```
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
```