Question 1 – How familiar are you with Artificial Intelligence?

-Quite familiar with AI.
-During university I studied a combination of Cyber security and AI, about 2 thirds Cyber security, 1 third AI.

Follow up – How familiar are you with Artificial Intelligence in video games?

-I am a gamer myself, so I've come across many different AI in video games.
-From entity AI, to emulating a player, or from real-time games to turn based strategy.

Question 2 – What experience have you had with artificial intelligence?

-I've worked with AI in project with large and small groups.
-One project involved a capture the flag scenario, where I had to create AI to out manoeuvre an opposing team to win.
-Another project involved a network of 'agents' who needed to communicate information between them to reach a consensus.

Follow up – What experience have you had with artificial intelligence in video games?

-I've never been part of a project for specifically creating video game AI
-However, I have definitely experimented with creating AI in a video game setting before.
-My first one was a text-based adventure, where the player enters text commands to guide a party through a dungeon, with goblins and other enemies as the AI they must defeat.
-I've also created a small space-invaders style game where the player needs to pilot a ship whilst avoiding and shooting aliens before they can damage the ship. The AI here was in the aliens.

Question 3 – How much work does it take to create an AI?

-It all depends on what you would like the AI to do, or how complicated or refined you want the AI to be.
-For example, programming an AI to follow and object or navigate a maze, would be very simple compared to something like an AI performing heart surgery in place of a doctor.
-Overall, you need to first work out what you want the AI to do, then find the steps you need to take to find that goal. During the development, you must test all the time - testing is vital for any kind of software development to avoid mistakes further down the line. Once the AI is in its first completed state, then you test some more.

Follow up – How much work does it take to create an AI in a video game.

-I would say it generally takes less work than real-life or convenience applications. As a video game is about leisure or entertainment, there is less risk involved.

However, that does not stop a video game programmer from putting in more work to refine and polish the AI they are creating.

Question 4– Have you ever created an AI for fun. If you want to tell me about an AI you have created for your work go for it but since that is governmental information and possibly classified I won't ask.

-I have previously experimented with some AI-style enemies in a turn-based RPG style game. I had to design attacks for the enemies. I had to design conditionals for which attacks the enemies used, which is where the AI comes in. For example, an enemy would only attempt to heal itself if it was damaged, or an enemy would only use some attacks on the first turn, etc.

Follow up – How long did it take you to create this AI and how sophisticated was it?

-Compared to general everyday AI, it was very basic. As it was part of a game development, each enemy took about 1-2 hours to properly finish off. Most of the time was spent testing and refining. Testing is a very important part of any software development process.

Question 5 – What did this AI do that you created? (IF one was made)

-The AI aimed to make the enemies feel life-like to the player. One way of achieving this was to mix-up different attacks, or to use attacks in a cycle. For example, using a powerful attack every 5-6 turns, such that the player must recover before the next powerful attack arrives. It encourages the player to form strategies to overcome such attacks, which in turn deepens the immersion the player experiences.

Question 6 – Have you ever played a game with an AI (If so, what was your favourite one)

-Age of Empires 2 is a game with very sophisticated AI. As AOE2 is a very complex game, developing an AI to feel like a player would require an immense amount of dedication. From managing 50 individual units, to creating buildings and fortifications, the highest difficulty AI in AOE2 is extremely difficult to defeat due to how sophisticated it is.
-I've recently been playing Baldur's Gate 3, (I'm sure you are familiar). It has a good AI (albeit sometimes slow) and the game is very enjoyable 😊

Follow up - What did the AI do and much work do you think went into it?

-The AI is meant to emulate a human player. It follows common game strategies and adapts to what the opposing human player does. Creating 'bots' (AI replacing a player) is generally a long process in games, as the player usually has a lot of different actions to take. This is especially true for real-time games, such as, real-time strategy (AOE2), first person shooters, MOBAs, etc. For the AI to know which action to take at any point in time, it must check several conditions in the AI's code before it can make that decision.

Question 7 – What do you need to create an Artificial Intelligence in a video game?

-Knowledge of what an AI is. Learning about AI is the first step to creating one.
-Testing, testing, testing. Always test your AI *during* development, as well as after.
-Have a goal in mind. What do you want your AI to do? What problem is it solving? How do you want players to interact with it? What conditions must it check before planning?

Question 8 – Could someone with some IT experience create an AI in a video game?

-Definitely. If they have experience with programming, there's nothing stopping them from creating an AI. Even if its just a simple text adventure, or even a chess recreation, they have the tools to make an AI.