

JK Lakshmipat University, Jaipur
INSTITUTE OF MANAGEMENT
End-Term Examination, December 2025
BBA Semester III, 2024-27

Roll No.....

ID1121: Intelligent Automation

Time: 2 hours

Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on the question paper
2. All questions are compulsory

Section A

Q1. A footwear company wants to test 20 different sole designs for an upcoming product line. However, creating separate molds and setups for each design would increase both cost and development time. The management is looking for a quick approach. As a consultant, suggest what kind of production capability they should consider, and explain how this choice would influence their overall business strategy. (2.5 Marks CO1)

Q2. A company receives thousands of customer comments, emails, and social media posts every week, making it difficult for managers to understand emerging issues or patterns manually. The leadership team wants a systematic way to uncover what customers are talking about, and how they feel. Recommend the type of analytical approach the company should use and explain the key techniques that could support the approach. (2.5 Marks CO1)

Q3. Amazon introduced a small, wireless device that customers could place around their homes to reorder specific household items with a single press. Each device was linked to one brand, and a signal sent through the button generated automatic purchase on Amazon's platform. Later, Amazon expanded this idea by partnering with appliance makers so that certain household devices such as printers, water filters, and washing machines could detect when a consumable item was running low and place a replenishment order automatically, without requiring the customer to take any action. As more products became capable of monitoring their own usage and communicating order requests, Amazon moved closer to becoming part of customers' daily consumption routines, rather than just an online store. What underlying technology ecosystem enables these automatic, device-initiated replenishment orders, and what customer-related challenges should managers anticipate when deploying such systems at scale? (5 Marks CO1, CO2)

Section B

Q3. Celestia Inn is a newly launched boutique hotel located in a rapidly developing tourist district. As a new property, it faces immediate managerial pressures: long check-in lines during peak hours, inexperienced front-desk staff, inconsistent room-access procedures, and high expectations from millennial travelers who prefer seamless, technology-driven hotel experiences. Management wants to position the hotel as a "smart, efficient, and guest-friendly property" within the first 90 days of launch. However, the hotel can implement only three technologies in Phase 1, and the total automation budget is strictly capped

at INR 15–16 lakhs, with all solutions needing to be deployed within a maximum of 12 weeks. Any combination exceeding this budget or timeline will not be approved. Leadership also values technologies that create quick room-access reliability, faster guest onboarding, and reduce the training load on inexperienced staff. Still, they have not named any specific technology, leaving it for consultants to recommend. The management is evaluating the following 10 automation options:

Tech	Time (weeks)	Cost (Lakhs)
Recommender Systems	14	11
Virtual influencer	7	4
RFID smart cards	4	3
Luggage robots	12	22
Smart lighting	7	5
Digital humans for service	18	16
IoT occupancy sensors	5	4
Cloud Computing platform	9	8
Drone security	10	9
Bar Codes	4	3

A) As a consultant, recommend any three technologies that Celestia Inn should implement in Phase 1, and suggest the order of implementation (1st, 2nd, 3rd) with a one-line justification for each step in the sequence. (3 Marks CO1, CO2, CO3)

B) Choose any two technologies that you did NOT select in Part A and compare them on:

- Customer experience impact
- Challenges and benefits

End by recommending which of the two should be considered for Phase 2 and why? (3 Marks LO1, CO3)

Q4. You were assigned a project during the semester in which you had to choose one emerging technology and prepare both a written report and a PPT. Using your knowledge from the project, write answers covering the following points:

1. Explain the technology in your own words — what it is and how it works. (4 Marks CO2, CO3)
2. Describe any three major benefits and challenges of this technology. (4 Marks CO2, CO3)
3. Provide two real-world applications or examples that show how the technology creates value. (2 Marks CO2, CO3)

Q5. Read the short paragraph below and answer the question:

“Haidilao became famous for its human warmth, the popular noodle-dance and Sichuan face-changing acts, complimentary services during waiting time, and the friendly behavior of its staff. Such service became the company’s most significant differentiation in China’s competitive hotpot industry. However,

as Haidilao expanded rapidly, new challenges emerged. Food safety and hygiene requirements in China have become stricter following several national incidents, emphasizing the importance of consistency and standardization. Employee salaries and labor costs also rose sharply, making it difficult to rely only on human-intensive operations. In response, CEO Zhang Yong introduced automation technologies, including bright kitchens, robotic arms, and robot servers, to enhance efficiency, hygiene, and reliability. The first few smart restaurants gained popularity for their futuristic experiences, including digital ordering, immersive wall projections, and customized soup recipes stored in the cloud. Zhang believed that automation could strengthen the brand only if it supported, rather than replaced, the emotional connection that customers valued.

Despite this progress, a major strategic dilemma emerged. Haidilao's organizational culture empowered restaurant managers with very high autonomy under a "flat" management philosophy. Managers were allowed to choose whether or not to adopt new technologies, experiment with automation, or maintain a traditional service model. This bottom-up management style kept employees motivated and helped maintain Haidilao's culture of ownership. But it also meant that technology adoption varied widely across outlets. Some restaurants eagerly embraced automation; others resisted it due to concerns about customer preference, staff retraining, or fear of losing the human touch that defined the brand."

What do you think Zhang Yong should do?

Should the decision be manager-driven, CEO-driven, or a balanced approach? What is your recommendation to Zhang Yong? Give strong arguments to support your strategic framework for Haidilao's Hotpot chain. (4 Marks CO3, CO2, CO1)

All the best!
