Question 01

An index basically creates a key where it is defined as unique, primary or just simple. This is used to differentiate certain attributes of a table in a database.

Question 02

CREATE INDEX COUNTRY_INDEX ON customer (country);

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	Id	91	A	No	
Edit Drop	COUNTRY_INDEX	BTREE	No	No	Country		A	Yes	

Question 03

The engine of the table did not support DESC of indexes. Therefore we changed the engine of the table from "MYISAM" to "InnoDB"

CREATE INDEX PRICE_INDEX ON product (UnitPrice DESC);

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	Id	78	A	No	
Edit Drop	PRICE_INDEX	BTREE	No	No	UnitPrice	63	D	Yes	

Question 04

SHOW INDEXES FROM customer;

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
customer	0	PRIMARY	1	Id	A	91	NULL	NULL		BTREE			YES	NULL
customer	1	COUNTRY_INDEX	1	Country	A	NULL	NULL	NULL	YES	BTREE			YES	NULL

Question 05

EXPLAIN SELECT COUNT(*) FROM customer WHERE Country="Spain"

id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
1	SIMPLE	customer	*NULL*	ref	COUNTRY_INDEX	COUNTRY_INDEX	43	const	5	100.00	Using index

Question 06

DROP INDEX COUNTRY_INDEX ON customer;

Indexes ⓘ

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
✏ Edit ⊖ Drop	PRIMARY	BTREE	Yes	No	Id	91	A	No	

Question 07

CREATE UNIQUE INDEX CONTACT_INDEX ON customer (Phone);

Indexes ⓘ

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
✏ Edit ⊖ Drop	PRIMARY	BTREE	Yes	No	Id	91	A	No	
✏ Edit ⊖ Drop	CONTACT_INDEX	BTREE	Yes	No	Phone		A	Yes	

Question 08

INSERT INTO customer(Id, FirstName, LastName, City, Country, Phone) VALUES
(100,"Jenny","Mendel","Graz","Austria","7675-3425");

Error

SQL query: Copy

```
INSERT INTO customer(Id, FirstName, LastName, City, Country, Phone) VALUES (100,"Jenny","Mendel","Graz","Austria","7675-3425")
```

MySQL said: ⓘ

#1062 - Duplicate entry '7675-3425' for key 'customer.CONTACT_INDEX'

Question 09

CREATE INDEX SIMPLE_CONTACT_INDEX ON customer (Phone);

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	**PRIMARY**	BTREE	Yes	No	Id	91	A	No	
Edit Drop	**CONTACT_INDEX**	BTREE	Yes	No	Phone		A	Yes	
Edit Drop	**SIMPLE_CONTACT_INDEX**	BTREE	No	No	Phone		A	Yes	

Question 10

ALTER TABLE customer DROP INDEX CONTACT_INDEX, DROP INDEX SIMPLE_CONTACT_INDEX;

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	**PRIMARY**	BTREE	Yes	No	Id	91	A	No	