

OFFICERS IAS ACADEMY

IAS ACADEMY RUN BY FORMER CIVIL SERVANTS

Daily MCQs: 16-07-2024

1. Consider the following statements about the National Skill Development Corporation (NSDC).

1. It is a 100 percent government-owned company setup.
2. It was set up by the Ministry of Finance as a not-for-profit public-private partnership.

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

2. Consider the following statements about Eklavya Model Residential Schools (EMRSs).

1. These schools are being set up by the Ministry of Tribal Affairs.
2. The objective of EMRSs is to provide quality middle and high level education to Scheduled Tribe (ST) students in remote areas.

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. The term 'CAR-T therapy' is talked about in the context of

- A. Chemotherapy using genetically modified cells.
- B. Spread of viral diseases
- C. Personalized immunotherapy targeting specific cancer antigens.
- D. Stem cell therapy for treating blood disorders.

4. Which of the following are the services provided by the International Financial Services Centre (IFSC)?

1. Fund-raising services for individuals, corporations and governments
2. Wealth management
3. Merger and acquisition activities among trans-national corporations

Select the correct answer using the codes given below

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

5. Who acts as the National Implementing Entity for implementation of adaptation projects under the National Adaptation Fund for Climate Change?

OFFICERS IAS ACADEMY

IAS ACADEMY RUN BY FORMER CIVIL SERVANTS

- A. The Ministry of Environment, Forest and Climate Change
- B. The Ministry of Rural Development
- C. NABARD
- D. Wildlife Institute of India

Solutions:

1. Answer: B

Explanation:

- **Statement 2 is correct:** The National Skill Development Corporation (NSDC) is a **not-for-profit public-private partnership** set up by the **Ministry of Finance** in 2008.
- **Statement 1 is incorrect:** The **Government of India** through the Ministry of Skill Development & Entrepreneurship (MSDE) holds **49%** of the share capital of NSDC, while the **private sector** has the balance **51%** of the share capital.
- NSDC acts as a catalyst in skill development by providing funding to enterprises, companies and organizations that provide skill training.
- It also develops appropriate models to enhance, support and coordinate private sector initiatives.

2. Answer: C

Explanation:

- The scheme of Eklavya Model Residential Schools (EMRSs) was introduced in **1997-98** with an objective to **provide quality middle and high-level education to Scheduled Tribe (ST) students in remote areas. Hence statement 2 is correct.**
- The schools are aimed to enable ST students to access the best opportunities in education and to bring them at par with the general population. The schools focus not only on academic education but on the **all-round development of the students.**
- Each school has a capacity of 480 students, catering to students from **Class VI to XII. Non-ST students** can be admitted in EMRSs up to **10% of the total seats.**
- The **National Education Society for Tribal Students (NESTS)**, an autonomous organization under the Ministry of Tribal Affairs, establishes, endows, maintains, controls and manages these schools.
- The government aims to establish EMRS in **every block with more than 50% ST population and at least 20,000 tribal persons.**
- EMRS are set up in States/UTs with grants under **Article 275(1)** of the Constitution of India.
 - Article 275(1) **guarantees grants-in-aid from the Consolidated Fund of India** each year for promoting the welfare of Scheduled Tribes. Infrastructure development schemes like protected drinking water, road connectivity, electricity and housing are provided under this scheme.
- The scheme is being implemented by the **Ministry of Tribal Affairs. Hence statement 1 is correct.**

3. Answer: C

Explanation

CAR-T Therapy

- **CAR T-cell therapies** use a patient's own cells **to fight cancer**.
- They are modified in the laboratory to **activate T-cells**, a component of immune cells, to attack tumors.
- These modified cells are then infused back into the patient's bloodstream after conditioning them to multiply more effectively.
- The cells are even more specific than targeted agents and directly activate the patient's immune system against cancer, making the treatment more clinically effective. This is why they're called '**living drugs**'.

How it works

- In CAR T-cell therapy, the **patient's blood is drawn to harvest T-cells** – immune cells that play a major role in destroying tumor cells
- Researchers modify these cells in the laboratory so that they express specific proteins on their surface, known as chimeric antigen receptors (CAR): they have an affinity for proteins on the surface of tumor cells.
- This modification in the cellular structure allows CAR T-cells to effectively bind to the tumor and destroy it.
- In CAR T-cell therapy, the immune system is activated when the modified T-cells are reintroduced into the body, which allows a gradual and sustained tumor kill as these cells multiply.

Where it is used

- CAR T-cell therapy has been approved for **leukaemias** (cancers arising from the cells that produce white blood cells) and **lymphomas** (arising from the lymphatic system)
- For **solid tumors** – like those of the prostate, lung, colon, and some other organs – CAR T-cell therapy has been shown to be able to cure patients with tumours that have recurred or have evaded multiple lines of treatment.
- CAR T-cell therapy is also presently used among patients with cancers that have returned after an initial successful treatment or which haven't responded to previous combinations of chemotherapy or immunotherapy.

Response rate of CAR-T cell therapy

- Its response rate is **variable**.
- In certain kinds of leukaemias and lymphomas, the **efficacy is as high as 90%**, whereas in other types of cancers it is significantly lower.

Side Effects

- The potential side-effects are also significant, associated with **cytokine release syndrome** (a widespread activation of the immune system and collateral damage to the body's normal cells) and neurological symptoms (severe confusion, seizures, and speech impairment).

About T cells and B cells

- There are two major classes of lymphocytes involved with specific defenses: B cells and T cells.
- Immature T cells are produced in the bone marrow, but they subsequently migrate to the thymus, where they mature and develop the ability to recognize specific antigens. **T cells** are responsible for **cell-mediated immunity**.

OFFICERS IAS ACADEMY

IAS ACADEMY RUN BY FORMER CIVIL SERVANTS

- **B cells**, which mature in the bone marrow, are responsible for **antibody-mediated immunity**.

4. Answer: D

Explanation:

- An International Financial Services Centre (IFSC) is a jurisdiction that provides **world class financial services to non-residents and residents**, to the extent permissible under the current regulations, in a currency other than the domestic currency (Indian Rupee) of the location where the IFSC is located.
- **Services provided by an IFSC:**
 - Fund-raising services for individuals, corporations and governments
 - Asset management and global portfolio diversification undertaken by pension funds, insurance companies and mutual funds
 - Wealth management
 - Merger and acquisition activities among trans-national corporations, etc. Hence **all the statements are correct**.

5. Answer: C

Explanation

- The National Adaptation Fund for Climate Change (NAFCC) was established in 2015 to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change.
- Considering the existing arrangement with NABARD as National Implementing Entity (NIE) for Adaptation Fund (AF) under **Kyoto Protocol** and its presence across the country, **NABARD** has been designated as National Implementing Entity (NIE) for implementation of adaptation projects under NAFCC by Govt. of India.
- Under this arrangement, NABARD would perform roles in facilitating identification of project ideas/concepts from State Action Plan for Climate Change (SAPCC), project formulation, appraisal, sanction, disbursement of funds, monitoring & evaluation and capacity building of stakeholders including State Governments.