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HEADLINE: Imported from India; Indian Institute of Technology produces world-class chemical, electrical and computer engineers who've played a leading role in the American technology revolution

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BODY:
IMPORTED FROM INDIA

LESLEY STAHL, co-host:

The United States imports oil from Saudi Arabia, cars from Japan, TVs from Korea and whiskey from Scotland. So what do we import from India? We import people, really smart people. And as you're about to see, the smartest, most successful, most influential Indians who've migrated to the US seem to share a common credential: They're graduates of the Indian Institute of Technology, better known as IIT. Made up of seven campuses throughout India, IIT may be the most important university you've never heard of.

(Footage of IIT campus; students)

STAHL: (Voiceover) This is IIT Bombay. Put Harvard, MIT and Princeton together, and you begin to get an idea of the status of this school in India.

(Footage from classroom)

Unidentified Man #1: You compute the capacity of the problem...

STAHL: (Voiceover) IIT is dedicated to producing world-class chemical, electrical and computer engineers...

Unidentified Woman #1: And then you plug this back in and you...

STAHL: (Voiceover) ...with a curriculum that may be the most rigorous in the world.

(Footage of traffic; from the streets of Bombay; IIT campus; classrooms)

STAHL: (Voiceover) Just outside the campus gates, the slums, congestion and chaos of Bombay are overwhelming. Inside, it's quiet and uncrowded and, by Indian standards, very well equipped. Getting here is the fervent dream of nearly every school boy.

With a population of over a billion people in India, competition to get into the IITs is ferocious. Last year, 178,000 high school seniors took the entrance exam called the JEE. Just over 3,500 were accepted, or less than 2 percent. Compare that with Harvard, say, which accepts about 10 percent of its applicants.

(Footage of Vinod Khosla)

Mr. VINOD KHOSLA: The IITs probably are the hardest school in the world to get into.

STAHL: The whole world.

Mr. KHOSLA: To the best of my knowledge.

(Footage of Khosla)

STAHL: (Voiceover) Vinod Khosla got into IIT about 30 years ago. After graduating, he came to the US, co-founded Sun Microsystems and became one of Silicon Valley's most important venture capitalists. He's one of thousands of IIT graduates who have made it big in the US.

(Footage of Stahl and Khosla)

STAHL: How significant would you say the impact of IIT graduates has been on the American technology revolution?

Mr. KHOSLA: It's far greater than most people realize. Microsoft, Intel, PCs, Sun Microsystems--you name it, I can't imagine a major area where Indian IIT engineers haven't played a leading role...

STAHL: Leading role?

Mr. KHOSLA: ...a leading role, and, of course, the American consumer and the American business in the end is the beneficiary of that.

(Footage of Khosla; McKinsey & Company sign; Citigroup Center; US Airways plane; classroom)

STAHL: (Voiceover) It isn't just high tech. The head of the giant consulting firm McKinsey & Company is an IIT grad; so is the vice chairman of Citigroup, and the former CEO of US Airways. Fortune 500 headhunters are always on the lookout for that IIT degree.

Mr. KHOSLA: They are favored over almost anybody else. If you're a WASP walking in for a job, you wouldn't have as much preassigned credibility as you do if you're an engineer from IIT.

(Footage of Stahl with students)

STAHL: (Voiceover) Ninety percent of IIT students are male, and the young men we met in Bombay know they're hot commodities.

And the American companies love the kids from IIT.

Unidentified Student #1: We've...

Unidentified Student #2: Thank goodness.

Unidentified Student #1: That's what we've heard. That's what we've heard, too. After I leave IIT Bombay, I hope to get a good job.

STAHL: So it can be a ticket to another way of life.

Unidentified Student #1: Yes.

Unidentified Student #2: Yeah.

Unidentified Student #1: Definitely.

(Footage of group of students)

STAHL: (Voiceover) And a ticket out of India.

How many of you think that you're going to end up in the United States?

Unidentified Student #1: For a while, I think all of us would be there.
Maybe for wor...

STAHL: At some stage.

Unidentified Student #1: At some stage.

(Footage of group of students)

STAHL: (Voiceover) That's not the way it was supposed to be.

(Historical footage of Nehru; footage of traffic; students)

Prime Minister NEHRU: I want my country to be strong.

STAHL: (Voiceover) Nehru, India's first prime minister, created IIT 50 years ago just after independence to train the scientists and engineers he knew the nation would need to move from medieval to modern. He never imagined India would be supplying brainpower to the whole world.

Would you say that IIT graduates are India's most valuable export?

