USE sql\_tasks;

-- Q1: Find out the average sleep duration of top 15 male candidates who's

-- sleep duration are equal to 7.5 or greater than 7.5

SELECT AVG(`Sleep duration`) FROM (

SELECT \* FROM task33.sleepefficiency WHERE `Sleep duration` >= 7.5 AND Gender= 'male' ORDER BY `Sleep duration` DESC LIMIT 15

) AS sleeps

-- Q2: Show avg deep sleep time for both gender.Round result at 2 decimal

-- places.

-- Note - sleep time and deep sleep percentage will give you, deep sleep time

SELECT Gender,AVG(`Sleep duration`\*(`Deep sleep percentage`/100)) AS 'avg\_deep\_sleep'

FROM sleep

GROUP BY Gender;

-- Q3: Find out the lowest 10th to 30th light sleep percentage records where

-- deep sleep percentage values are between 25 to 45.

-- Display age, light sleep percentage and deep sleep percentage columns

-- only.

SELECT Age,`Light sleep percentage`,`Deep sleep percentage` FROM sleep

WHERE `Deep sleep percentage` BETWEEN 25 AND 45

ORDER BY `Light sleep percentage` LIMIT 10,20;

-- Q4: Group by on exercise frequency and smoking status and

-- show average deep sleep time, average light sleep time

-- and avg rem sleep time.

-- Note - Note the differences in deep sleep time for smoking

-- and non smoking status

SELECT `Exercise frequency`,`Smoking status`,

AVG(`Sleep duration`\*(`Deep sleep percentage`/100)),

AVG(`Sleep duration`\*(`REM sleep percentage`/100)),

AVG(`Sleep duration`\*(`Light sleep percentage`/100))

FROM sleep

GROUP BY `Exercise frequency`,`Smoking status`

ORDER BY AVG(`Sleep duration`\*(`Deep sleep percentage`/100));

-- Q5: Group By on Awakening and show AVG Caffeine consumption,

-- AVG Deep sleep time and AVG Alcohol consumption only for

-- people who do exercise atleast 3 days a week.

-- Show result in descending order awekenings

SELECT Awakenings,

AVG(`Caffeine consumption`),

AVG(`Sleep duration`\*(`Deep sleep percentage`/100)),

AVG(`Alcohol consumption`)

FROM sleep

WHERE `Exercise frequency` >= 3

GROUP BY Awakenings

ORDER BY Awakenings DESC;

-- Q6: Display those power stations which have average 'Monitored Cap.(MW)'

-- (display the values) between 1000 and 2000 and the number of occurance

-- of the power stations (also display these values) is greater than 200.

-- Also sort the result in ascending order.

SELECT `Power Station`,

AVG(`Monitored Cap.(MW)`) AS 'Avg\_Capacity',

COUNT(\*) AS 'Occurence'

FROM power

GROUP BY `Power Station`

HAVING (Avg\_Capacity BETWEEN 1000 AND 2000) AND Occurence > 200

ORDER BY Avg\_Capacity DESC;

-- Q7: Display top 10 lowest "value" State names of which the Year

-- either belong to 2013 or 2017 or 2021 and type is 'Public In-State'.

-- Also the number of occurance should be between 6 to 10.

-- Display the average value upto 2 decimal places, state names

-- and the occurance of the states.

SELECT State,

ROUND(AVG(Value),2) AS 'Avg\_Value',

COUNT(\*) AS 'frequency' FROM undergrad

WHERE Year IN (2013,2017,2021) AND Type = 'Public In-State'

GROUP BY State

HAVING frequency BETWEEN 6 AND 10

ORDER BY Avg\_Value ASC LIMIT 10;

-- Q8: Best state in terms of low education cost (Tution Fees) in

-- 'Public' type university.

SELECT State,AVG(Value) FROM undergrad

WHERE Type LIKE '%Public%' AND Expense LIKE '%Tuition%'

GROUP BY State

ORDER BY AVG(Value) ASC LIMIT 1;

-- Q9: 2nd Costliest state for Private education in year 2021.

-- Consider, Tution and Room fee both.

SELECT State,AVG(Value) FROM undergrad

WHERE Year = 2021 AND Type LIKE '%Private%'

GROUP BY State

ORDER BY AVG(Value) DESC LIMIT 1,1;

-- Q10: Display total and average values of Discount\_offered

-- for all the combinations of 'Mode\_of\_Shipment' (display this feature)

-- and 'Warehouse\_block' (display this feature also) for all male ('M')

-- and 'High' Product\_importance. Also sort the values in descending order

-- of Mode\_of\_Shipment and ascending order of Warehouse\_block

SELECT Mode\_of\_Shipment,Warehouse\_block,

SUM(Discount\_offered),AVG(Discount\_offered)

FROM shipment

WHERE Gender = 'M' AND Product\_importance = 'high'

GROUP BY Mode\_of\_Shipment,Warehouse\_block

ORDER BY Mode\_of\_Shipment DESC,Warehouse\_block ASC