Q: Consider the following statement regarding Nugu Wildlife Sanctuary:

1. It was added to the Nilgiri Biosphere Reserve in 2003-04.
2. Most of the vegetation in the forests is dry, deciduous.
3. The area receives rainfall from only from northeast monsoons.

Choose the correct option from the codes given below:

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) 1, 2 and 3

Ans: a
Explanation:

- Nugu Wildlife Sanctuary is situated north of Bandipur National Park in Mysore District, Karnataka.
- It covers about 30 sq km, and the northern part of the sanctuary is occupied by the Nugu Reservoir. It is built across the Nugu River, a tributary of the Cauvery.
- In 1974, Nugu was declared a Wildlife Sanctuary, and later, in year 2003-2004, the area of Nugu Wildlife Sanctuary was added to the Nilgiri Biosphere Reserve.
- The area receives rainfall from both southwest and northeast monsoons. The average amount of rainfall received in this area is 1000 mm.
- Most of the vegetation in the forests is dry, deciduous and interspersed with patches of plantations.

Q: Consider the following statement regarding Brahmani River:

1. It is a major inter-state west-flowing river amongst the peninsular rivers in India
2. The river is known as Dhamra in its lower reaches.
3. It is formed by the confluence of the Sankh and South Koel rivers.

Choose the correct option from the codes given below:

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) 1, 2 and 3

Ans: b
Explanation:

- Brahmani River is a major inter-state east-flowing river amongst the peninsular rivers in India.
- The river is known as Dhamra in its lower reaches.
- It is formed by the confluence of the Sankh and South Koel rivers near the major industrial town of Rourkela in Odisha.
- Both the sources of the Brahmani River are on the Chota Nagpur Plateau.
- The Sankh River has its origins near the Jharkhand- Chhattisgarh border, along with the South Koel River, which also rises in Jharkhand.
- The Brahmani River basin is bounded in the north by the Chhotanagpur plateau, in the west and south by the Mahanadi basin, and in the east by the Bay of Bengal.
- It is one of the few rivers that cut across the Eastern Ghats and has formed a minor gorge at Rengali in Odisha, where a dam has been built.

Q: Consider the following statement regarding Risk weight:

1. It is every rupee lent by the bank is a cost or has an implication on its capital position.
2. These are used to determine the minimum amount of capital a bank.

Choose the correct option from the codes given below:

a) 1 Only
b) 2 Only
c) 1 and 2

d) None of the above

Ans: c
Explanation:

- Risk weight is every rupee lent by the bank is a cost or has an implication on its capital position.
- These are used to determine the minimum amount of capital a bank must hold in relation to the risk profile of its lending activities and other assets.
- The Reserve Bank of India decided in April 1992 to introduce a risk-asset ratio system for banks (including foreign banks) in India as a capital adequacy measure in line with the Capital Adequacy Norms prescribed by the Basel Committee.

Q: Consider the following statement regarding Gambusia fish:

1. It is known as mosquitofish
2. It is native to the waters of the south-eastern United States.
3. The International Union for Conservation of Nature (IUCN) declares Gambusia as worst invasive alien.

Choose the correct option from the codes given below:

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) 1, 2 and 3

Ans: d
Explanation:

- Gambusia fish is known as mosquitofish and, is widely used as a biological agent for controlling mosquito larvae.
- It is native to the waters of the south-eastern United States.
- It has been a part of mosquito-control strategies for over a century in various parts of the world, including India.
- A single full-grown fish eats about 100 to 300 mosquito larvae per day.
- Also, it has been part of various malaria control strategies in India since 1928, including the Urban Malaria Scheme.
- The International Union for Conservation of Nature (IUCN) declares Gambusia one of the 100 worst invasive alien species in the world.

Q: Consider the following statement regarding Tantalum:

1. It is a rare metal.
2. It possesses high corrosion resistance.
3. It has a very low melting point.

Choose the correct option from the codes given below:

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) 1, 2 and 3

Ans: a
Explanation:

- Tantalum is a rare metal with the atomic number 73—the number of protons found in one atom of the element.
- The rare metal has been named after a Greek mythological figure, Tantalus.
- It's grey, heavy, very hard, and one of the most corrosion-resistant metals in use today.
- It possesses high corrosion resistance because, when exposed to air, it forms an oxide layer that is extremely difficult to remove, even when it interacts with strong and hot acid environments.

- When pure, tantalum is ductile, meaning it can be stretched, pulled, or drawn into a thin wire or thread without breaking.
- It is almost completely immune to chemical attack at temperatures below 150°C and is attacked only by hydrofluoric acid, acidic solutions containing the fluoride ion, and free sulphur trioxide."
- It also has an extremely high melting point, exceeded only by tungsten and rhenium.
- When it is placed in the midst of acids, it is incapable of taking any of them up.