Daily subject quiz – Science & Technology (06-11-2026)

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Questions

1. The point where Chandrayaan-3's Vikram lander touched down near the Moon's south pole has been named:

A. Tiranga point
B. Shiv Shakti point
C. Jawahar Sthal
D. Sarabhai crater

2. Assertion (A): A spacecraft in a halo orbit around the Sun–Earth L1 point, such as Aditya-L1, can observe the Sun continuously without occultation or eclipses.
Reason (R): At the L1 point the Sun's gravitational pull on a spacecraft is zero.

A. Both A and R are true, and R is the correct explanation of A
B. Both A and R are true, but R is not the correct explanation of A
C. A is true, but R is false
D. A is false, but R is true

3. Match the ISRO centres (List I) with their locations (List II):
(a) Vikram Sarabhai Space Centre (VSSC) – 1. Hyderabad
(b) Space Applications Centre (SAC) – 2. Bengaluru
(c) U R Rao Satellite Centre (URSC) – 3. Thiruvananthapuram
(d) National Remote Sensing Centre (NRSC) – 4. Ahmedabad
Codes: (a) (b) (c) (d)

A. 3 2 4 1
B. 3 4 2 1
C. 4 3 1 2
D. 1 4 2 3

4. Assertion (A): Floating solar panels on reservoirs can produce more electricity than similar panels mounted on land.
Reason (R): The efficiency of silicon solar cells falls as their temperature rises, and water keeps floating panels cooler.

A. Both A and R are true, and R is the correct explanation of A
B. Both A and R are true, but R is not the correct explanation of A
C. A is true, but R is false
D. A is false, but R is true

5. Terahertz (THz) radiation, now being explored for 6G wireless communication, lies in the electromagnetic spectrum between:

A. ultraviolet and X-rays
B. visible light and ultraviolet
C. gamma rays and X-rays
D. microwaves and infrared

6. Match the missiles (List I) with their type (List II):
(a) Pralay – 1. Surface-to-air missile
(b) Akash – 2. Anti-tank guided missile
(c) Astra – 3. Beyond-visual-range air-to-air missile
(d) Nag – 4. Surface-to-surface quasi-ballistic missile
Codes: (a) (b) (c) (d)

A. 4 3 1 2
B. 1 4 3 2
C. 4 1 3 2
D. 4 1 2 3

7. Consider the following statements about Sowa-Rigpa:
1. It is a traditional system of medicine practised in Himalayan regions such as Ladakh, Sikkim and parts of Arunachal Pradesh and Himachal Pradesh.
2. It was recognised by amending the Indian Medicine Central Council Act, 1970 in 2010.
3. The National Institute of Sowa-Rigpa is located at Gangtok.
Which of the above are correct?

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

8. Consider the following statements about proton therapy, used in cancer treatment:
1. It is a form of radiotherapy that uses a beam of charged particles.
2. The proton beams used for therapy are produced in nuclear reactors.
3. Protons deposit most of their energy near the end of their path (the Bragg peak), so tissue beyond the tumour receives very little dose.
Which of the above are correct?

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

9. SHAKTI, an indigenous microprocessor family built on the open-source RISC-V instruction set, was developed at:

A. Indian Institute of Science, Bengaluru
B. IIT Bombay
C. IIT Madras
D. C-DAC, Pune

10. Match the diseases (List I) with the type of organism that causes them (List II):
(a) Tuberculosis – 1. Virus
(b) Malaria – 2. Bacterium
(c) Dengue – 3. Fungus
(d) Ringworm – 4. Protozoan
Codes: (a) (b) (c) (d)

A. 2 1 4 3
B. 4 2 1 3
C. 2 4 3 1
D. 2 4 1 3

Answers with explanations

1. **B) Shiv Shakti point** – Vikram landed on 23 August 2023; on 26 August 2023 the Prime Minister named the landing point 'Shiv Shakti point' (approved by the International Astronomical Union in 2024 as 'Statio Shiv Shakti'). 'Tiranga point' is where Chandrayaan-2's lander hit the Moon (2019); 'Jawahar Sthal' is the impact site of Chandrayaan-1's Moon Impact Probe (2008).

2. **C) A is true, but R is false** – A is true – ISRO placed Aditya-L1 in a halo orbit around L1 (about 1.5 million km from Earth) on 6 January 2024 for an uninterrupted view of the Sun. R is false: at L1 the Sun's gravity is not zero; the pulls of the Sun and the Earth combine to give the exact force needed for a spacecraft to orbit the Sun in step with the Earth.

3. **B) 3 4 2 1** – VSSC, Thiruvananthapuram – lead centre for launch vehicles; SAC, Ahmedabad – satellite payloads and applications; URSC, Bengaluru – design and building of satellites; NRSC, Hyderabad – receiving and processing remote-sensing data.

4. **A) Both A and R are true, and R is the correct explanation of A** – Solar cells lose output as they heat up; the water below floating panels cools them, so they can yield more energy than identical ground-mounted panels. They also save land and cut evaporation from the reservoir – one reason for the PM Surya Sarovar Yojana (Union Cabinet, July 2026) for floating solar.

5. **D) microwaves and infrared** – The terahertz band (about 0.1–10 THz) sits between microwaves and (far-)infrared. Its very high frequency can carry far more data than today's mobile bands, but the waves are easily absorbed by water vapour in air, so the range is short.

6. **C) 4 1 3 2** – Pralay – surface-to-surface quasi-ballistic missile; Akash – surface-to-air missile for air defence; Astra – beyond-visual-range air-to-air missile fired from fighter jets; Nag – third-generation anti-tank guided missile. All are developed by DRDO.

7. **B) 1 and 2 only** – Statement 3 is wrong: the National Institute of Sowa-Rigpa is at Leh (Ladakh) – an autonomous institute under the Ministry of AYUSH. Sowa-Rigpa, the 'science of healing' of the Himalayan region, was recognised through the Indian Medicine Central Council (Amendment) Act, 2010.

8. **A) 1 and 3 only** – Statement 2 is wrong: therapy protons are accelerated in a cyclotron or synchrotron, not produced in a nuclear reactor. Because of the Bragg peak, proton therapy spares healthy tissue better than X-ray radiotherapy – useful for tumours near the brain, spine and in children.

9. **C) IIT Madras** – SHAKTI was designed at the RISE Laboratory of IIT Madras, with funding from MeitY. In 2018 SHAKTI chips were fabricated at the Semi-Conductor Laboratory (SCL), Mohali (near Chandigarh) – a step towards indigenous processors for strategic and consumer use.

10. **D) 2 4 1 3** – Tuberculosis – bacterium (Mycobacterium tuberculosis); malaria – protozoan (Plasmodium, spread by female Anopheles mosquitoes); dengue – virus (spread by Aedes mosquitoes); ringworm – fungi (not a worm, despite the name).

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