

Do not write on this question paper and return it to the Invigilator after the examination.

PRACTICAL EXAMINATION LDM

Duration: 60' – **Set: 04**

Total marks: 100

Requirement

Use data query in the **MongoDB** database, and create a file named <<Student_enrollment_number>> that contains a script doing the following tasks:

No.	Specification	Marks
R1	<p>Create a database named hospital. In this database, create 3 collections named: patients, doctors and appointments.</p> <ul style="list-style-type: none">○ <i>Insert at least five documents into these collections.</i> <p><i>Hints:</i></p> <ul style="list-style-type: none">• Collection patients: {"patientID": 1, "name": "Alice", "age": 25, "gender": "Female", "conditions": "Diabetes"}• Collection doctors: {"doctorID": 1, "name": "Dr. Smith", "specialty": "Cardiology"}• Collection appointments: {"appointmentID": 1, "patientID": 1, "doctorID": 2, "date": "2024-07-01", "status": "Completed"}	15
R2	Query all patients who have appointments with "Dr. Smith"	10
R3	Query all doctors who have more than one appointment scheduled.	10
R4	Update the status of the appointment with “ <i>appointmentID</i> ”: 3 is "Completed"	5
R5	Delete all appointments where the <i>status</i> is "Cancelled".	5
R6	Add a new field called “ notes ” to the appointments collection and set it to an empty string for all documents.	5
R7	Create a compound index on the <i>name</i> and <i>specialty</i> fields in the doctor's collection.	5
R8	Use the Aggregation Framework to calculate the total number of appointments for each doctor.	15
R9	Create a view named activeAppointments that includes all appointments where the status is "Scheduled".	15
R10	Start a session , inserting a new document into the patient's collection, and update the <i>status</i> of the appointment with “ <i>appointmentID</i> ”: 1 to "Cancelled" within a transaction. Ensure the transaction is committed if both operations succeed.	15

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All the marks are evaluated in the Query.