

System Deployment	<ul style="list-style-type: none"> • Direct deployment • Pilot deployment <p>L. <u>Phase deployment</u> M. <u>Parallel Deployment</u></p>
N <u>System maintenance</u>	<ul style="list-style-type: none"> • New errors has identified <p>N. <u>New user requirements identified</u> O. <u>New technologies available</u></p>

8. List the 3 advantages of manual system with compared to the computerized system.

- **Cost is very low since we don't need hardware or software.**
- **Power is not needed.**
- **Training is not needed.**
- **Very flexible.**

9. An ATM is a machine built into the wall of a bank or other building, which allows people to take out money from their bank account by using a special card. ATM is an abbreviation for 'automated teller machine'.

List the Two inputs of the ATM

Pin number, Withdraw amount and ATM card

List the Two processes of the ATM

Validation of the pin number and validation of the amount entered to withdraw

List Two outputs of the ATM

Cash, receipt and error message

10. Identify the suitable system development life cycle model for the questions given below and justify your answer.

- a) A school wants have an online examination system to conduct the examination for the students who at remote places. They want to see the system components parts by parts very quickly and sometimes the requirements can be changed time to time. The software engineer has decided to use the **Iterative Incremental** model because of requirements **are changing and they want to see the system components parts by parts very quickly.**
- b) A school wants to have a computerized system for the library to automate the book borrowing and returning using bar code reader. The principal has specified that the requirements are static. The software engineer has decided to use the **waterfall** model because of **requirements are static.**

- c) A company wants to have AI based system to manage the request come from the large number of customers online. This is a kind of very expensive and AI based system. The requirements are dynamic. The software engineer has decided to use the **Spiral** model because of **high risk of AI project and requirements are dynamic.**
- d) A customer requested to develop an online system for his organization but he is unable to explain the exact system that he wants. He wants to see each component before start the final coding. The software engineer has decided to use the **Prototype** model because of **requirements are not clear and client wants to see each components.**

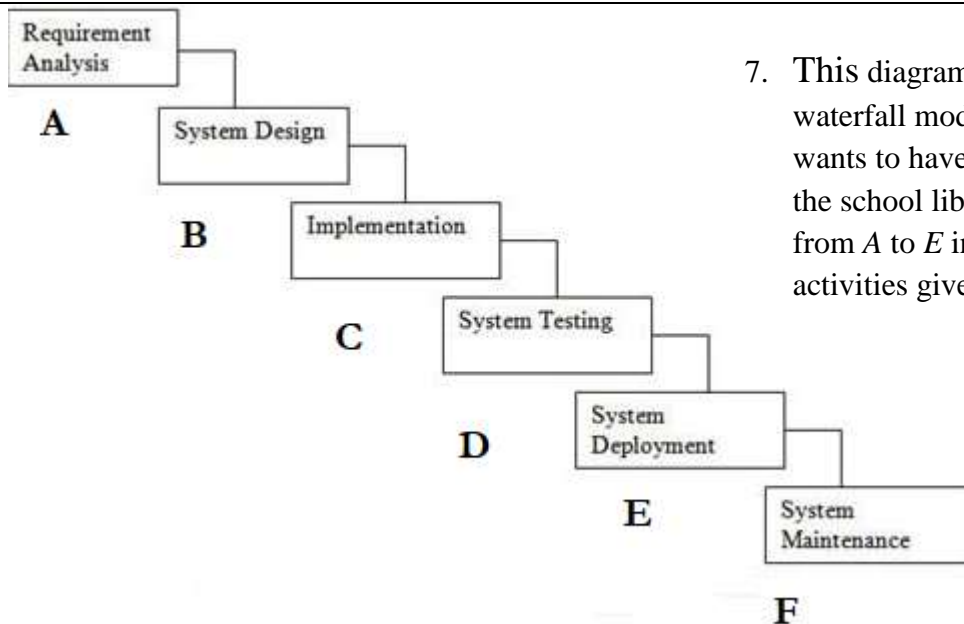
11. Identify the most suitable system deployment technique for the following situations and justify your answer.

- a) An emergency call handling center in a hospital wants to implement a software based system to manage their operations. When the software engineers completed the system development for the above requirements of emergency call handling, **parallel** deployment can be used to install the system because of **it is handling the emergency call.**
- b) Set of software engineers developed the library system for a school and they have tested the system for several months. They have identified the system is working 100% accurately without any errors. Therefore this system can be installed using the **direct** deployment method because of **it is tested properly.**
- c) An organization has 10 departments at different locations in the country. They are planning to automate all the work using new software based system. But initially they want to use The system only in the head office and once they test it then the system can be installed in remaining departments. Therefore this system can be installed using the **pilot** deployment method because of **it is installed only in one department at the beginning.**
- d) An organization wants have a very large and complex software system but they have Specified the component that they need immediately and component that they need later. When the software engineering team completed the project the system can be installed using the **phase** deployment method because of **the system must be installed phase by phase.**

12. Identify the most suitable testing technique for the following situations in SDLC.

- a) When the entire system development is completed and when all components are tested we need to test the system to determine the correct output for the given input. This testing is called as **system** testing in SLDC.

- b) Each system has sub components and each subcomponent has small parts. The quality assurance team is assigned to test each small parts separately by the project manager. This testing is called as **unit** testing in SLDC.
- c) When the entire system is tested properly, the software development team wants to test the system with the end user or client. This testing is called as **acceptance** testing in SLDC.
- d) When each units are tested separately, we need to test those tested units together. This testing is called as **integration** testing in SLDC.



7. This diagram represents the steps in the waterfall model. The school principal wants to have computerized system for the school library. Match the each steps from A to E in the diagram with the activities given in a to e.

Answer:
A = b
B = c
C = f
D = d
E = e
F = a

- a) After 2 years of the system implementation in the library, the librarian has informed the principle that they wants have an interface to do the online book reservation from mobile phone.
- b) The software engineering team has interviewed the librarian and other members in the library.
- c) The project manager and software architect has decided the software, hardware components and design the user interface and database.
- d) The quality assurance team has tested the entire library system with principal of the school.
- e) The school has decided to use both manual and current system together for two weeks.
- f) The team has selected the C++ language to program the library system.