Operations Management Questions and Answers

# Question 1

The throughput time is the total time taken for a process from start to finish. In the given scenario, it involves adding up the time taken for Screening (4 mins), Interview (10 mins), Testing (12 mins), and Card Issue (6 mins), resulting in a total throughput time of 32 minutes.

# Question 2

The cycle time refers to the time it takes to complete one cycle of a process. In this context, it's determined by the longest individual section time, which is the Testing section at 12 minutes.

# Question 3

The flow rate, also known as throughput rate, is the rate at which the process outputs completed units. Given the cycle time of 12 minutes per cycle, the flow rate is 5 units per hour (60/12).

# Question 4

The maximum process output in persons per hour is directly related to the flow rate. With a flow rate of 5 units per hour, the maximum process output is also 5 persons per hour.

# Question 5

The minimum cycle time, or the time between successive people, is influenced by the process's bottleneck, which in this case is the Testing phase at 12 minutes. This results in a minimum cycle time of 12 minutes.

# Question 6

The average labor utilization is calculated by determining the ratio of active working time to available time across all workers. Given the process steps and their respective times, the average labor utilization is approximately 66.67%.

# Question 7

To prepare for a substantial increase in volume with only a 25% increase in staffing costs, initiatives could include Cross-Training of Staff and Process Optimization using Lean Management principles.

# Question 8

Doubling the staff at the bottleneck step (Testing) could potentially halve its duration, increasing throughput and possibly shifting the bottleneck to another step, such as the Interview phase.