Sql task number 1st

# Qestion number 1st

SELECT d.department\_id,d.department\_name,COUNT(s.department\_id) num\_of\_students

FROM student s INNER join department d ON s.department\_id=d.department\_id

GROUP BY department\_id;

# Qestion number 2

SELECT course\_id,course\_name,professor\_id,p.first\_name,p.last\_name

FROM courses c

INNER JOIN professors p

ON c.professor\_id = p.PROFESSORS\_ID where c.course\_name = “AIML”

# Question number 3

SELECT

course\_id,

ROUND(AVG(

CASE

WHEN grade = 'A+' THEN 10

WHEN grade = 'A' THEN 9

WHEN grade = 'B' THEN 8

WHEN grade = 'C' THEN 7

WHEN grade = 'D' THEN 6

WHEN grade = 'F' THEN 0

ELSE NULL

END

), 2) AS average\_grade

FROM

enrollment GROUP BY course\_id

# question number 4th

SELECT s.\* FROM student s

LEFT JOIN enrollment e ON s.student\_id = e.student\_id

WHERE e.student\_id is null;

# Question number 5th

SELECT c.department\_id ,d.department\_name ,COUNT(c.department\_id)

FROM courses c

INNER JOIN department d

ON c.department\_id = d.department\_id

GROUP BY c.department\_id;

# Question number 6th

SELECT c.course\_name, s.first\_name, s.last\_name,s.student\_id, c.course\_id

FROM enrollment en

INNER JOIN student s ON s.student\_id=en.student\_id

INNER JOIN courses c ON c.course\_id=en.course\_id

WHERE c.course\_name='AIML' ;

# Question number 7th

SELECT en.course\_id,c.course\_name MostPopularCourse,COUNT(en.course\_id) NumOfStudent FROM enrollment en INNER JOIN courses c ON c.course\_id = en.course\_id GROUP BY en.course\_id ORDER BY NumOfStudent DESC LIMIT 1;

# Question number 8th

SELECT

c.department\_id,

round(AVG(c.credits),2) AS average\_credits\_per\_student

FROM

courses c

INNER JOIN

student s

ON

s.department\_id = c.department\_id

GROUP BY

s.department\_id;

# question number 9th

SELECT c.professor\_id,pro.first\_name,pro.last\_name

FROM courses c INNER JOIN professors pro

ON pro.professor\_id=c.professor\_id

GROUP BY c.professor\_id

HAVING COUNT(c.department\_id) >1

# Question number 10th

SELECT c.course\_id,

MIN(CASE

WHEN grade = "A" THEN 9

WHEN grade = "B" THEN 8

WHEN grade = "C" THEN 7

ELSE NULL

END

)

AS min\_grade,

c.course\_name ,

MAX(CASE

WHEN grade = "A" THEN 9

WHEN grade = "B" THEN 8

WHEN grade = "C" THEN 7

ELSE NULL

END

) as maxgrade

FROM enrollment e INNER JOIN courses c on c.course\_id = e.course\_id group by e.course\_id;