MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
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Model Answer Paper – COMP-231

SECTION "A"

Q.1 ANS : Input devices : OCR, mouse, scanner,

Storage device : Pen drive, RAM

Input-Output device: touch screen

VDU – stands for Video Display Unit. It is also called as Monitor. It displays the information on the screen. It is the most commonly used output device. The size and clarity are the two important characteristics of the VDUs. The clarity of the monitor is indicated by its resolution which in turn measured in terms of Pixels. There are two base types of the monitor LCD and CRT monitors. There are 4 most common standards to indicate monitor capabilities.

1. SVGA monitors
2. XGA monitors
3. SXGA monitors
4. UXGA monitors

(should include long forms and pixels)

(0.5 mark each devices, 1 marks VDU description)

Q.2 ANS : **Home menu** : Copy, cut, paste, format painter, font type, bold, italic, alignments, bulleting and numbering

Format painter : This option is available under home menu of MS office applications such as MS word, MS excel and MS power point. Format Painter option is used to quickly apply the same formatting, such as color, font style and size, or border style, to multiple pieces of text or graphics. With format painter, you can copy all of the formatting from one object and apply it to another one—think of it as copying and pasting for formatting.

(Def 0.5 marks for each correct option/6 options = 3 marks, 1 mark for format painter description)

Q. 3 ANS Examples of spread sheet software : Microsoft Excel, Corel Quattro pro, Open Office Calc and Google Drive Spreadsheet.

Features of MS excel :

1. OLE support: Object linking and Embedding is a feature through which Excel can contain any object like a document, a picture etc.

2. Maintaining high volume of data: Excel can contain large volume of data. A worksheet can contain 65536 rows and 256 columns. A single cell can contain a maximum of255 characters. One workbook can contain a maximum of 256 worksheets.
3. Availability of functions: Several Mathematical, financial & statistical functions are available in an Excel package.
4. Availability of Charts & Graphs: MS-Excel allows users to view data entered as tables in a graphical form as charts, which helps the user to easily understand, analyze data & compare data.
5. Data Analysis Tools: MS-Excel provides a set of data analysis tools called Analysis Tool pack.
6. Sorting capability: Excel has the capability of sorting any data in Ascending or Descending order.
7. Auto fill feature: Excel has the feature which allows to fill cells with repetitive data such as chronological dates or numbers and repeated text.

(0.5 marks for each example- 2 examples = 1 mark and 0.5 marks for each feature- 6 features = 3 marks)

Q .4 ANS Primary memory

This type of memory is in the form of semiconductor ICs. Therefore this memory is also called as Semiconductor Memory. The advantages of this type of memory include compact size, high speed operation, low cost etc. But as these are fixed on the computer motherboard itself, there are limitations to the amount of memory which can be put on the motherboard. Semiconductor memory is of two types.

Primary storage is used for four purposes.

- To store the input data until the CPU is ready for processing.

- As a working storage space like a sheet of paper used for calculations.

- As an output storage area that holds the finished results.

- As a program storage area that stores the processing instructions.

Examples - RAM, ROM, and cache

Secondary memory

It is also called as auxiliary or back up storage memory. One needs some storage device to store data and other information. It should be cheap and should not lose the content when power is switched off. This storage is called as the secondary storage. All secondary storage devices are connected to the CPU. Magnetic storage media fulfills these requirements and most common storage devices are disks and tapes.

Exaples – Floppy, CD, DVD,

(Types 1 marks each and example and 0.5 marks for each example- total 4 examples – 2marks)

Q.5 ANS A **number system** is a set of symbols used to represent values derived from a common base or radix. A number system is a method to represent (write) numbers. Every number system has a set of unique characters or literals. The count of these literals is called the radix or base of the number system

As far as computers are concerned, number systems can be classified into four major categories:

1. Decimal number system
2. Binary number system
3. Octal number system
4. Hexadecimal number system

Binary number system – It is exactly like the decimal system except that the base is 2 instead of 10. There are only two symbols or digits 0 or 1 that can be used in this number system. The largest single digit is 1. Each position in a binary number represents a power of the base (2). In this system the rightmost position is the units (2^0) position, the second position from the right is the 2's (2^1) position and proceeding in this way we have 4's (2^2) position, 8's (2^3) position, 16's (2^4) position and so on.

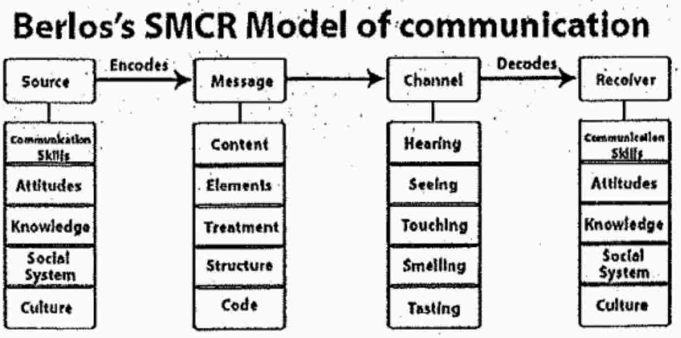
Example : The decimal equivalent of the binary number 10101 is

$= (1x2^4) + (0x2^3) + (1x2^2) + (0x2^1) + (1x2^0)$

$= 21$

(1 mark for definition, 1 mark for types and 2 marks for binary description)

Q.6 ANS 1) The **Berlo's model** follows the Source-Message-Channel-Receiver (SMCR) model. This model is not specific to any particular communication



The model has four basic elements such as Source-Message-Channel-Receiver (SMCR). Under each element there are number of factors as below –

A) Source: The source is where the message originates.

