B K BIRLA CENTRE FOR EDUCATION, PUNE
PRE-BOARD EXAMINATION – I (2023-24)
CLASS-X
INFORMATION TECHNOLOGY (Subject Code-402)

Class : X   Duration : 2 Hours

Date : 21-12-2023   Max. Marks : 50

Admission No.: ……………….   Roll No.: …………..……

MARKING SCHEME

General Instructions:

1. *Please read the instructions carefully.*
2. *This Question Paper consists of 21 questions in two sections: Section A & Section B.*
3. *Section A has Objective type questions whereas Section B contains Subjective type questions.*
4. *Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.*
5. *All questions of a particular section must be attempted in the correct order.*
6. *SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):*
    - i. *This section has 05 questions.*
    - ii. *Marks allotted are mentioned against each question/part.*
    - iii. *There is no negative marking.*
    - iv. *Do as per the instructions given.*
7. *SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):*
    - i. *This section has 16 questions.*
    - ii. *A candidate has to do 10 questions.*
    - iii. *Do as per the instructions given.*
    - iv. *Marks allotted are mentioned against each question/part.*

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.(1) Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)

(i) Which of the following is more helpful for improving one's present performance ?
(a) Generic feedback   (b) Summative feedback   **(c) Specific fedback**

(ii) Which of the following stress enhances your productivity in terms of output ?
(a) Distress   **(b) Eustress**   (c) Both (a) & (b)

(iii) Your ability to identify effective methods of getting yourself to move from thought to action is your :
(a) Self-regulation   **(b) Self-motivation**   (c) Self-dedication

(iv) ……………………….. feature of Windows 7 allows you to create a copy of data for future use.
(a) **Backup and Restore**   (b) Spyware   (c) Keylogger

(v) Which of the following characteristics should an entrepreneur have ?
(a) Innovativeness   (b) Motivator   **(c) All of these**

(vi) Sustainable development requires judicious use of
(a) **Natural resources**   (b) human resources   (c) man made resources

Q.(2) Answer any 5 out of the given 6 questions   **(1 x 5 = 5 marks)**

(i) Ajay has inserted a picture in a document. But he wants to cut off a part of the picture. Which option he should use to accomplish the task ?

    (a) Cut   (b) Copy   **(c) Crop**   (d) Layout

(ii) Dhanush wants to select the entire text in a document. Which key combination he should use to do the same ?

    (a) Ctrl + R   **(b) Ctrl + A**   (c) Ctrl + V   (d) Ctrl + S

(iii) In order to delete an image in Writer, click on the image and press…………… from keyboard.

    (a) **Delete key**   (b) Alt key   (c) Shift key   (d) None

(iv) After the document is modified, clicking on which option will update the TOC ?

    (a) Delete Index/Table   **(b) Update Index/Table**

    (c) Modify Index/Table   (d) None

(v) The name used for the common part of the letter in Mail Merge Process is:

    (a) Data source   (b) Address List   **(c) Main Document**   (d) None

(vi) Which of the following is the most complex step in the Mail Merge Wizard process ?

    (a) Select Document Type   **(b) Insert Address Block**

    (c) Adjust Layout   (d) None

Q.(3) Answer any 5 out of the given 6 questions   **(1 x 5 = 5 marks)**

(i) Namita wants to know the name of the feature of a spreadsheet application that can speed up data entry. Solve her query.

    (a) The use of Autofill handle   (b) The use of resize handle

    (c) The use of Name box   (d) The use of Formula bar

(ii) A formula in Calc always starts with a/an :

    (a) Colon   (b) Semi colon   **(c) Equal to sign**   (d) None

(iii) Which of the following is a correct way to refer to a cell in Calc ?

    (a) <Sheet name>.<Row name>   (b) <Sheet name>.<Column name>

    (c) <Sheet name>.<Cell reference>   (d) None

(iv) Saba wants to know the name of the most basic tool to solve "what-if" scenarios in a spreadsheet application. Answer to her query by selecting the right option.

    (a) Solver   **(b) Goal Seek**   (c) Subtotal   (d) None of these

(v) The Consolidate option is part of the :

    (a) Edit menu   (b) Insert menu   **(c) Data menu**   (d) None

(vi) Anikan wants to know the name given to the mathematical expression to perform calculation on data in cells. Help her to find the correct answer.

    (a) Goal Seek   (b) Macro   **(c) Formula**   (d) Subtotal

Q.(4) Answer any 5 out of the given 6 questions   **(1 x 5 = 5 marks)**

(i) …………………….. data type takes the values in the form of 0 and 1 in the database.

    (a) Integer   (b) Text   **(c) Boolean**   (d) Memo

(ii) A relational database uses …………………… commands which is a standard user application that provides an easy programming interface for database interaction.

