 Province of the

EASTERN CAPE

EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET**

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| **SUBJECT** | INFORMATION TECHNOLOGY THEORY | **GRADE** | 11 | **DATE** | 14 April to 17 April 2020 |
| **TOPIC** | Database Management – Test/Consolidation task | **TERM 1**  **REVISION** | (Please tick) | **TERM 2 CONTENT** | ✓ |
| **TIME ALLOCATION** | 1hr | **TIPS TO KEEP HEALTHY**  1. **WASH YOUR HANDS** thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%.  2. **PRACTISE SOCIAL DISTANCING** – keep a distance of 1m away from other people.  3. **PRACTISE GOOD RESPIRATORY HYGIENE**: cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use.  4. **TRY NOT TO TOUCH YOUR FACE.** The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick.  5. **STAY AT HOME.** | | | |
| **INSTRUCTIONS** | Resources used// Most of this week’s work is taken from the New DBE book   * Its gr8! @ grade12 theory, Study Opportunities * Information Technology Theory Book Grade 12 , DBE * Past Exam Papers   Answer all questions |
|  | 1. Match the COLUMN A with the correct answer in COLUMN B. Write down only the question number (1.1–1.6) and the matching letter (A–F) in COLUMN B, for example 1.6–F.   |  |  | | --- | --- | | COLUMN A | COLUMN B | | 1. Size  2. Desktop software  3.  4. Distributed  database  5. Database  programmer  6. Database analyst | A. Powerful since they can be expanded easily and  make use of the power and bandwidth provided  by multiple computers  B. Amount of data that will be stored on the  database.  C.  D. Designed to work on a user’s personal computer.  E. Working with companies to identify opportunities  to set up and improve their data systems.  F. Creates database and database structures |   2. The database will be designed on one computer and will run on one standalone computer.  a. What is the name given to this type of database?  b. Give an example of a program that can be used to design the database mentioned in the previous question  c. What is the name given to a database that is shared on the internet?  d. Give TWO examples of programs that can be used to design the database described in the previous question.  3. While discussing the database, it is suggested that you set up a distributed  database for your small office.  a. What is a distributed database?  b. Justify why this may not be a good idea.  c. Suggest a more appropriate type of database for your office.  d. Give an example of a program that can be used to design a distributed database.  e. Will it be possible for many staff members to work on the distributed database at the same time? Justify your answer.  f. You realise you might need the help of a database programmer. List THREE responsibilities a database programmer has.  4. Choose the correct answer.  a. Which one is NOT a function or duty of a database administrator  A. Managing and maintaining the database via a DBMS.  B. Capturing and entering data in a database.  C. Setting up and maintaining users of the database and their access rights.  D. Performing routine maintenance on the database.  b. Which one of the following is an example of a distributed database?  A. Amazon web services  B. Google  C. Wikipedia  D. Superbalist  5. Match the COLUMN A with the correct answer in COLUMN B. Write down only the question number (1.1–1.6) and the matching letter (A–F) in COLUMN B, for example 1.2–A.   |  |  | | --- | --- | | COLUMN A | COLUMN B | | 1. Distributed database  2. Spotify  3. Database  4. DBMS software  5. Database analyst  6. Microsoft Access | A. Create database tables  B. An example of a typical desktop database  C. One example of how a DBMS is used  D. Responsible with working with companies to identify opportunities to set up and improve their data systems  E. Databases that are not stored and run from a single computer (or server), but instead are stored on multiple computers at the same time  F. Used to store data |   6. What is a database used for?  7. List TWO factors that determine how databases are used.  8. Give ONE difference between a database on a desktop and database on a server.  9. Give THREE factors to consider when choosing a DBMS to use for the database.  10. List TWO open-source DBMS applications.  11. Give a description of a Microsoft SQL Server.  12. Look at the following DBMS systems. Indicate which type of DBMS you would use for the following situations. Motivate your answer.  a. Sign-in and sign-out information of a company of 100 employees.  b. An online programming course website.  c. An online hotel booking service.  13. Discuss TWO reasons why businesses make use of the distributed database.  14. You have been appointed as a Database Analyst for the planned database of your brother’s Primary School. More than 1 000 learners attend the school, you must make several presentations to the school management, teachers and governing body.  a. One of the governing body members has suggested that you plan for a distributed DBMS instead of a server DBMS.  A. What is a DBMS?  B. List THREE activities that a DBMS allows you to do.  C. Give TWO reasons when it becomes necessary for an organisation to have a distributed database.  b. A Database Administrator will have to be appointed. List TWO tasks of a database administrator.  15. a. You want to create a database for a new online messaging app to store both the users’ settings and the messages sent between users. In terms of the amount of data that will be used, it is difficult to say. Since it is a new application, you do not expect there to be millions of messages sent. However, even with just a few thousand users, you can easily see a hundred thousand messages being sent a day. The database should therefore be designed to handle large amounts of data.  b. Describe the difference between a local database and an online database.  c. Based on this scenario, which database would you use. Motivate your answer.  16. You need to create a database used to store the text and images for a large website. The website will need to be very reliable and be able to expand quickly as it becomes more popular. Which type of database would you choose for this scenario? Motivate your answer.  17. The following screenshot is an example of a possible database that can be used. It is created in Microsoft Access. A database analyst was asked to help with this.      a. List TWO tasks of a database analyst.  b. Under which Database Management System (DBMS) software does Microsoft Access fall?  c. Give ONE advantage of the database described in question b). | | | | |