Mr. EM RAHM (Journalist): Yes, undoubtedly.

(Footage of Stahl and Em Rahm)

STAHL: (Voiceover) Em Rahm, one of India's leading journalists, says that because the stakes are so high, a kid starts preparing early.

Mr. RAHM: Age seven, eight, 10. By 10, you know whether you've made it--you're made for it or not.

(Footage of classroom)

STAHL: (Voiceover) And at least half of these 10-year-olds told us they think they're made for it.

Unidentified Woman #2: ...(Unintelligible).

(Footage of classroom)

STAHL: (Voiceover) But just standing out in school won't be enough.

Unidentified Man #2: Two balances to the other.

(Footage of classroom)

STAHL: (Voiceover) At about 16, they enroll in a prep class where they're drilled for the IIT entrance exam. There are even pre-dawn tutoring classes.

Mr. RAHM: 4:30 to about 8, they--they--they are gr--they're grilled, and then they go to school.

STAHL: Regular school.

Mr. RAHM: Regular school.

STAHL: 4:30 to 8 AM.

Mr. RAHM: Yes.

STAHL: Are you saying they do that every day?

Mr. RAHM: Yes, every day, for that period.

STAHL: Two years.

Mr. RAHM: Typically two years. Classes 11 and 12, you do nothing but study.

(Footage of father and son)

STAHL: (Voiceover) And parents hover and push and fret.

Unidentified Student #3: I normally stay up all night and study for my exams. So during-- during this period of preparation, my mother never used to let me prepare my own cup of tea.

STAHL: So if you stayed up all night, she stayed up all night to make your tea?

Unidentified Student #3: She--she used to stay--stay up with me. Yeah.

(Footage of Stahl with group of students)

STAHL: (Voiceover) After years of preparation, the day they and their families believe will make or break the future finally arrives.

Unidentified Student #3: On the day of the exam, my dad, my mom and my younger brother, they all accompanied me to the center. I said, 'OK, now you can leave. I'll come--I'll come home on my own.' But I was--I was literally amazed when I came back from the--came back out of the center and see my parents and brother still waiting for me outside the center.

STAHL: Still waiting. How many hours?

Unidentified Student #3: It was--it was close to six hours.

(Footage of classroom)

STAHL: (Voiceover) Six hours of testing, then an excruciating monthlong wait for the results.

Unidentified Student #2: They put them up on the Web and you can call them up. And after 10 days, you get a letter.

STAHL: But it's on the Web, so everybody knows.

Unidentified Student #2: Yeah.

Unidentified Student #1: You don't get your marks. Nobody...

Unidentified Student #2: You just get your rank.

Unidentified Student #1: You just get your ranks.

STAHL: Ranks. So you're first, second, third in the country.

Unidentified Student #1: Right.

STAHL: Yeah.

Unidentified Student #2: So it goes from one to...

STAHL: So everybody knows.

Unidentified Student #2: ...3,000, roughly.

STAHL: So if you were 2,999, everybody knows.

Unidentified Student #1: Everybody knows.

Unidentified Student #2: Knows.

Unidentified Student #1: And you're considered really lucky.

Unidentified Student #2: The top rankers get their photographs in the paper, you know.

STAHL: The f--the high ranks.

Unidentified Student #2: The high ranks.

Unidentified Student #1: He's one of them.

STAHL: Of course. You get--you were one of them.

Unidentified Student #2: Yes, somewhat, yeah.

STAHL: What number?

Unidentified Student #2: I was 196.

STAHL: Did you get your picture in the paper?

Unidentified Student #2: Oh, yeah.

(Footage of Student #2; photos titled The Trailblazers)

STAHL: (Voiceover) The ranking isn't just an ego trip. The top kids get to choose which campus they want and which major.

Mr. NARAYANA MURTHY: It's a big deal in India, it is.

(Footage of Murthy)

STAHL: (Voiceover) Narayana Murthy, founder of the huge software company Infosys, is known as the Bill Gates of India.

Mr. MURTHY: It's very easy to lose hope in this country. It's very easy to set your aspirations low in this country. But amidst all this, this competition among high-quality students, this institution of IIT, sets your aspirations much higher.

STAHL: Now what about your own son?

Mr. MURTHY: Well, my son, he wanted--probably wanted to do computer science at IIT. To do computer science at IIT, you have to be in the top 200 and he couldn't do that, so he went to Cornell instead.

(Footage of students)

STAHL: (Voiceover) Think about that for a minute. A kid from India using an Ivy League university as a safety school. That's how smart these guys are.

