APPENDIX 2

Power requirement of the circulation pump of water-bell fountains

Each water-bell fountain requires, 100 lpm at 9m Head.
For 12 bell fountains, 1200 lpm is required at 9m Head.

\[
Pump\ power = 0.756 \times \frac{Q \times H}{75 \times \text{Efficiency}} \quad \text{(kW)}
\]

where \( Q \) = L/s
\( H \) = Head (m)

Efficiency = 0.60 – 0.65 for centrifugal pumps of 1 to 5 HP range

\[
Pump\ Power = \frac{(1200/60) \times 9}{75 \times 0.6} \times (0.756)
\]

= 3.78 kW

One hour of pump operation requires 3.78 kWh power (i.e., 3.78 units). At Rs.4 per kWh,

The cost of operation of 3.78 kW pump = 3.78 \times 4 = Rs. 15.12

For 7 hours operation, the operating cost = Rs.15.12 \times 7 = Rs.105.87