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#### Q.1) Consider the following statements about naval exercise MILAN

- 1. It is conducted under the aegis of the Andaman and Nicobar Command
- 2. All the members of Indian Ocean Rim Association for Regional Cooperation (IORARC) participate in the exercise

#### Select the correct statements

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

## Q.1) Solution (a)

MILAN is a congregation of littoral navies conducted biennially by the Indian Navy under the aegis of the Andaman and Nicobar Command.

The participating nations include Australia, Malaysia, Maldives, Mauritius, Myanmar, New Zealand, Oman, Vietnam, Thailand, Tanzania, Sri Lanka, Singapore, Bangladesh, Indonesia, Kenya and Cambodia.

Source: <u>https://timesofindia.indiatimes.com/india/india-to-host-naval-exercise-amid-</u> <u>chinas-manoeuvring-in-high-seas/articleshow/63070198.cms</u>

# Q.2) Consider the following statements about Indian Ocean Rim Association for Regional Cooperation (IORARC)

- 1. It is the brainchild of South Africa and India
- 2. Maldives is not a member state

#### Select the correct code:

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

## Q.2) Solution (c)

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The Indian Ocean Rim Association is an inter-governmental organisation which was established on 7 March 1997. The vision for IORA originated during a visit by late President Nelson Mandela of South Africa to India in 1995.

Members - Commonwealth of Australia, People's Republic of Bangladesh, Union of Comoros, Republic of India, Republic of Indonesia, Islamic Republic of Iran, Republic of Kenya, Republic of Madagascar, Malaysia, Republic of Mauritius, Republic of Mozambique, Sultanate of Oman, Republic of Seychelles, Republic of Singapore, Federal Republic of Somalia , Republic of South Africa, Democratic Socialist Republic of Sri Lanka, United Republic of Tanzania, Kingdom of Thailand, United Arab Emirates and Republic of Yemen.

## Q.3) Consider the following statements about Ruttom-2

- 1. It is a Medium Altitude Long Endurance drone (MALE)
- 2. It is being developed by the Defence Research and Development Organisation
- 3. It can fly missions on manual as well as autonomous modes

## 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)

Rustom 2 can fly missions on manual as well as autonomous modes. The onboard way-point navigation system allows the drone to conduct missions autonomously.

The medium-altitude prototype can fly at over 22,000 ft and is a long-endurance (MALE) UAV that has an approximate flight time of 20 hours.

It is being developed by Defence Research and Development Organisation for the three services, Indian Army, Indian Navy and the Indian Air Force of the Indian Armed Forces.

Source: <u>http://www.thehindu.com/news/national/rustom-2-uav-successfully-test-flown/article22852178.ece</u>

## Q.4) 'Samruddhi Corridor' connects which of the following cities?

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- a) Mumbai and Ahmedabad
- b) Mumbai and Nagpur
- c) Bengaluru and Chennai
- d) Delhi and Jaipur

# Q.4) Solution (b)

The project, called Samruddhi Corridor, is a 700-km expressway connecting Mumbai with Nagpur.

Officially called the Nagpur Mumbai Super Communication Expressway (NMSCE), the project is estimated to cost Rs 46,000 crore and will pass through Nagpur, Buldhana, Amravati, Wardha, Washim, Thane, Aurangabad, Akola, Bhiwandi and Nashik districts.

Source: <u>http://www.thehindu.com/news/national/other-states/spv-to-accelerate-nagpur-mumbai-samruddhi-corridor/article22614376.ece</u>

# Q.5) Consider the following statements about 'Heavy Water'

- 1. It is water composed of the hydrogen isotope with a mass double that of ordinary hydrogen, and oxygen.
- 2. Heavy Water Board (HWB) is a constituent unit under the Department of Atomic Energy
- 3. It is used as a moderator of neutrons in nuclear power plants

# Select the correct statements

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

# Q.5) Solution (d)

Heavy water (D2O), also called deuterium oxide, water composed of deuterium, the hydrogen isotope with a mass double that of ordinary hydrogen, and oxygen. (Ordinary water has a composition represented by H2O.) Thus, heavy water has a molecular weight of about 20 (the sum of twice the atomic weight of deuterium, which is 2, plus the atomic

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weight of oxygen, which is 16), whereas ordinary water has a molecular weight of about 18 (twice the atomic weight of ordinary hydrogen, which is 1, plus oxygen, which is 16).

Heavy Water Board (HWB) is a constituent unit under the Department of Atomic Energy in the Government of India. The organisation is primarily responsible for production of Heavy Water (D2O) which is used as a 'moderator' and 'Coolant' in nuclear power as well as research reactors. Other than Heavy Water, HWB is also engaged with production of different types of nuclear grade solvents and extraction of rare materials. India is one of the largest manufacturers of heavy water in the world.

Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=176760

