

18. Indian Scientist: Biography and Achievements

Exercise Questions

1. Question

Dr. A.P.J. Abdul Kalam studied from which branch of engineering from Madras Institute of Technology?

- A. Computer
- B. Aeronautical
- C. Electrical
- D. Electronics

Answer

Dr. APJ Abdul Kalam, the 11th President of India, moved to Madras in 1955 to study aerospace engineering in Madras Institute of Technology.

Aerospace engineering is a field of engineering concerned with the development of aircraft and spacecraft.

2. Question

In which year did C.V Raman get the Nobel Prize?

- A. 1928
- B. 1930
- C. 1932
- D. 1934

Answer

Sir Chandrasekhara Venkata Raman got the Nobel Prize in November in the year 1930 for his work on the 'scattering of light' which was later known as 'Raman effect'.

3. Question

Ornithologist is-

- A. Dr. Panchanan Maheshwari
- B. Dr. Meghnad Saha

C. Dr. Prafulla Chandra

D. Dr. Saleem Ali

Answer

Dr. Saleem Moizuddin Abdul Ali was an Indian ornithologist who was also sometimes referred to as the "birdman of India".

He was awarded the Padma Bhushan in 1958 and the Padma Vibhushan in 1976.

4. Question

Bhabha atomic research center (BARC) is situated at-

A. Madras

B. Delhi

C. Kolkata

D. Mumbai

Answer

The Bhabha Atomic Research Centre (BARC) is headquartered in Trombay, Mumbai, Maharashtra. It was named after Homi Jehangir Bhabha, who was a pioneer of the Indian nuclear programme.

5. Question

In which language is 'Charaka Samhita' Written?

A. Hindi

B. Persian

C. Sanskrit

D. Urdu

Answer

The 'Charaka Samhita' is a Sanskrit text on Ayurveda (Indian traditional medicine).

6. Question

Which particles were identified by Dr. Bhabha in cosmic rays?

Answer

Electrons were identified by Dr. Bhabha in cosmic rays. The basic constitution of cosmic rays is electrons and protons. These are sub-atomic

particles which form the major component of Cosmic rays.

7. Question

Of which Rishi was sushruta descendant?

Answer

According to the Mahabharata, Sushruta is believed to be the descendant of **Vishvamitra**. Sushruta is an ancient Indian physician, who is also considered as 'father of plastic surgery'.

8. Question

What were the reasons for genetic disorders according to Charaka?

Answer

Charaka is well known as the "Indian father of medicine" who wrote the book 'Charaka Samhita'. According to Ayurveda, all genetic disorders are **congenital** in nature. A congenital disorder is any medical condition that is present at birth.

9. Question

On which position was Dr. C.V. Raman appointed at first?

Answer

Sir Chandrasekhara Venkata Raman was appointed as the first **Palit Professor of Physics** at the University of Calcutta in the year 1917. Before this he served the nation as a government employee.

10. Question

Which reactors were established under the guidance of Dr. Bhabha?

Answer

Under Dr. Bhabha's expert guidance the nation's first **atomic reactor 'Apsara'** was commissioned in 1956. In 1945, he founded the Tata Institute of Fundamental Research (TIFR) in Mumbai.

Dr. Bhabha was also known as the "Father of Indian Nuclear Science".

11. Question

Which scientist contributed for the establishment of Bharatpur (Keoladeo) Bird Sanctuary?

Answer

Dr. Saleem Moizuddin Abdul Ali was the scientist who worked hard to gain the government support for the establishment of **Bharatpur bird sanctuary** (Keoladeo Ghana Bird Sanctuary).

He is also known as the '**birdman of India**'.

12. Question

What are the contribution of Dr. Kalam in space and defence?

Answer

Dr. APJ Abdul Kalam, the 11th President of India, moved to Madras in 1955 to study aerospace engineering in Madras Institute of Technology.

- Dr. Kalam made significant contribution as Project Director to develop India's first indigenous **Satellite Launch Vehicle (SLV-III)**.
- Dr. Kalam was also behind the evolution of Indian Space Research Organization's (ISRO's) launch vehicle programme.
- After working for two decades in ISRO he took up the responsibility of developing Indigenous Guided Missiles at Defence Research and Development Organization as the **Chief Executive of Integrated Guided Missile Development Programme (IGMDP)**.
- Because of these contributions, he was also known as the "**Missile man of India**".

13. Question

What is the contribution of Dr. Panchanam Maheswari in botanical science?

Answer

- Dr. Panchanan Maheswari was an Indian botanist remembered chiefly for his invention of the technique of test-tube fertilization of angiosperms.
- His another achievement was the production of haploids using anther culture which help in developing new improved plant varieties.
- Dr. Maheshwari also published a book, 'An Introduction to the Embryology of Angiosperms', in the year 1950.

14. Question

What are the contributions of Dr. Panchanan Maheshwari in botanical science?

Answer

Contributions of Dr.Panchan Maheswari:1. He was a prominent Indian botanist noted chiefly for his invention of the technique of test-tube fertilization of angiosperms.