    (a) Access   (b) Python   **(c) SQL**   (d) Protocol

(iii) ………………. are the ways to produce the data stored in databases and tables in a printed form.

(a) Forms   (b) Queries   **(c) Reports**   (d) None

(iv) Asterisk (*) symbol in criteria for query stands for :

(a) **Any number of characters**   (b) One character

(c) Zero characters   (d) None

(v) Anil wants to create a database for his clients. For this purpose, he needs to store the address of his clients. Which datatype should he use to accomplish this purpose?

(a) Numeric   **(b) Varchar**   (c) Binary   (d) Boolean

(vi) The DROP command is used to :

(a) Drop only databases   (b) Drop only tables

(c) Drop databases or tables   (d) None

Q.(5) Answer any 5 out of the given 6 questions   **(1 x 5 = 5 marks)**

(i) A ……………………. is a device that converts digital computer signals into a form (analog signals) that can travel over phone lines and vice versa.

(a) Repeater   (b) Switch   **(c) Modem**   (b) All

(ii) Do not use the elevator in times of fire in the building. Always use …………………… for such emergencies.

(a) Office space   (b) Washroom   **(c) Staircase**   (d) None

(iii) Class A fires are caused by :

(a) Wood, paper cloth etc.   (b) Gasoline, propane and solvents

(c) Magnesium, lithium and titanium   (d) All of the above

(iv) …………………… is a feature to assist people with vision impairment.

(a) Filter keys   (b) Sound sentry   **(c) High contrast**   (d) None

(v) …………………… refers to the amount of data that a signal can carry.

(a) Bandwidth   (b) broadband   (c) Cable   (d) None

(vi) …………………… acts as a bridge between your computer and other computers on servers.

(a) hardware   (b) Spam   **(c) Firewall**   (d) All

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills   **(2 x 3 = 6 marks)**

Q.(6) Explain any four 7 Cs of effective communication.

Ans. : Clear information, Complete information, Concise message, Concrete and coherent presentation, Correctness of facts, Consideration of the message and the receiver, Courtesy towards receiver.

Clear information : Choosing appropriate words and phrases to convey ideas in the form of a message is very important. You need yourself to be fully clear of what exactly your message is, what the objective of your message is, and to whom you are going to share it with.

Complete information : Completeness of information is very important as it brings the desired results without additional messages, builds goodwill. Add 5 W's in your information : who, what, when, where, why.

Concise message : In this world, every person lacks time. Hence, it is necessary to keep the message crisp and concise. It adds not only to the efficacy of the message but also saves the receiver's time in understanding it.

Correctness of facts : Make sure that whatever you communicate is correct to the best of your knowledge. This can be ensured by using the right level of language, presenting accurate facts, words and figures.

Q.(7) Briefly explain any two stress management techniques.

Ans. : Yoga, Meditation, Physical Exercise, Vacations, Taking nature walks

Yoga : Yoga for breathing exercises is an effective way of dealing with stress. It brings good supply of oxygen to your brain.

Meditation : It helps in enhancing our mindfulness. It bring peace to your mind.

Q.(8) What is an antivirus ? Name any four antivirus programs.

Ans. : It is often installed on the computer to prevent presence of any virus on the computer. Eg. : McAfee, Symantec, Kasperskey, Norton

Q.(9) Describe advantages and disadvantages of entrepreneurship as a career. (two each)

Ans. : Advantages : Independence, Ambition fulfilment, Excitement, Freedom, Wealth creation, Status

Disadvantages : Risk, Hard work, Uncertain income, Problem of finance, Incompetent staff

Independence : An entrepreneur is his own boss. He can take all decisions himself.

Freedom : Entrepreneurship allows the freedom to try out one's ideas. Freedom seeking people choose entrepreneurship as a career.

Risk : It involves considerable risk of loss. Failure can wipe away all the personal savings and lead to considerable debt burden.

Problem of finance : Raising the necessary funds is very difficult for a first generation entrepreneur.

Q.(10) Describe any four short term solutions to sustainable development.

Ans. :
(1) Illegal deforestation and smuggling of forest resources and minerals should be stopped.
(2) People should be encouraged to regenerate forest, to compensate the loss of forest cover.
(3) During legal deforestation, a proper balance ought to be maintained between deforestation and afforestation
(4) Adoption of rainwater harvesting,, drip/sprinkler irrigation and alternative source of energy.

Answer any 4 out of the given 6 questions. **(2 x 4 = 8 marks)**

Q.(11) Explain the following anchoring options for a picture :

Ans. :

(a) To character : Frame is with its X and Y coordinates associated to a character, for example in the X direction always to the margin and in the Y direction always to the height of the character. The frame should be set at flow.

(b) To paragraph : Frame is associated to a paragraph, change its position with the paragraph.