1. Communication skills 2. Attitudes 3. Knowledge 4. Social system 5. Culture

All to this model, only if you have the above in the proper or adequate proportion you can communicate.

B) Message

1. Content – The beginning to the end of a message comprises its content

2. Elements – It includes various things like language, gestures, body language etc,
3. Treatment – It refers to the packing of the message.
4. Structure– The structure of the message how it is arranged.
C) Channel– It is nothing but the five senses through this only we do. The following are the five senses which we use – Hearing, Seeing, Touching, Smelling, Tasting
D) Receiver: The receiver needs to have all the things like the source.
Criticism of Berol's SMCR model of communication:

1. No feedback / don't know about the effect
2. Does not mention barriers to communication
3. No room for noise
4. Complex model

2) **Smart phone applications in Agril** - Smartphones have become a useful tool in agriculture because their mobility matches the nature of farming, the cost of the device is highly accessible, and their computing power allows a variety of practical applications to be created. Moreover, smartphones are nowadays equipped with various types of physical sensors which make them a promising tool to assist diverse farming tasks. Mobile communication technology forced governments to be transformed from electronic government (e-government) to mobile government (m-government).

There are many agriculture smartphone apps on crop prices, weather conditions, inventory levels and innovative farming techniques and machinery. These are as given below –

1. *Agriculture Management Information Apps*

2. *Agriculture Information Resource Apps*

3. *Agriculture Calculator Apps*

4. *Agriculture News Apps*

5. *Weather Apps*

6. *Crop market prize Apps*

7. *Crop Water Requirement Calculator Apps*

(2 marks each)

Q.7 ANS: Database is organized collection of information on a particular item and storage of such organized information in the form of file in computer memory is called as database file. A **Database Management System** (DBMS) is software designed to store, retrieve, define, and manage data in a database. Two or more database files with information on same items can be related each other and such type of database is called as relational database management system (RDBMS)

Important features

1. It is object oriented programme

2. Handles enormous information

3. Tables are primary building blocks

4. Query is a question that you ask of the data that is stored in the table of your database.

5. Forms help to view or update the data

6. Reports help to print the results.

Examples : MS Access, Fox Plus, dBASE III

(1 mark for definition, 2 marks for features – four features and 1 mark for example – two examples)

Q.8 **ANS** Def **System software** - System softwares are sets of programs, responsible for running the computer, controlling various operations of computer systems and management of computer resources. Operating system (OS) falls under this category.

Function of operating system:-

1. User Interface

The user interface is the software layer, sometimes called the shell, through which the user communicates with the OS. The OS, in turn, communicates with the computer.

2.Job Management - Job management is an operating system function that controls the order and time in which programs are run.

3. Task Management - Task management is an operating system function found in multitasking operating systems.

4.Memory Management - Memory management is an operating system function that manages the placement of programs and data in memory, while keeping track of where it put them.

5. File Management - File management, also referred to as data management, is an operating system function that allows the operating system to read, write, and modify data, while managing the logical storage of the data.

(Def 1 mark, functions 3 marks)

Q. 9 ANS DSS – Def - Model-based set of procedures for processing data and judgments to assist a manager in decision making. OR

Computer-based support for management decision making. OR

Decision Support System (DSS) is an interactive computer-based system or subsystem intended to help decision makers to use information and communication technologies, data, knowledge and/or models to facilitate decision making

Applications of DSS in Agril

Use of DSS in agriculture for providing information and recommendation on efficient utilization of fertilizer, reducing herbicide use , plant protection, variety-specific information, management of environment risks, Integrated Nutrient Management, Forest Management, Crop disease control, Agricultural practices and extension, Farm mechanization, Seasonal Climate Prediction,

Integrated Pollution Control, labour requirements and land use planning, profit maximization and risk minimization etc., have been designed and implemented successfully mainly for improving economic returns, changing farming practices or minimizing environmental risks.

(Def 1 mark and applications 3 marks)

Q. 10 ANS

Impact printer	Non impact printer
1. Direct contact between paper and printiung head	No direct contact
2. Striking noise is created during printing	Smooth printing
3. Initial cost is lower than non impact printer	Higher than impact printer
4. Running cost is more	Low
5. Quality of printing is inferior to non impact printer	Superior to impact printer.

Examples of non-impact printer – Laser printer, thermal printer, ink jet printer, plotters

(Difference 4 points 2 marks, examples 4- 2 marks)

SECTION "B" 4M

Q.11 Fill in the blanks.

1 In DBMS columns are used for **fields** and rows are used for **records**

2 Copying file from internet to your computer is called as **downloading**

3 The insertion point is also called as **cursor**

4 In **DOS** operating system, written commands are used. 4M

Q.12 Spell out the abbreviations.

GUI – Graphical User Interface

PPM – Page Per Minute

DOS – Disk Operating System

URL – Uniform Resource Locator

Signature of Course Instructor
Name: Dr. Sandip .P. Nikam
Phone No: 02562-230368 Extn.214
Mobile No: 9423478205
E-mail : spnikam74@gmail.com

Signature of Head of Section
Name: Dr. Sandip . P. Nikam
PhoneNo: 02562-230368 Extn.222
Mobile No: 9423478205
E-mail : spnikam74@gmail.com