Wastewater Engineer Interview Questions

1. What factors do you consider when conducting feasibility studies for the construction of facilities, such as water supply systems, run-off collection networks, water and wastewater treatment plants, or wastewater collection systems?
2. Share an example when you designed pumping systems, pumping stations, pipelines, force mains, or sewers for the collection of wastewater.
3. What kind of experience do you have designing domestic or industrial water or wastewater treatment plants, including advanced facilities with sequencing batch reactors (SBR), membranes, lift stations, headworks, surge overflow basins, ultraviolet disinfection systems, and aerobic digesters?
4. Tell me about the last time you wrote technical reports or publications related to water resources development or water use efficiency.
5. Walk me through how you review and critique proposals, plans, or designs related to water or wastewater treatment systems.
6. Describe an experience when you provided technical support on water resource or treatment issues to government agencies.
7. Have you ever provided technical direction or supervision to junior engineers, engineering or computer-aided design (CAD) technicians, or other technical personnel? Share an example.
8. What is the most challenging part of identifying design alternatives for the development of new water resources?
9. What kind of experience do you have developing plans for new water resources or water efficiency programs?
10. What factors do you consider when designing or selecting equipment for use in wastewater processing to ensure compliance with government standards?
11. Share your effective methods when performing mathematical modeling of underground or surface water resources, such as floodplains, ocean coastlines, streams, rivers, or wetlands.

12. Describe your computer skills when performing hydrological analyses, using three-dimensional simulation software, to model the movement of water or forecast the dispersion of chemical pollutants in the water supply.
13. Walk me through how you would perform hydraulic analyses of water supply systems or water distribution networks to model flow characteristics, test for pressure losses, or to identify opportunities to mitigate risks and improve operational efficiency.
14. What is the challenging part of overseeing the construction of decentralized or on-site wastewater treatment systems, including reclaimed water facilities?
15. Explain to me how you would conduct environmental impact studies related to water and wastewater collection, treatment, or distribution.
16. Tell me about the last time when you conducted cost-benefit analyses for the construction of water supply systems, run-off collection networks, water and wastewater treatment plants, or wastewater collection systems.
17. Tell me how you analyze the efficiency of water delivery structures, such as dams, tainter gates, canals, pipes, penstocks, or cofferdams?
18. Name a time when you analyzed storm water or floodplain drainage systems to control erosion, stabilize river banks, repair channel streams, or design bridges.
19. What factors do you consider when analyzing and recommending chemical, biological, or other wastewater treatment methods to prepare water for industrial or domestic use?
20. What are your thoughts when it comes to designing water storage tanks or other water storage facilities?
21. Have you ever designed water run-off collection networks, water supply channels, or water supply system networks? Share an example.
22. Describe an experience when you designed water distribution systems for potable or nonpotable water.
23. Share an effective approach to design sludge treatment plants.