free living bacteria**.
- **Statement 2 is correct:** Nitrogen-fixing bacteria examples comprise Rhizobium, Frankia, Azospirillum, Azotobacter, Cyanobacteria, Rhodospirillum rubrum, Klebsiella, etc.

3. Answer: D

Sol:

- Maldharis are a tribal herdsmen community in **Gujarat**. Originally nomads, they came to be known as Maldharis after settling in Junagadh district.
- They have survived through the ages by having a symbiotic relationship with lions in the **Gir national park**. Their settlements are called "**nesses**".

4. Answer: D

Sol:

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- The Polar Satellite Launch Vehicle (PSLV) is a third-generation rocket launcher **designed, manufactured and operated by the ISRO.**
- It is the first Indian launch vehicle to be equipped with **liquid stages.**
- Besides, the vehicle successfully launched two spacecraft – **Chandrayaan-1** in 2008 and **Mars Orbiter Spacecraft (Mangalyaan)** in 2013 – that later traveled to Moon and Mars respectively.
- Another notable feature was the launch of **PSLV C37** in 2017 successfully deploying 104 satellites in sun-synchronous orbit.

Technical aspects



- **Statement 1 is incorrect:** PSLV has a **four-stage system** comprising a combination of solid and liquid-fuelled rocket stages.
- The first stage at the very bottom is **solid fuelled**, having six strap-on solid rocket boosters wrapped around it. Second stage is **liquid fuelled (Vikas liquid engine)** whereas the third stage has a **solid fuelled** rocket motor. At the fourth stage, the launcher uses a **liquid propellant** to boost in outer space.
- PSLV earned its title '**the Workhorse of ISRO**' through consistently delivering various satellites to Low Earth Orbits.
- **Statement 2 is incorrect:** PSLV has a payload capacity of **1,050 kg** for launching into the GeoSynchronous Transfer Orbit and **1,600 kg** for the Polar Sun Synchronous Orbit.
- The PSLV is also capable of placing multiple payloads into orbit, thus multi-payload adaptors are used in the payload fairing.

5. Answer: A

Sol:

Key Provisions of the Act

- **Statement 1 is correct:** The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 addresses the issue of workplace sexual harassment faced by women in **private institutions and government organisations.**
- The act superseded **Vishakha Guidelines** laid down by the Supreme Court in 1997.

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- The Act defines sexual harassment at the work place and creates a mechanism for redressal of complaints. It also provides safeguards against false or malicious charges.

Definition of Workplace

- Under the Act, a workplace is defined as “any place visited by the employee arising out of or during the course of employment, including transportation provided by the employer for undertaking such a journey.”
- **Statement 2 is incorrect:** As per this definition, a workplace covers **both the organised and unorganised sectors**.
- It also includes all workplaces whether owned by Indian or foreign company having a place of work in India.
- As per the Act, workplace includes:-
 - Government organizations, including Government company, corporations and cooperative societies;-
 - Private sector organisations, venture, society, trust, NGO or service providers etc. providing services which are commercial, vocational, educational, sports, professional, entertainment, industrial, health related or financial activities, including production, supply, sale, distribution or service;-
 - Hospitals/Nursing Homes;-
 - Sports Institutes/Facilities;-
 - Places visited by the employee (including while on travel) including transportation provided by employer;
 - A dwelling place or house.

ICC & LCC

- **Statement 3 is incorrect:** Every employer is required to constitute an **Internal Complaints Committee** at each office or branch with **10 or more employees**.
- Every district will have a **Local Complaints Committee (LCC)** so as to enable women in the unorganised sector or small establishments to work in an environment free of sexual harassment.
- The LCC will receive complaints:
 - From women working in an organisation having less than 10 workers;
 - When the complaint is against the employer himself;
 - From domestic workers.
- At least **50 percent** of the nominated members in any Internal or Local Committee must be women.
- The Complaints Committees have the powers of **civil courts** for gathering evidence.
- The Complaints Committees are required to provide for **conciliation** before initiating an inquiry, if requested by the complainant.