

## QUESTION A

: i) Find the total feeding time for all of the rare animals.

The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left lists 'Oracle Connections' and 'Database Schema Service Connect'. The 'Reports' pane shows 'All Reports' and 'User Defined Reports'. The 'Worksheet' tab is active, displaying a query:   
--Q1 i) Find the total feeding time for all of the rare animals.  
  
SELECT SUM(TIMETOFEED), ANAME  
FROM ANIMAL  
WHERE ACATEGORY = 'rare'  
GROUP BY ANAME;  
  
The 'Query Result' pane shows the output:   
SUM(TIMETOFEED) ANAME  
1 1.75 Florida black bear  
2 0.75 Emperor Penguin  
3 3.5 Siberian tiger  
  
The 'SQL History' pane at the bottom shows the executed query:   
SELECT SUM(TIMETOFEED), ANAME FROM ANIMAL ... Adarsh 05-OCT-... SQL 3 0.085

ii) Which animal(s) have a 'time to feed' larger than every rare animal? Give the id and name of the animal.

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab is active, displaying a query:   
--Q1 ii) Which animal(s) have a 'time to feed' larger than every rare animal? Give the id and name of the animal.  
  
SELECT ANAME, AID  
FROM ANIMAL  
WHERE TIMETOFEED > (  
SELECT AVG(TIMETOFEED)  
FROM ANIMAL  
WHERE ACATEGORY='rare');  
  
The 'Query Result' pane shows the output:   
ANAME AID  
1 Sri Lankan sloth bear 3  
2 Grizzly bear 4  
3 Siberian tiger 7  
4 Bengal tiger 8  
5 South China tiger 9  
6 Llama 11  
  
The 'SQL History' pane at the bottom shows the executed query:   
SELECT ANAME, AID FROM ANIMAL WHERE TIMETO... Adarsh 05-OCT-... SQL 1 0.088

iii) Name zookeepers handling at least 4 animals.

The screenshot shows the SQL Developer interface with a query window titled 'A.sql'. The query is as follows:

```

SELECT Z.ZNAME, H.ZOOKEEPID, COUNT(H.ZOOKEEPID)
FROM HANDLES H, ZOOKEEPER Z
WHERE Z.ZID = H.ZOOKEEPID
GROUP BY Z.ZNAME, ZOOKEEPID
HAVING COUNT(H.ZOOKEEPID) >= 4;

```

The Query Result pane shows the following data:

ZNAME	ZOOKEEPID	COUNT(H.ZOOKEEPID)
1 Rob Schneider	3	4

The SQL History pane shows the query was executed on 05-OCT-... at 0.075 seconds.

iv) Find the names of the animals that are not related to the bear.

The screenshot shows the SQL Developer interface with a query window titled 'A.sql'. The query is as follows:

```

SELECT ANAME
FROM ANIMAL
WHERE ANAME NOT LIKE '%bear%';

```

The Query Result pane shows the following data:

ANAME
1 Galapagos Penguin
2 Emperor Penguin
3 Siberian tiger
4 Bengal tiger
5 South China tiger
6 Alpaca
7 Llama

The SQL History pane shows the query was executed on 05-OCT-... at 0.083 seconds.

v) List zookeepers earning the most while feeding animals.

The screenshot displays the SQL Developer application interface. On the left, the 'Connections' pane shows 'Oracle Connections' with 'Adarsh' selected. Below it, the 'Reports' pane lists various report types. The main workspace is divided into several panes. The 'Worksheet' pane shows a query titled 'Q1 v) List zookeepers earning the most while feeding animals.' The query is as follows:

```
--Q1 v) List zookeepers earning the most while feeding animals.
SELECT * FROM (SELECT ZNAME, (HOURLYRATE*SUM(TIMETOFEED))) AS MOST_EARN
FROM ZooKeeper, Handles, Animal
WHERE ZooKeeper.ZID = Handles.ZOOKEEPID AND Animal.AID = Handles.ANIMALID
GROUP BY ZNAME, HOURLYRATE
ORDER BY MOST_EARN DESC)
WHERE ROWNUM<=1;
```

The 'Query Result' pane shows the output of the query, which is a single row:

	ZNAME	MOST_EARN
1	Tina Fey	2450

The 'Script Output' pane shows the message 'All Rows Fetched: 1 in 0.094 seconds'. The 'SQL History' pane at the bottom shows the executed query and its details:

SQL	Connect...	TimeSt...	Type	Executed	Duratio...
SELECT * FROM (SELECT ZNAME, (HOURLYRATE*SUM(TIMETOFEED))) AS MOST_EARN FROM ZooKeeper, Handles, Animal WHERE ZooKeeper.ZID = Handles.ZOOKEEPID AND Animal.AID = Handles.ANIMALID GROUP BY ZNAME, HOURLYRATE ORDER BY MOST_EARN DESC) WHERE ROWNUM<=1;	Adarsh	06-OCT...	SQL	5	0.094