

## 5.2 - ONLINE EXAMINATION

### FUNCTIONAL DEPENDENCIES

#### TABLE : STUDENT

StudentID  $\rightarrow$  FName  
StudentID  $\rightarrow$  MName  
StudentID  $\rightarrow$  LName  
StudentID  $\rightarrow$  DOB  
StudentID  $\rightarrow$  email  
StudentID  $\rightarrow$  ContactNo  
StudentID  $\rightarrow$  GENDER  
StudentID  $\rightarrow$  categoryID  
StudentID  $\rightarrow$  SchoolCode  
StudentID  $\rightarrow$  password

Here, Key is {StudentID}. So, Student table is in BCNF.

#### TABLE : AssignedTo

{ExamID, CenterID, StudentID}  $\rightarrow$  SeatNo  
{ExamID, CenterID, StudentID}  $\rightarrow$  BlockNo

Here, Key is {StudentID, ExamID, CenterID}. So, this table is in BCNF.

#### TABLE : Registration

{ExamID, StudentID}  $\rightarrow$  Fees  
{ExamID, StudentID}  $\rightarrow$  Result

Here, Key is {StudentID, ExamID}. So, this table is in BCNF.

### **TABLE : ResponsesTo**

$\{\text{StudentID}, \text{SetID}, \text{SetCode}, \text{Index}\} \rightarrow \text{Response}$

Here, Key is  $\{\text{StudentID}, \text{SetID}, \text{SetCode}, \text{Index}\}$ . So, this table is in BCNF.

### **TABLE : Set**

$\{\text{SetID}, \text{SetCode}, \text{Index}\} \rightarrow \text{ExamID}$

$\{\text{SetID}, \text{SetCode}, \text{Index}\} \rightarrow \text{QuestionID}$

Here, Key is  $\{\text{SetID}, \text{SetCode}, \text{Index}\}$ . So, this table is in BCNF.

### **TABLE : Exam**

$\text{ExamID} \rightarrow \text{ExamDate}$

$\text{ExamID} \rightarrow \text{StartTime}$

Here, Key is  $\{\text{ExamID}\}$ . So, this table is in BCNF.

### **TABLE : Question**

$\text{QuestionID} \rightarrow \text{Content}$

$\text{QuestionID} \rightarrow \text{A}$

$\text{QuestionID} \rightarrow \text{B}$

$\text{QuestionID} \rightarrow \text{C}$

$\text{QuestionID} \rightarrow \text{D}$

$\text{QuestionID} \rightarrow \text{CorrectOption}$

$\text{QuestionID} \rightarrow \text{SetterID}$

$\text{QuestionID} \rightarrow \text{SubjectID}$

Here, Key is  $\{\text{QuestionID}\}$ . So, this table is in BCNF.

### **TABLE : Setter**

SetterID → Name

SetterID → Gender

SetterID → SchoolID

SetterID → AddressID

Here, Key is {SetterID}. So, this table is in BCNF.

### **TABLE : SCHOOL**

SchoolID → SchoolName

SchoolID → AddressID

Here, Key is {SchoolID}. So, this table is in BCNF.

### **TABLE : SUBJECT**

SubjectID → SubName

Here, Key is {SubjectID}. So, this table is in BCNF.

### **TABLE : CUTOFF**

{ ExamID , CategoryID } → CutoffMark

Here, Key is { ExamID , CategoryID }. So, this table is in BCNF.

### **TABLE : SupervisedBy**

{ ExamID, CenterID , SupervisorID } → BlockNo

Here, Key is { ExamID, CenterID , SupervisorID }. So, this table is in BCNF.

### **TABLE : Center**

CenterID → CenterName

CenterID → AddressID

CenterID → Capacity

Here, Key is { CenterID }. So, this table is in BCNF.

### **TABLE : SUPERVISOR**

SupervisorID → Name

SupervisorID → Gender

SupervisorID → ContactNo

SupervisorID → AddressId

Here, Key is { SupervisorID }. So, this table is in BCNF.

### **TABLE : ADDRESS**

AddressID → Street

AddressID → City

AddressID → District

AddressID → State

AddressID → PIN

Here, Key is { AddressID }. So, this table is in BCNF.

### **TABLE : Category**

CategoryID → CategoryName

CategoryID → StudentID

Here, Key is { CategoryID }. So, this table is in BCNF.

### **TABLE : CoductedAt**

No FDS available