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Q.1) The term 'Ghost nets' refer to

- a) Fishing nets that have been left or lost in the ocean
- b) Internet that isn't visible to search engines
- c) An American private military company security contracting in the Iraq War
- d) None of the above

Q.1) Solution (a)

Ghost nets are classified under Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG), which includes lines, traps, hooks, dredges and buoys.

Ghost nets can kill marine wildlife, including vulnerable species, and destroy the benthic ecosystems that exist at the lowest level of a body of water. The problem has been worsening with the global expansion in fishing operations, and the availability of more durable gear.

The United Nations Environment Programme (UNEP), in a 2009 study titled 'Abandoned, Lost or Otherwise Discarded Fishing Gear', states that almost 6,40,000 tonnes of all fishing gear (approximately 10% of the total usage) is lost or discarded in our oceans annually, in bad weather or when nets get stuck to the rocky bottom.

Additionally, "the economic impacts of ALDFG are complex and have not been estimated systematically but include incremental costs associated with fishing operations, compliance, accidents at sea, search and rescue and recovery," says a 2016 submission on 'Marine Debris, Plastics and Microplastics' by the Food and Agriculture Organisation (FAO).

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/picking-out-silent-ghosts-in-the-deep/article25146517.ece>

Q.2) Consider the following statements with respect to 'Odonates'.

1. It encompasses the dragonflies and damselflies
2. They are amphibiotic

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

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Q.2) Solution (c)

Odonata is an order of carnivorous insects, encompassing the dragonflies (Anisoptera) and the damselflies (Zygoptera). The Odonata form a clade, which has existed since the Triassic.

Dragonflies are generally larger, and perch with their wings held out to the sides; damselflies have slender bodies, and hold their wings over the body at rest.

Odonates are amphibiotic (having aquatic larval form and terrestrial adult form) insects.

Source: <https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/a-safe-haven-for-rare-dragonflies/article25147007.ece>

Q.3) Consider the following statements about 'Seemai karuvelam' trees

1. It is native to Mexico, South America and the Caribbean
2. It is an invasive species
3. It produces less oxygen and more carbon dioxide

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.3) Solution (d)

Prosopis juliflora is a shrub or small tree in the family Fabaceae commonly known as Seemai Karuvelam. It is native to Mexico, South America and the Caribbean. It was initially introduced in India during colonial times. Later in 1960s it was Seed Bombed i.e. aerially seeded by helicopter in Southern Tamil Nadu to meet firewood demand. Since then it has become an invasive species. It causes stomach poisoning in livestock by inducing a permanent impairment of its ability to digest cellulose. It causes drying up of water bodies and groundwater as it absorbs more than 4 litres of water to obtain one kg of biomass. It cannot even shelter birds as it produces less oxygen and more carbon dioxide. It causes land erosion due to the loss of the grasslands that are habitats for native plants and animals. Dispersal of the species is mainly through animals by endozoochory (dispersal by vertebrate animals).

Q.4) The place, 'Kutupalong' was in news recently. Where is it located?

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- a) Myanmar
- b) Bangladesh
- c) Thailand
- d) Vietnam

Q.4) Solution (b)

Kutupalong refugee camp is a refugee camp in Ukhaia, Cox's Bazar, Bangladesh, inhabited mostly by Rohingya refugees that fled from ethnic and religious persecution in neighboring Myanmar. It is one of two government-run refugee camps in Cox's Bazar, the other being the Nayapara refugee camp.

Source: <https://www.thehindu.com/news/international/uncertainty-shadows-the-rohingya-in-bangladeshs-kutupalong-refugee-camp/article25145560.ece>

Q.5) Consider the following statements with respect to 'Duchenne Muscular Dystrophy'

1. It is more common in boys
2. It leads to shortened lifespans

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.5) Solution (c)

Duchenne muscular dystrophy (DMD) is a severe type of muscular dystrophy. The symptom of muscle weakness usually begins around the age of four in boys and worsens quickly. DMD affects about one in 5,000 males at birth

Duchenne Muscular Dystrophy results in progressive muscular weakness leading to shortened lifespans. This is due to mutations that reduce expression of dystrophin, an essential structural protein in heart and skeletal muscles.