



INNOVATION QUIZ SERIES 2026

by

INDIAN MEDICAL ASSOCIATION – VADODARA



Test Your Knowledge... Explore Future Medicine... Lead Innovation...

IMA Vadodara proudly presents a year-long academic Innovation Quiz Series designed to enhance awareness and understanding of latest medical inventions, emerging technologies, artificial intelligence, robotics, gene therapy, and breakthrough clinical innovations relevant to all medical specialties.

OBJECTIVES

- Enhance awareness of latest medical inventions and emerging technologies across all specialties
- Promote continuous academic engagement among IMA Vadodara members
- Encourage analytical, concept-based, and application-oriented learning
- Bridge the gap between research innovations and clinical practice
- Prepare members for future-ready medical practice

**Answers
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Who Can Participate?

- Anyone can participate to get the knowledge but for Leader board and participation in final Mega Quiz Membership of IMA Vadodara is Must.

MONTHLY QUIZ FORMAT (February – October 2026)

- One quiz every month consisting of 10 MCQs
- Questions will be case-based, concept-based, and focused on latest innovations and guidelines
- Scoring: +5 marks for each correct answer | No negative marking
- Participation through Google Form by scanning QR code
- Explanations and Top 10 scorers will be published in the next IMA Vadodara Bulletin (apply for all participants)
- Cumulative leaderboard will determine Mega Quiz qualification (apply only for IMA Vadodara Members)

Scan the QR code for Quiz 5



**Give Your Answers
Before 5th July 2026**

Mega Innovation Quiz – November 2026 (Live Finale) – only for IMA Vadodara Members

- **Participant Must be Member of IMA Vadodara**
- **Top 15 participants** based on cumulative scores will qualify for the **Elimination Round**
- **Top 6 participants** will compete in the **Mega Quiz Grand Finale (Live On-Stage Event)**
- **Certificates will be awarded to all participants of the Mega Quiz Final Round**
- **Winner and Runners-up will be awarded Trophy and Exciting Prizes**
- Audience will also have opportunity to participate and win prizes

Dr. Mitesh Shah

President IMA, Vadodara

Dr. Mehul Desai

Hon. Secretary IMA, Vadodara

Dr. Samir Shah

Quiz Academic Director

Dr. Bhupendra Kapadia

Quiz Coordinator

Stay updated... Stay innovative... Shape the future of medicine...

Answers Of Quiz 4 - May 2026

31. CRISPR-Cas9 gene editing was used in 2025 to achieve the first FDA approval for which condition?

- A) **Sickle Cell Disease**
- B) Type 1 Diabetes
- C) Alzheimer's Disease
- D) Cystic Fibrosis

Explanation: Casgevy & Lyfgenia were FDA-approved in Dec 2023/early 2024 for Sickle Cell Disease & Beta Thalassemia. By 2025, they became the first CRISPR-based therapies in routine clinical use, curing patients by editing stem cells.

32. Which AI model made headlines in 2025 for outperforming radiologists in detecting breast cancer on mammograms?

- A) ChatGPT-5
- B) Google DeepMind's AlphaFold 3
- C) **Lunit INSIGHT MMG**
- D) IBM Watson Health

Explanation: Multiple large trials in 2024-2025 showed Lunit INSIGHT MMG improved cancer detection rates by 13-17% vs radiologists alone. It's now FDA-cleared and used as "second reader" in many centers.

33. The first fully personalized mRNA cancer vaccine was tested in 2025 for which cancer?

- A) Lung Cancer
- B) Melanoma
- C) **Pancreatic Cancer**
- D) Glioblastoma

Explanation: Moderna + Merck's mRNA-4157/V940 showed promising Phase 2 data in pancreatic cancer in 2025. It uses tumor-specific neoantigens from each patient's biopsy to train the immune system.

34. "Organ-on-a-chip" technology is primarily used to:

- A) Replace human organ transplants
- B) **Test drug toxicity without animal/human trials**
- C) 3D print organs for surgery
- D) Store organs for longer duration

Explanation: FDA Modernization Act 2.0 allows drug testing on organ-chips instead of animals. These microfluidic devices mimic human lung, liver, kidney to predict toxicity/efficacy faster.

35. Which company received approval for the first pig-to-human kidney xenotransplant in 2025?

- A) Moderna
- B) **eGenesis**
- C) Neuralink
- D) Pfizer

Explanation: eGenesis + Massachusetts General Hospital did the first gene-edited pig kidney transplant in a living human in March 2024, with 2025 follow-ups showing sustained function. 69 gene edits removed pig viruses + immune triggers.

36. Neuralink's first human brain-chip implant in 2024-25 allowed the patient to:

- A) Regrow damaged neurons
- B) **Control a computer cursor with thoughts**
- C) Cure Parkinson's tremors
- D) Restore complete vision

Explanation: Noland Arbaugh, paralyzed patient, demonstrated playing chess & browsing web using only thoughts via the N1 implant. Telepathy trials expanded in 2025.

37. "Digital Twins" in medicine refers to:

- A) Identical twin doctors using AI
- B) **Virtual model of a patient to simulate treatment responses**
- C) Backup copies of medical records
- D) Robotic surgical assistants

Explanation: Digital twins use a patient's genomics, labs, imaging to create a virtual replica. Doctors test chemo doses or surgery outcomes on the twin before treating the real patient.

38. In 2025, the FDA approved the first once-weekly insulin for Type 2 Diabetes. Its name is:

- A) Insulin Glargine U-300
- B) **Icodec**
- C) Degludec
- D) Afrezza

Explanation: Insulin Icodec (Awiqli by Novo Nordisk) approved in Europe 2024, FDA 2025. One injection/week vs daily basal insulin, with similar glucose control.

39. Which innovation uses sound waves to destroy tumors without incisions?

- A) Cryoablation
- B) HIFU - High Intensity Focused Ultrasound**
- C) Gamma Knife
- D) Laser ablation

Explanation: HIFU focuses ultrasound beams to heat & kill tumor cells. 2025 saw expanded use for prostate cancer, uterine fibroids, and tremor treatment — no cuts, outpatient procedure.

40. “Ambient Clinical Intelligence” in hospitals means:

- A) Smart lighting in ICUs
- B) AI that listens to doctor-patient conversations & auto-generates notes**
- C) Temperature-controlled drug storage
- D) Automated billing systems

Explanation: Tools like Nuance DAX Copilot, Abridge are in 2025 EHRs. They record OPD visits, extract history, exam, plan, and drop structured notes into EMR — saving 2+ hrs/day for doctors.

Leader Board of May 2026

Dr. Sweta H Patel

Dr. Vikky Ajwani

Dr. Pinakin J. Baxi

Dr. Kamaxi Jonwal

Dr. Jagruti Solanki

Dr. Santosh R Dubey

Dr. Shridhar P Joshi

Dr. Nilay Kandoi

Dr. Shahenaz Master