Answer to Question 1:

S. No.	Input	Expected Output
1	New customer	Eligible for 15% discount
2	New customer with discount coupon	Eligible for 15% discount or 20% discount.
3	Existing customer with loyalty card	Eligible for 10 % discount
4	Existing customer with loyalty card and discount coupon	Eligible for 30% discount

New customer can be validated by checking if the account has not made a single purchase before.

Discount coupon can be validated by having a set of unique discount coupons that enable customers to use it or having a single discount code that anyone can use.

Loyalty card can be validated if the customer has made a purchase before and a 2FA method can be used to validate the loyalty card, such as OTP to the registered e-mail ID or mobile no.

Answer to Question 2:

I do not find this argument to be well reasoned. The reason is not convincing enough. The reason stated is “it intends to open a big shop in an adjacent town.” How does it matter if the shop is big? If it is something liked by customers, they will have business regardless of a factor of big shop or it being close to an adjacent town. One school of thought that may have been thought by the author is that there must be a volume of traffic near the shop due to it being adjacent to a town, but that does not necessarily mean more business. One reason could be that customers of the previous shop visited this new area and found out the previous shop moved else where and now there is an Auto Repair Shop here. It made these people aware of this shop, so if they needed some repairs, they would recall this Auto Repair Shop, thus giving them more business. A reason for the Beauty Parlour’s less business is that since it moved away, the customers that went to this Parlour since it came in the journey on the way to the adjacent town, would not go there anymore since they would have to change their route. I think these reasons would help argue the business state of the Auto Repair shop and Beauty Parlour.

Answer to Question 3:

I will use the following table to check the functionalities and quality of the mouse to help me determine if the mouse is a good quality mouse.

- Battery Life

  A good quality mouse should last a good amount, at least 6 months. When the mouse has not been in use for a while, say one hour, it should turn itself off to conserve the battery. If the battery dies within a day or week of usage, that is not a good wireless mouse.

- Input Delay

  A good quality mouse should have as less input delay as possible. It should be almost unnoticeable. High input delay can render the mouse useless for some clients, who would want to use the mouse which involve quick and accurate actions. If an increase in input delay is observed while using the mouse roughly, that is not a good wireless mouse.

  This can be tested by performing a task that can involve a certain intensive task, or a software can calculated the input delay.

- Wireless Range

  A good quality mouse should have a decent range in which it would remain connected to the machine. About 10 meters is good enough. The mouse should be able to perform well with less input delay within this range.

  This can be tested easily by checking how well the mouse works at different distances from the receiver. I would say it is a good quality mouse if the input delay remains low and connection strength is decent even at far distances.

- Performance / Sensitivity (DPI)

  The mouse should be sensitive, and if it is too sensitive users should be able to tweak it, either through the machine's OS, or a software provided by the company. It would be much better if the mouse is compatible with any machines OS rather than having the users download a software just to configure this. The pointer speed should match the speed of the user along with the sensitivity set by the user.

  This can be tested by doing an intensive task with the mouse, on different settings. If the pointer speed is adjusted appropriately according to the speed of moving the mouse and mouse settings, I would call it a good wireless mouse

- Compatibility with different machines / OS / Software

  Since the mouse is a very common peripheral, it should be usable on any machine by just plugging the receiver in, at most a driver may need to be installed on the device, nothing more. If I need to download some special software, that may not be good unless it provides some extra features that a normal mouse may not have.

  This can be tested if the mouse works on any machine after simply plugging the receiver in. But most importantly, initially it must be tested if it works on different machines having different operating systems. The mouse should work on windows, MacOS, Linus, etc.

- Left / Right / Middle mouse button

The mouse buttons should be working as intended, for example pressing the left mouse button should perform the left mouse button action. The feel of performing this action is important too. It should feel smooth, and not feel clunky. The user should not have to use force to get it to work.

- Scroll Wheel

  The scroll wheel should work smoothly, and it scroll at the same speed the user rolls the scroll wheel. It should be smooth, and not clunky, The user should not have to use force to operate the wheel.

- Grip comfort

  The mouse should feel comfortable and it should grip well to the hand, so it can be used roughly for long hours without pain

- Weight

  The mouse should be light, so it does not strain the user when having to turn or lift the mouse.

- Performance on soft surface
- Performance on hard surface
- Performance on rough surface
- Performance after rough usage
- Performance fluctuation after long hours of use

  The performance should not fluctuate after long hours of usage.

- Sounds

  The mouse may generate sounds while clicking/scrolling. These sounds can be silent, or clicky, but it should not be annoying and not sound like the mouse is broken.

- Waterproof

  The mouse should work fine even if a little water is dropped on it.

- Dust collection

  Over time, the mouse should not attract much dust while sitting on the shelf and it must be easy to clean.

To test all the above, we can form a table like such:

Test	Notes	Feedback
Battery Life		
Input Delay		
Wireless Range		
Performance		
Sensitivity (DPI)		

Compatibility with different machines / OS / Software		
Left mouse button		
Right mouse button		
Middle mouse button		
Scroll Wheel		
Grip comfort		
Weight		
Performance on soft surface		
Performance on hard surface		
Performance on rough surface		
Performance after rough usage		
Performance fluctuation after long hours of use		
Waterproof		
Dust collection		

Overall, if the battery life is long, there is extremely low input delay, decent range of at least 5 meters, has good performance and sensitivity, and does not feel heavy, clunky to use, uncomfortable to hold, works on any machine easily, does not collect dust, I would say it is a good quality mouse.