**Degree/ Branch: B. E / Common to all Branch****Semester/ Year: I / I****Subject Code / Name: GE2112/ Fundamentals of Computing and Programming****(Question Bank)****UNIT III: Problem Solving and Office Application Software****Part-A (2 marks for each question)**

1. What are the activities to be performed to solve the program?
 - Identifying the purpose.
 - Developing the program.
 - Executing the program.

2. Is the computer thing like human mind? How it solves the problem?

Yes. The working process of a computer is similar to the human mind, which first analyses the complete situation of a problem, then decides the way to solve the problem on the basis of available parameter.

3. What is meant by identifying the purpose of a problem?

It is the first stage of problem solving using a computer. It basically focuses on understanding the problem.

4. What are the steps followed in identifying the problem?
 - Identifying the parameter and Constraints
 - Collecting Information

5. How can we developing a program?
 - Identifying the logical structure
 - Writing the computer program
 - Debugging the program

6. What is meant by debugging of the program?

After writing the code, a user has to apply the debugging techniques for removing any possible errors in the program.

7. What are the steps followed to identifying the logical structure in developing a program?
 - Writing algorithm to list the various steps
 - Drawing flowchart to represent the flow of information
 - Writing pseudo code to specify the programming specifications.

8. Describe about executing the program.

After developing an error-free program, it needs to be executed in order to view the solution of the original problem.

9. Write short notes on problem solving techniques

It is a set of techniques and graphical tools that helps in providing logic for solving problem. These tools are used to express the logic of the problem by specifying the correct sequence of all instruction to be carried out.

10. List the various problem solving tools used nowadays

- Algorithm
- Flowcharts
- Pseudo code

11. Write Short notes on algorithm

An algorithm is a well organized, pre-arranged & defined textual computational module that receives some value as input & provides an output

12. Write the algorithm to find the biggest of the given two numbers

Step1: Read the values of a & b

Step2: Assign big=a

Step3: If big greater then big then assign big=b

Step4: Print big

Step5: Stop

13. Describe about flow chart

A flowchart is a pictorial representation of an algorithm in which the steps are drawn in the form of different shapes of boxes and logical flow is indicated by interconnecting arrows.

14. What are the tools used in design phase of the program development life cycle?

- Algorithm
- Flowcharts
- Pseudo code

15. Draw the Symbol which is used for Decision, connector in flowchart

Decision

Connector

16. Draw the Symbol which is used for input, output, Terminal, Processing

input/output

Terminal

Processing

17. Write any two guidelines for preparing the flowcharts

- The flowchart should be clear, neat and easy to follow.
- The flowchart must have a logical start & finish

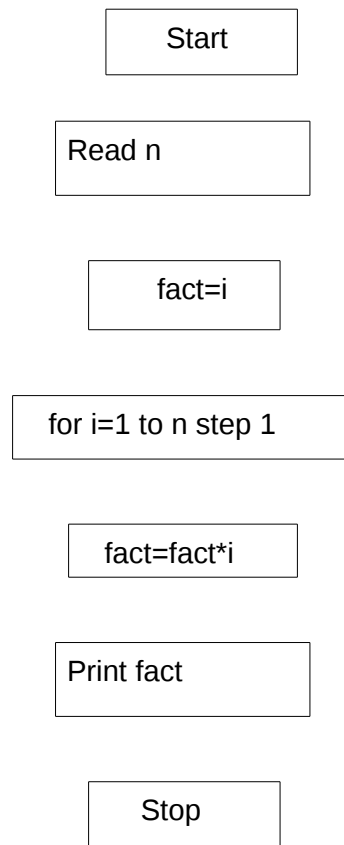
18. List the benefits of the flowchart.

- It helps to understand the flow of program control in an easy way.
- The use of flow charts work well for small program design.

19. Write any two disadvantages of the flowchart

- Modification of a flowchart is difficult and required almost an entire rework.
- Excessive use of connectors in a flowchart may at times confuse the programmers.

20. Draw a flowchart to find the factorial of a given number.



21. Define pseudo code

It is an outline of a program written in a form that can be easily converted to real programming statements. It uses plain English statement rather than symbols to represents the process of computer program.

22. Write down the keyword used in the pseudo code

Input : READ, OBTAIN, GET and PROMT
Output : PRINT, DISPLAY and SHOW
Compute : COMPUTE, CALCULATE and DETERMINE
Initialize : SET& INITIALISE
Add one : INCREMENT

23. Write the pseudo code to calculate the area of rectangle.

- PROMPT the user to enter the height of the rectangle
- PROMPT the user to enter the width of the rectangle
- COMPUTE the area by multiplying the height with width
- DISPLAY the area
- STOP

24. List any two guidelines which are followed in the pseudo code.

- Statement should be written in the simple English
- Steps must be understandable, when the steps are followed, they produce a solution.

25. Describe some of the merits in pseudo code.

- The use of pseudo code works well for large program design.
- Easy to modify

26. Write any two limitation of pseudo code.

- No standard format so it varies depends upon the programmer.
- Difficult to understand the flow of program

27. What is application Software?

It helps the user to do some specific task on the computer.

Examples:

MSWord, MS Excel

28. Write short notes on MSWord

MS Word is an important tool of the Ms Office suite that is mainly designed for word processing. It also referred as word processing program.

29. Describe about Ms Excel.

It allows to create professional spreadsheets and charts. It performs numerous functions and formulas to assist in project.

30. Write short notes on Ms Access.

It is a powerful program to create and manage database. It has many built in features to assist in constructing and viewing information.

Part B (16 Mark Questions)

1. Explain in detail about the planning activities of the computer
2. List the problem solving techniques and explain it with suitable example.
3. What is algorithm? Explain with an example.
4. Describe briefly about pseudo code & its guidelines.
5. Define flowchart. Explain its merits & demerits.
6. Give a brief note about MSWord application software
7. Explain MS Excel application software.
8. Write short notes about application software package. Explain with one example.