Task 1)

a)

$R = \pi_{item\_id,\ item\_description}$ (ITEM - (ITEM_USED ⋈ (ρitem_id/item_id (ITEM) ⋈ ρservice_code/service_code (SERVICE))))

b)

$R = \pi_{patient\_number,\ patient\_first\_name,\ patient\_last\_name,\ emergency\_contact\_first\_name,\ emergency\_contact\_last\_name,\ emergency\_contact\_phone\_number}$ (
(σresidential_address LIKE 'Mooroolbark%' AND appointment_date = '08 September 2023')
⋈ (σpatient_number=patient_number PATIENT)
)

c)

$R = \pi_{patient\_number,\ patient\_first\_name,\ patient\_last\_name,\ contact\_email\_address}$ (
(σspecialization = 'ENDODONTICS' PROVIDER)
⋈ APPOINTMENT
⋈ PATIENT
)