6-A-Day – Computer Science GCSE (46)

Q1

Charlotte runs a website which stores details about movies. The users can log onto the website and leave ratings for movies.

The websites uses a database with three tables:

- The table `FILM` contains the following fields; `FilmID, Title, Year, Director, Category`
- The table `USER` contains the following fields; `UserID, FirstName, Surname, DateOfBirth`
- The table `RATING` stores, amongst other fields, the rating a user has given a film (a score out of 5).

An extract of the data in the table `RATING` is shown in Fig. 1:

RatingID	FilmID	UserID	Rating
00214	16CM12	20_Elliot	4.5
00215	55HR8	Jade01	1
00216	12HR15	Sunil_99	1
00217	16SF8	Jade01	2

Fig. 1

(a) Explain why `FilmID` has been included in the `RATING` table.

.....

.....

.....

.....

.....

..... **[3]**

Q2

(b) Explain why it is a good idea to separate the data from the applications that use the database.

.....

.....

.....

..... **[2]**

Q3

(c) Give **one** example of a record that could be stored in the user table.

.....

..... **[1]**

Q4

(d) (i) Charlotte uses a query to list films. The query uses the following criteria:

```
(Rating < 2) AND (UserID = "Jade01")
```

List the RatingID(s) of the rating(s) that will be selected from the extract shown.

.....

..... **[1]**

(ii) Write the criteria for a query that will select all Films produced in the Year 2015 in the Category `"Comedy"`.

.....

..... **[3]**

Q5

Joseph is an author and programmer, and he needs to estimate how many pages his new book will have.

Each page has an average of 300 words. Each chapter starts with a chapter title page.
The number of pages is estimated by;

- dividing the number of words by 300
- ignoring the decimal part of the division
- adding the number of chapters to this total.

Joseph uses the algorithm below to estimate the number of pages, but his algorithm does not give the correct result.

```
01  INPUT numberOfWords
02  INPUT numberOfChapters
03  CONST wordsPerPage = 300
04  numberOfPages = RoundDown(numberOfWords / wordsPerPage)
05  numberOfPages = numberOfWords + numberOfChapters
06  OUTPUT numberOfPages
```

Joseph has used a `RoundDown` function to remove the decimal part of the division, e.g. `RoundDown(6.2)` would return 6, `RoundDown(7.8)` would return 7.

(a) State whether this algorithm uses selection, sequence or iteration.

..... **[1]**

Q6

Line 03 defines a constant. Describe what is meant by a constant.

.....

.....

..... **[2]**