Mr. MURTHY: I do know cases where students who couldn't get into computer science at IITs, they have gotten scholarship at MIT, at Princeton, at Caltech, yes, sure.

(Footage of students; classrooms)

STAHL: (Voiceover) You wouldn't mistake this for MIT or Caltech. It's the final exam of metal fabrication class, required for every IIT freshman. Call it shop class on steroids. Using just a saw and a file, students have to cut quarter-inch steel into an assigned shape, measured to the millimeter. It's an illustration of IIT's emphasis on engineering basics, precision and discipline. Nobody majors in music at IIT. The education is not well-rounded. But in science and technology, IIT undergraduates leave their American counterparts in the dust.

Mr. KHOSLA: When I finished IIT Delhi and went to Carnegie Mellon for my master's, I thought I was cruising all the--all the way through Carnegie Mellon because it was so easy, relative to the education I had gotten at IIT Delhi.

(Footage from classrooms)

STAHL: (Voiceover) If you think of engineering students as nerds, not particularly bold or creative, IIT somehow breaks the mold. It turns computer geeks into risk-takers and leaders.

(Footage of Stahl and group of students)

STAHL: I'm wondering why so many IIT graduates are entrepreneurs, why so many do start their own companies?

Unidentified Student #1: I think it's because of the confidence. We are lucky enough to be told by people around us that we're good and that we have a bright future, and that gives us a lot of confidence.

(Footage of students; dorm rooms; sports event; mess hall)

STAHL: (Voiceover) There's something else. Students act like entrepreneurs the whole time they're at IIT. They run everything in the dorms, which might be mistaken for cell blocks if not for all the Pentium 4 PCs. They organize the sports themselves. They even hire the chefs and pick the food in the mess halls. And unlike so many other institutions in India, they all know they're here because they deserve to be here.

(Footage of Stahl and Murthy)

STAHL: Can you slip somebody a couple of rupees and say, 'Come on, get my son in'?

Mr. MURTHY: No, no, never.

STAHL: Impossible?

Mr. MURTHY: Impossible. Impossible. There is no corruption. It's a pure meritocracy.

(Footage from IIT; students; classrooms; map)

STAHL: (Voiceover) IIT may also be one of the best educational bargains in the world. It costs a family just about \$700 a year for room, board and tuition. That's less than 20 percent of the true cost. The Indian government subsidizes all the rest. While some IIT grads stay and have helped build India's flourishing high-tech sector, almost two-thirds--up to 2,000 people--leave every year, most for the US.

(Footage of Stahl and Rahm)

Mr. RAHM: Some people would say you're subsidizing factories, which produce largely for the higher end of the American employment market.

STAHL: So there's this debate here that says, 'Why are we spending so much money to educate these brilliant young men who just leave?'

Mr. RAHM: You don't have to be crudely nationalistic to raise this question. There's a de--need here. There's a demand here, and these guys are simply not available.

(Footage of Stahl and Murthy)

STAHL: How many of them ever come back?

Mr. MURTHY: Very small percentage, but my view is that we also have to work harder here to make it attractive for them to come back.

(Footage of IIT campus)

STAHL: (Voiceover) Murthy is doing his part. His software company, Infosys, hires about 150 IIT graduates every year to stay and work in India. He says the brain-drain doesn't worry him.

Mr. MURTHY: Sure, Nehru wanted all these young men and women to contribute to the success of India, and they are contributing to the success of India in some way, because today, the respect for the Indian professional is much higher in the United States than what it was in the '50s.

STAHL: But does that translate into investment money coming into India?

Mr. MURTHY: Some of these people who have reached the higher e—higher echelons in the corporate world in the US, you know, they have persuaded their corporations to start operations in India, whether it's Texas Instruments, whether it's General Electric, whether it's Citibank.

STAHL: So it does mean investment back here.

Mr. MURTHY: Well, yes, it does mean.

(Footage of Stahl and Khosla)

Mr. KHOSLA: I have no question that India now is benefiting significantly from the cycling of knowledge, the back and forth, no question about it.

STAHL: (Voiceover) And individual IIT grads are sending lots of money back home, too, but the US still gets the better end of the bargain.

Mr. KHOSLA: How many jobs have entrepreneurs--Indian entrepreneurs in Silicon Valley created over the last 15, 20 years? Hundreds of thousands, I would guess.

STAHL: For this society.

Mr. KHOSLA: For this society, here in America.

(Footage of students)

Mr. KHOSLA: (Voiceover) For America to be able to pick off this human capital, these well-trained engineers with great minds, it's a great deal.

(Announcements)