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Daily MCQs: 13-02-2025

1. Consider the following statements about the Petroleum and Natural Gas Regulatory Board

- 1) It is a statutory body.
- 2) Appeals against the decision of the board go before the Appellate Tribunal established under the Electricity Act, 2003.

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 the Technical Textiles

- 1) They are engineered products with a definite functionality.
- 2) They are manufactured using natural fibers only.

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. Consider the following statements about the National Health Authority (NHA).

1. It is an attached office of the Ministry of Health and Family Welfare with full functional autonomy.
2. It is responsible for the implementation of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana.

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

4. Which of the following is used by MRI to generate images of the body?

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- A. Ionizing radiation
- B. X-rays
- C. Radio waves and a strong magnetic field
- D. Ultrasound

5. Which of the following statements about the PM-Surya Ghar Muft Bijli Yojana is correct?

- A. It aims to provide 100% solar energy to all government buildings.
- B. It provides subsidies to install rooftop solar panels for residential consumers.
- C. It mandates that all new buildings must have solar panels installed.
- D. It focuses only on rural electrification projects.

Solutions:

1. Answer: C

Explanation

- **Statement 1 is correct:** Petroleum and Natural Gas Regulatory Board (PNGRB) is a **statutory body** for the Petroleum and Natural Gas Sector constituted under the PNGRB Act, 2006.
- The objective of PNGRB is to **protect the interests of consumers and entities** engaged in specified activities relating to petroleum, petroleum products and natural gas and to **promote competitive markets**.
- The board has also been mandated to **regulate** the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as to ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country.
- **Statement 2 is correct:** The appeals against the decisions of the Board go before the **Appellate Tribunal** established under the **Electricity Act, 2003**.

2. Answer: A

Explanation

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- **Statement 1 is correct:** Technical textiles are textile materials and products **used primarily for their technical performance and functional properties** rather than their aesthetic or decorative characteristics. They are **engineered products with a definite functionality**.
- **Statement 2 is incorrect:** Technical textiles are manufactured using **natural as well as man-made fibers** such as Nomex, Kevlar, Spandex, Twaron that **exhibit enhanced functional properties** such as higher tenacity, excellent insulation, improved thermal resistance etc.
- These products find end-use application across multiple non-conventional textile industries such as healthcare, construction, automobile, aerospace, sports, defense and agriculture.

About NTTM

- To position India as a global leader in Technical Textiles, the **Ministry of Textiles** launched the National Technical Textile Mission in **2020**.
- The Mission also supports the '**Make in India**' initiative promoting domestic manufacturing of related machinery and equipment.
- The Mission has a target to take the **domestic market size of the technical textile sector to \$ 40-50 Bn** by the year 2024 with an **average growth rate of 15-20% per annum**.
- The Mission comprise of the following **four components**:
 - **Research, Innovation and Development**
 - **Promotion and Market Development**
 - **Export Promotion**
 - **Education, Training, Skill Development.**

3. Answer: C

Explanation

- **Statement 1 is correct:** The National Health Authority (NHA) is an attached office of the Ministry of Health and Family Welfare with full functional autonomy.
- **Statement 2 is correct:** NHA is responsible for the implementation of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).
- In addition to this, NHA has been given the mandate by the government to design, build, roll-out and implement the **National Digital Health Mission (NDHM)** in the country.

4. Answer: C

Explanation

- A Magnetic Resonance Imaging (MRI) scanner is a medical device that uses a **strong magnetic field and radio waves** to generate detailed images of the inside of the body, particularly the soft tissues like the brain, muscles, and organs.
- **MRI does not use ionizing radiation.**

Functioning of MRI

- The strong magnetic field created by the MRI scanner causes the **atoms in your body to align in the same direction.**
- **Radio waves** are then sent from the MRI machine and **move these atoms** out of the original position.
- As the radio waves are turned off, the **atoms return to their original position and send back radio signals.**
- These signals are received by a computer and converted into an image of the part of the body being examined.

5. Answer: B

Explanation

- In a bid to boost solar power and sustainable progress, the Government of India has launched the PM-Surya Ghar Muft Bijli Yojana (PM-SGMBY) with a total outlay of ₹75,021 crore for **installing rooftop solar in one crore households nationwide.**
- The scheme aims to **provide free electricity up to 300 units every month to the one crore households of the country.**

About the Scheme

- Under the scheme, the **households who opt to install rooftop solar electricity units will get 300 units of electricity for free every month.**
- The scheme **focuses on the household segment with up to 3 kW systems**, which covers most of the residential consumers in India.
- The households will apply for subsidy through the **National Portal** (<https://pmsuryaghar.gov.in>) and will be able to select a suitable vendor for installing rooftop solar.

What is the amount of subsidy for households?

- The initiative offers a **subsidy of 60% of the solar unit cost for systems up to 2 kW capacity and 40% of the extra system cost for systems between 2 and 3 kW capacity.**
- The subsidy is **limited to systems up to 3 kW capacity.**
- Based on current benchmark prices, eligible beneficiaries will receive a subsidy of Rs 30,000 for 1 kW systems, Rs 60,000 for 2 kW systems, and Rs 78,000 for 3 kW systems or higher.

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- Households will also be able to access **collateral-free low-interest loan products** of around **7%** for installation of residential Rooftop Solar systems up to 3 kW.

Other Features of the Scheme

- A **Model Solar Village** will be developed in **each district** of the country to act as a role model for adoption of rooftop solar in rural areas.
- **Urban Local Bodies and Panchayati Raj Institutions** shall also benefit from incentives for promoting RTS installations in their areas.

Outcome and Impact

- Through this scheme, the households will be **able to save electricity bills** as well as **earn additional income through sale of surplus power to DISCOMs**.
- The proposed scheme will result in **addition of 30 GW of solar capacity** through rooftop solar in the residential sector, generating **1000 BUs (billion units) of electricity** and resulting in **reduction of 720 million tonnes of CO2 equivalent emissions** over the 25-year lifetime of rooftop systems.
- It is estimated that the scheme will create around **17 lakh direct jobs** in manufacturing, logistics, supply chain, sales, installation, O&M and other services.

Who is eligible for PM Surya Ghar Muft Bijli Yojana?

- Individuals must meet the following criteria to apply for the scheme:
 1. Indian citizenship.
 2. Ownership of a house with a suitable roof for solar panel installation.
 3. Possession of a valid electricity connection.
 4. Absence of prior subsidies for solar panels.