PAPER: **INFORMATION SYSTEMS QUESTION PAPER**

SPECIALTY: **COMPUTER ENGINEERING**
OPTION: **DATABASE MANAGEMENT**
EXAM PAPER: **INFORMATION SYSTEMS**
CODE: **DBM22**
CREDIT VALUE: **5**
DURATION: **3 HOURS**
NATURE OF EXAM: WRITTEN

SECTION A: Software Engineering (40 marks)
Circle only one answer in each MCQ (10 marks)

1) This phase of the SDLC is known as the "ongoing phase" where the system is periodically evaluated and updated as needed.
A. preliminary investigation
B. system design
C. system implementation
D. system maintenance

2) ………. includes the existing system, the proposed system, system flow charts, modular design of the system, print layout charts and data file designs.
A. Feasibility Report
B. Functional Specification Report
C. Design Specification Report
D. Terms of Reference

3) After implementation of the system, system maintenance could be done for
A. Minor changes in the processing logic
B. Errors detected during the processing
C. Revision of the formats of the reports
D. All of the above

4) The final step of the system analysis phase in the SDLC is to
A. gather data
B. write system analysis report
C. propose changes
D. analyze data

5) The different phases for development and testing of the systems includes
i) Development and testing of the individual programs
ii) Development and testing of the system modules as a part of the major subsystems
iii) Development and testing of the major subsystems as a part of the proposed system
A. i and ii only
B. ii and iii only
C. i and iii only
D. All i, ii and iii

6) The electronic data processing department has specific functions to be performed which includes
i) System department and programming

ii) Computer system operation
iii) Control over data, reports and files
iv) Data preparation
A. i, ii and iii only
B. i, iii and iv only
C. ii, iii and iv only
D. All i, ii, iii and iv

7) A feasibility study is used to determine the proposed systems
A. resource requirements
B. costs and benefits
C. availability of hardware and software
D. all of the above

8) Breaking the system modules into smaller programs and allocating these programs to the members of the system development team is the activity involved in …………..
A. System Design Phase
B. System Development Phase
C. System Analysis Phase
D. System Implementation Phase

9) ………….. has responsibilities for all aspects of data processing, operation research, organization and method, system analysis and design investment etc.
A. Management Services Director
B. Data Processing Manager
C. System Analyst
D. Senior Systems Analyst

10) During which phase of the SDLC are users trained to use the new system?
A. preliminary investigation
B. systems implementation
C. systems development
D. systems maintenance

Structural Question (30 Marks)

11) Discuss about the waterfall life cycle model
A modern hotel has installed a sandwich making robot to supply room service sandwiches at any hour of the day. The hotel also has an automated delivery system that will take the completed sandwich to a specified room. You have been asked to program a software agent interface that guests can phone to order sandwiches.
1. Write a short scenario describing how a guest would order a sandwich using your interface.
2. Provide a hierarchical task description of the sandwich ordering process. Note particularly where there might be choice points or alternative methods. Also explain your criteria for the level of decomposition used.
3. Use a state diagram to describe the dialogue between the system and the user. Note any additional issues this raises about the system that need to be resolved in the design.

SECTION B: Introduction to Information Systems (60 marks)
Circle only one answer in each MCQ (10 marks)
1)Which of the following are the basic activities involved in system development phase….
i) Preparing the documentation for each one of the programs
ii) Receiving the user data for acceptance testing
iii) Getting the user sign-off after the acceptance testing
iv) Operation and testing of software and hardware
A. i, ii and iv only
B. ii, iii and iv only
C. i, ii and iii only
D. All i, ii, iii and iv

2) …….. is responsible for the efficient running of the department and must therefor to be a good
administrator as well as having some knowledge.
A. Management Services Director
B. Data Processing Manager
C. System Analyst
D. Senior Systems Analyst

3) Using the ………. approach, a new system is tested in one part of the organization before being
implemented in others.
A. direct
B. parallel
C. phased
D. pilot

4) For development of the proposed system, it is important that all possible support should be provided to the
development team. This support includes availability of
A. Office space
B. Relevant Data
C. Secretarial Assistance
D. All of the above

5) Assessing the effectiveness of file maintenance procedures and suitability of file security procedures is the
main duties of ………
A. Management Services Director
B. Data Processing Manager
C. System Analyst
D. Senior Systems Analyst

6) During a systems audit, the system performance is compared to
A. similar systems
B. newer systems
C. the design specifications
D. competing systems

7) The final output of ……… phase is a fully developed and tested software system along with complete documentation and testing results.
A. system analysis
B. system design
C. system development
D. system implementation

8) System analyst are progress through three levels during their career the begin as "analyst" become "Senior Systems Analyst" after they have gained the requisite experience and finally are appointed as ………….
A. main system analyst
B. director of system analyst
C. chief system analyst
D. system analyst manager

9) State whether the following statements are True or False.
i) A grid chart shows the relationship between input and output documents.
ii) A decision table shows the various rules that apply to a decision when certain conditions exist.
A. i-True, ii-True
B. i-True, ii-False
C. i-False, ii-True
D. i-False, ii-False

10) The system implementation phase of SDLC includes the following activities
i) Planning for implementation
ii) Preparing the schedule for implementation
iii) Procurement of hardware
iv) Installation of software
A. i, ii and iv only
B. ii, iii and iv only
C. i, ii and iii only
D. All i, ii, iii and iv

Structural Questions (50 marks)

11) **What is Software Development Life Cycle? (SDLC)**

12) **Draw a diagram for pure waterfall life cycle.**

13) **What is feasibility study? What are the contents we should contain in the feasibility report?**