MySQL Exercise 5: Answer Key

Question 1:
```
%%sql
SELECT gender, breed_group, COUNT(DISTINCT dog_guid) AS Num_Dogs
FROM dogs
GROUP BY gender, breed_group
ORDER BY Num_Dogs DESC;
```

Question 2:
```
%%sql
SELECT gender, breed_group, COUNT(DISTINCT dog_guid) AS Num_Dogs
FROM dogs
GROUP BY 1, 2
ORDER BY 3 DESC;
```

Question 3:
```
%%sql
SELECT gender, breed_group, COUNT(DISTINCT dog_guid) AS Num_Dogs
FROM dogs
WHERE breed_group IS NOT NULL AND breed_group!="None" AND breed_group!=""
GROUP BY 1, 2
HAVING Num_Dogs >= 1000
ORDER BY 3 DESC;
```

Question 4:
```
%%sql
SELECT breed_type, AVG(total_tests_completed) AS TotTests, AVG(mean_iti_minutes)
        AS AvgMeanITI
FROM dogs
GROUP BY breed_type
ORDER BY AVG(total_tests_completed) DESC;
```

Question 5:
```
%%sql
SELECT test_name, AVG(TIMESTAMPDIFF(hour,start_time,end_time)) AS Duration
FROM exam_answers
WHERE TIMESTAMPDIFF(HOUR,start_time,end_time)<6000 and
TIMESTAMPDIFF(minute,start_time,end_time) > 0
GROUP BY test_name
ORDER BY Duration desc;
```

Question 6:
```
%%sql
SELECT state, zip, COUNT(DISTINCT user_guid) AS NUM_Users
FROM users
WHERE Country="US"
GROUP BY State, zip
ORDER BY State ASC, NUM_Users DESC;
```

Question 7:
```sql
%%sql
SELECT state, zip, COUNT(DISTINCT user_guid) AS NUM_Users
FROM users
WHERE Country="US"
GROUP BY State, zip
HAVING NUM_Users>=5
ORDER BY State ASC, NUM_Users DESC;
```