```javascript
const CategoriaSchema = new mongoose.Schema({
  descripcion: {
    type: String
  }
});

const ProductoRelacionadoSchema = new mongoose.Schema({
  id_producto_relacionado: {
    type: Number,
    ref: 'Producto',
    required: true
  }
});

const ProductoSchema = new mongoose.Schema({
  id: {
    type: Number,
    required: true
  },
  nombre: {
    type: String,
    required: true
  },
  precio: {
    type: Number,
    required: true
  },
  descripcion: {
    type: String
  },
  imagenURL: {
    type: String
  },
  fabricante: {
    type: String,
    required: true
  },
  stock: {
    type: Number,
    required: true
  },
  categorias: {
    type: CategoriaSchema,
    required: true
  },
  ref_productos_relacionados: [
    {
      type: ProductoRelacionadoSchema
    }
  ]
});
```

```javascript
const ItemPedidoSchema = new mongoose.Schema({
  _productos_productoId: {
    type: Number,
    ref: 'Producto',
    required: true
  },
  nombreItem: {
    type: String,
    required: true
  },
  cantidad: {
    type: Number,
    required: true
  },
  subtotal: {
    type: Number,
    required: true
  }
});

const DescuentoSchema = new mongoose.Schema({
  id: {
    type: Number,
    required: true
  },
  descripcion: {
    type: String,
    required: true
  },
  ratioDescuento: {
    type: Number,
    required: true
  }
});

const PedidoSchema = new mongoose.Schema({
  id: {
    type: Number,
    required: true
  },
  fechaPedido: {
    type: Date,
    required: true
  },
  precioTotal: {
    type: Number,
    required: true
  },
  descuentos: [DescuentoSchema],
  items: [ItemPedidoSchema]
});

const MetodoPagoSchema = new mongoose.Schema({
  nombreMetodo: {
    type: String,
    required: true
  },
  infoMetodo: {
    type: String,
    required: true
  }
});
```

```javascript
const UsuarioSchema = new mongoose.Schema({
  id: {
    type: Number,
    required: true
  },
  nombre: {
    type: String,
    required: true
  },
  email: {
    type: String,
    required: true
  },
  password: {
    type: String,
    required: true
  },
  direccion: {
    type: String
  },
  pais: {
    type: String,
    required: true
  },
  fechaRegistro: {
    type: Date,
    required: true
  },
  _usuarios_recomendadoPor: {
    type: Number,
    ref: 'Usuario'
  },
  valoracionTienda: {
    type: Number,
    required: true
  },
  premium: {
    type: Boolean,
    required: true
  },
  fecha_premium: {
    type: Date
  },
  premium_fee: {
    type: Number
  },
  metodosDePago: [MetodoPagoSchema],
  pedidos: [PedidoSchema]
});
```