



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

CERTIFICATE IN INFORMATION TECHNOLOGY – CIT2K 11M
YR I SEM I

EIT 1125: DATABASE MANAGEMENT SYSTEMS

END OF SEMESTER EXAMINATIONS

SERIES: AUGUST/SEPTEMBER 2011

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer booklet*

Answer any **THREE** questions

This paper consists of **FOUR** printed pages

SECTION A –Answer all questions

Question 1 (Compulsory)

- a) Explain the term Database (2 marks)
- b) Explain the component of standard database (12 marks)
- c) Explain any **FOUR** data types in MS-ACCESS (8 marks)
- d) Explain the following database terminologies (8 marks)
 - i) Data item
 - ii) Field
 - iii) Record
 - iv) Database structure
- e) Explain any **FIVE** disadvantages of computerized database (10 marks)
- f) State any **THREE** database packages (3 marks)

Question 2

- a) Create a Database called **salary.mdb** having the following records. Save the records in a table called **salary table 1**.

b)

| LAST NAME | FIRST NAME | DEPARTMENT | HOURS | RATE |
|-----------|------------|------------|-------|------|
| Adams | Nathan | Sales | 20 | 700 |
| Baman | Sanday | Sales | 60 | 800 |
| Cohen | Larry | Executive | 100 | 1000 |
| Dean | Lena | Executive | 30 | 2000 |
| London | Eric | Sales | 40 | 400 |
| Lucas | John | Sales | 70 | 1500 |
| Long | Chuck | Sales | 90 | 700 |
| Newman | Robert | Executive | 30 | 1000 |
| Keegan | Keith | Sales | 110 | 500 |

form

DEPARTMENT

HOURS

RATE

GROSS SALARY

NETPAY

EMPLOYEE DATABASE

| | | | |
|------------|--------|-------|-------|
| ADD RECORD | DELETE | PRINT | CLOSE |
|------------|--------|-------|-------|

- c) Explain the term “FORM” as used in MS-ACCESS (3 marks)
- d) List any **FIVE** advantages of computerized database (5 marks)

Question 3

- a) Explain the “Query” as used in Database management system (3 marks)
- b) Create a database called POLY.MDB having the following records (10 marks)

| CATEGORY | STORE | QUANTITY | COST |
|----------|---------------|----------|---------|
| CD | Disc city | 8 | 12.50 |
| CD | Disk city | 34 | 13.50 |
| CD | Book Mart | 23 | 50.00 |
| BOOK | Book Mart | 6 | 1000.00 |
| BOOK | Book Mart | 456 | 400.00 |
| PAINTING | Computer City | 20 | 100.00 |
| PAINTING | Computer City | 100 | 60.00 |
| BOOK | Auction Art | 34 | 700.00 |
| BOOK | Auction Art | 200 | 400.00 |
| CD | Auction Art | 300 | 800.00 |

c) Create Query files that meet the following conditions:-

- (i) Have all CATEGORY CD, call it category cd.
- (ii) Have all records whose COST is greater than 600, call it cost more than 600.
- (iii) Have all records whose STORE is computer city and QUANTITY less than 100. Call it quantity less than 100. (10 marks)

Question 5

a) Crate a database called SALARY MDB having the following records. (10 marks)

| EMPO | NAME | HOUSE-ALL | MED-ALL | COMM-ALL | PAYE | UNION-DUES | RISK-FUND | NSSF | HOURS | RATE |
|------|------|-----------|---------|----------|------|------------|-----------|------|-------|------|
| 001 | MARY | 10000 | 7000 | 5000 | 8000 | 200 | 150 | 300 | 20 | 1000 |
| 002 | JOHN | 15000 | 5000 | 5000 | 6000 | 200 | 150 | 300 | 30 | 9000 |

b) Create a form called salary form from the above table as shown below.

SALARY = HOURS * RATE
 TOTAL EARNINGS = SALARY + HOUSE ALL + MEDICAL ALL + COMM ALL
 TOTAL DEDUCTIONS = PAYE + UNION DUES + RISK FUND + NSSF
 NETPAY = TOTAL EARNINGS – TOTAL DEDUCTIONS (13 marks)

| | | | | | |
|--|--|------------|--------|-------|-------|
| EMPNO | <input style="width: 90%;" type="text"/> | | | | |
| NAME | <input style="width: 90%;" type="text"/> | | | | |
| HOUSE ALLOWANCE | <input style="width: 90%;" type="text"/> | | | | |
| MEDICAL ALLOWANCE | <input style="width: 90%;" type="text"/> | | | | |
| TOTAL EARNINGS | <input style="width: 90%;" type="text"/> | | | | |
| DEDUCTIONS | <input style="width: 90%;" type="text"/> | | | | |
| PAYEE | <input style="width: 90%;" type="text"/> | | | | |
| UNION DUES | <input style="width: 90%;" type="text"/> | | | | |
| RISK FUND | <input style="width: 90%;" type="text"/> | | | | |
| NSSF | <input style="width: 90%;" type="text"/> | | | | |
| TOTAL DEDUCTIONS | <input style="width: 90%;" type="text"/> | | | | |
| NETPAY SALARY | <input style="width: 90%;" type="text"/> | | | | |
| <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; padding: 5px; width: 25%; text-align: center;">ADD RECORD</td> <td style="border: 1px solid black; padding: 5px; width: 25%; text-align: center;">DELETE</td> <td style="border: 1px solid black; padding: 5px; width: 25%; text-align: center;">PRINT</td> <td style="border: 1px solid black; padding: 5px; width: 25%; text-align: center;">CLOSE</td> </tr> </table> | | ADD RECORD | DELETE | PRINT | CLOSE |
| ADD RECORD | DELETE | PRINT | CLOSE | | |