2. Another landmark discovery by Dr. Maheshwari was production of haploids using anther culture.

15. Question

Match the following:

Column I

- (i) Birdman of India
- (ii) Missile man
- (iii) Father of Plastic Surgery
- (iv) Father of Indian Nuclear Science

Column II

- (a) Charaka
- (b) Dr. A.P.J. Abdul Kalam
- (c) Dr. Bhabha
- (d) Dr. Saleem Ali

Answer

(i) Birdman of India - (d) Dr. Saleem Ali

Dr. Saleem Moizuddin Abdul Ali was an Indian ornithologist who was also sometimes referred to as the "birdman of India". He was the scientist who worked hard to gain the government support for the establishment of Bharatpur bird sanctuary (Keoladeo Ghana Bird Sanctuary).

(ii) Missileman - (b) Dr. APJ Abdul Kalam

Dr. APJ Abdul Kalam, the 11th President of India, moved to Madras in 1955 to study aerospace engineering in Madras Institute of Technology. Dr. Kalam made various contributions in the field of space and defense and hence he is given the title - Missileman of India.

(iii) Father of plastic surgery - (a) Charaka

Charaka is well known as the "Indian father of medicine" who wrote the book 'Charaka Samhita'. He is also referred to as the "Father of plastic surgery".

(iv) Father of Indian Nuclear Science - (c) Dr. Bhabha

Under Dr. Bhabha's expert guidance the nation's first atomic reactor 'Apsara' was commissioned in 1956. In 1945, he founded the Tata Institute of Fundamental Research (TIFR) in Mumbai.

Dr. Bhabha was also known as the "Father of Indian Nuclear Science".

16. Question

Explain Sushruta's life and his contribution towards science.

Answer

EARLY LIFE:

According to the Mahabharata, Sushruta is believed to be the descendant of Rishi Vishvamitra, although many scholars do not agree to this. Sushruta is an ancient Indian physician, who is also considered as 'Father of plastic surgery' and 'Father of Indian medicine'.

CONTRIBUTIONS:

- He wrote a book '*Sushruta Samhita*' which is considered as the oldest text in the world on plastic surgery.
- The Great Trilogy of Ayurvedic Medicine describes surgical procedures, diagnostic techniques, and treatments for various illnesses and injuries.
- He developed different surgical techniques (such as using the head of an ant to sew sutures) and, invented the practice of cosmetic surgery. His specialty was rhinoplasty, the reconstruction of the nose.

17. Question

Explain about Dr. A.P.J. Abdul Kalam's early life and his contributions towards science.

Answer

EARLY LIFE:

- Dr. Avul Pakir Jainulabdeen Abdul Kalam was born to a Tamil Muslim family in Rameswaram on Pamban Island on 15 October 1931.
- He moved to Madras in 1955 to study aerospace engineering in Madras Institute of Technology.

CONTRIBUTIONS:

- Dr. Kalam made significant contribution as Project Director to develop India's first indigenous Satellite Launch Vehicle (SLV-III).
- Dr. Kalam was also behind the evolution of Indian Space Research Organization's (ISRO's) launch vehicle programme.
- After working for two decades in ISRO he took up the responsibility of developing Indigenous Guided Missiles at Defence Research and Development Organization as the Chief Executive of Integrated Guided Missile Development Programme (IGMDP).
- Because of these contributions, he was also known as the "**Missile man of India**".

18. Question

Describe Sir C.V Raman's life and his contributions towards science.

Answer

EARLY LIFE:

- Sir Chandrasekhara Venkata Raman was an Indian physicist born in the former Madras Province in India on 7 November 1888.
- At an early age, Raman moved to the city of Visakhapatnam and studied at St. Aloysius Anglo-Indian High School.
- In 1902, Raman joined Presidency College in Madras, where he stood first and bagged the gold medal in Physics.
- In the year 1917, Raman resigned from his government service after he was appointed the first Palit Professor of Physics at the University of Calcutta.

CONTRIBUTIONS:

- He won the 1930 Nobel Prize in Physics "for his work on the scattering of light and for the discovery of the Raman effect".
- Later on the phenomenon of scattering of light was known as Raman scattering.
- He was the first non-white to receive a Nobel Prize for work in Science.

19. Question

Describe the life of Dr. Saleem ali and contributions to science.

Answer

EARLY LIFE:

- Dr. Saleem Ali was born into a Muslim family in Bombay on 12 November 1896. He was the ninth and youngest child of Moizuddin.
- Salim went to primary school at Zenana Bible and Medical Mission Girls High School at Girgaum along with two of his sisters and later to St. Xavier's College, Bombay.

CONTRIBUTIONS:

- Dr. Saleem Ali was one of the very first scientists to carry out systematic bird surveys in India and abroad.
- He published a research paper discussing the nature and activities of the weaver bird in 1930 while he was at his wife's house in Kihim, a coastal village in Bombay.
- Saleem also wrote other books like, "Common Birds" (1967) and his interesting autobiography "The Fall of Sparrow" in 1985.
- He was the scientist who worked hard to gain the government support for the establishment of Bharatpur bird sanctuary (Keoladeo Ghana Bird

Sanctuary).

- Because of his contributions in the field of Science and towards birds, he is also referred to as the "**birdman of India**".