

- With respect to the r/k reproduction strategies consider the following statements:
 - R-strategist species reproduce rapidly under favorable conditions and also offer higher parental care
 - K-strategies species focus on reproducing few, healthy, complex offspring that can receive ample care so that they go on to survive till adulthood.
 Which of the above given statements is/are correct?
 - 1 only
 - 2 only**
 - Both 1 and 2
 - Neither 1 nor 2
- Principle of reciprocal exclusion suggests:
 - Two species that possess the same ecological niche cannot live together in the same ecosystem.**
 - Each species having its own vital preference can develop very well within its adaptive potentialities, without any competitions.
 - Species do not express its entire genetic potential. It develops only as part of its potential.
 - Both b and c
- Consider the following statements regarding Purchasing Managers Index (PMI) :
 - PMI is a private sector survey released at the start of every month and is calculated separately for the manufacturing and services sectors and then a composite index is constructed.
 - A score above 50 denotes contraction while one below 50 signifies expansion.
 Which of the statements given above is/are correct?
 - 1 only**
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
- Which of the following plant mechanisms is influenced by light?
 - Chlorophyll production.
 - Vegetative development.
 - Effect on transpiration rate.
 - Stomatal movements.
 - Distribution of plants.
 Select the correct answer from the codes given below:
 - 1, 2, 3 and 4 only
 - 1, 3 and 5 only
 - 2, 3, 4 and 5 only
 - 1, 2, 3, 4 and 5**
- Biocover can refer to a few different things. Select the answer that best describes the use of biocover in landfills:
 - A plastic sheet placed on top of landfill waste to prevent rainwater from entering.
 - A layer of compost placed on top of a landfill to capture and neutralize methane gas emissions.**
 - A hydraulically applied cover made from wood fibers used as an alternative to daily soil cover.
 - A special type of plant-based fabric used for weed and erosion control in landscaping.
- Consider the following statements:
 - PM2.5 particles are larger than PM10 particles.
 - Particulate Matter can be emitted directly from sources such as construction sites, unpaved roads, fields, smokestacks, or fires.
 - Long-term exposure to PM2.5 is linked to serious health problems such as heart and lung diseases.
 How many of the above statements is/are correct?
 - Only one
 - Only two**
 - All three
 - None
- Consider the following statements:
 - Thermosetting plastics can be reshaped and remolded multiple times upon heating.
 - Once cured, thermosetting plastics cannot be melted by reheating.
 - Thermosetting plastics are typically used in applications requiring high heat resistance.
 How many of the above statements is/are correct?
 - Only one
 - Only two**
 - All three
 - None
- In India, the use of xylitol, acesulfame potassium, neotame and advantame is viewed with apprehension. These chemicals are used as
 - pesticides in agriculture
 - preservatives in processed foods**
 - fruit-ripening agents
 - moisturizing agents in cosmetics
- Consider the following statements:
 - Quantum bits (qubits) can exist in multiple states simultaneously.
 - Quantum computers use classical logic gates like AND, OR, and NOT.

3. Quantum entanglement allows qubits that are entangled to be instantly correlated, regardless of the distance between them.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two**
- (c) All three
- (d) None

10. Consider the following statements the International Space Station (ISS):

1. The ISS orbits the Earth approximately once every 24 hours.

2. The ISS is a collaborative project involving space agencies from the United States, Russia, Japan, Europe, and Canada.

3. The ISS is located in geostationary orbit, directly above the equator.

How many of the above statements is/are correct?

- (a) Only one**
- (b) Only two
- (c) All three
- (d) None



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