Q.(12) What do you mean by Hyperlinks in Spreadsheets? Explain two different types of Hyperlinks that can be used in Spreadsheets.

Ans. : : It can be used to in Calc to jump to a different location from within a spreadsheet and can lead to other parts of the current file, to different files or even to websites.

Relative hyperlink : Here is how to get there from where you are now

Absolute hyperlink : Here is how to get there no matter where you start from.

Q.(13) What are the rules for the naming of libraries, modules and macro names ?

Ans. :

(i) Begin with a letter

(ii) Not contains spaces

(iii) Not contains special characters, accents included, except for (_) underscore

Q.(14) Explain any four advantages of DBMS.

Ans. : Database Management System. It is collection of inter related data and a set of programs to access those data.

Advantages : Sharing of data, Data redundancy, Data inconsistency, Confidentiality, Highly securable

Sharing of data : Different users can use the same database to access the data according to their needs.

Data redundancy : It means duplication of data. It avoids duplication of data and ensures that there is only one instance of certain data.

Data inconsistency : It helps to avoid data inconsistency. It means if a single database is used by multiple users then it also ensures that the same data is present for all the users.

Confidentiality : It can ensure different views for the different users of the database. This keeps the confidentiality of the data safe.

Q.(15) Write some best practices used for Internet security. Explain any four.

Ans. : Use strong password : A strong password is a combination of alpha numeric and special characters.

Backup your data : Always keep copies of your personal data in CDs, pendrive etc.

Don't share personal information : Never share your personal information while filling online forms.

Secure transactions : Be careful while doing transactions on the Internet.

Install firewalls

Never install software from unknown sources

Clear browser cookies frequencies

Use antivirus and antispyware software

Q.(16) Explain different types of switching techniques.

Ans. :

Circuit switching : In it, an end to end path is created before sending the data. The data is transferred using physical connection.

Message switching : It is based on the transfer of block of messages from sender to receiver.

Packet switching : A message is broken into packets of fixed size. Each packet has header that contains source and destination address information, acknowledgement and error bits.

Answer any 3 out of the given 5 questions. (4 x 3 = 12 marks)

Q.(17) Explain all the steps of Mail Merge Process in detail.

Ans. :

Select starting document : It create starting document. It has several options like current document, new document, existing document or froma template.

Select document type : It can produce letters or email messages. We here produce a letter. Select letter and click on Next.

Insert address block : It is the most complex steps. Select the address block to use in the document by clicking on Select Address List.

Create salutation : It is possible to create just about any salutation you want in this step. Select This document should contain a salutation to enable the General Salutation list box.

Adjust layout : In it, you can adjust the position of the address block and salutation on the page. You can place the address block anywhere on the page.

Edit document and insert extra fields : In this step, you have another opportunity to exclude particular recipients from the mail merge.

Q.(18) What is cell referencing ? Explain different types of cell referencing used in spreadsheet.

Ans. :

The cell addresses in a formula are known as cell referencing. It means how a cell address behaves in the formulae when it is copied from one cell to the other.

Relative cell referencing : It is normal cell address like A1, C3. In this, the formulae in the copied cell changes according to the change in the position of the cell pointer. Eg.: =B3*C3

Absolute cell referencing : It is specified by using $ sign along with the column and the row number in the cell. Eg. B4.

Mixed cell referencing : It is when one part of the cell address is relative and the other is absolute. So, either the column or the row number should have a $ along with it. Eg.: $B3

Q.(19) Define Referential integrity with example. Explain different types of relationship between tables by giving suitable example of each.

Ans. : Referential integrity refers to the relationship between tables. Because each table in a database must have a primary key, this primary key can appear in other tables because of its relationship to data within those tables. When a primary key from one table appears in another table, it is called a foreign key. It means the reference from a row in one table to another table must be valid. It requires that a foreign key must have a matching primary key or it must be null.

There are three types of reletionships which can be created in tables :

(a) 1:1 (one to one) : : In this relationship, both the tables must have primary key columns. Eg. Roll number to address

(b) 1:n (one to many) : In this relationship, one of the tables must have primary key column. It signifies that one column of primary key table is associated with all the columns of associated table. Eg. Student to subjects/teachers

(c) m:n (many to many) : In this relationship, one of the tables must have primary key column. It signifies that all the columns of primary key table is associated with one column of associated table. Eg. Student and class teacher

Q.(20) Write the SQL commands to answer the queries based on **GroceryBill** table

Item ID	Product name	Price per unit	Discount	Total price
A002	Rice	80	4	140
A004	Wheat	38	3	390
A901	Apple	16	2	157
B007	Biscuits	24	1	238

Write SQL commands for :

a) Write the datatype of each and every field or column name.
b) Display all the tuples with an Item ID that starts with "A".

c) Display all the tuples with the total price as more than 150.
d) Display all the tuples with exactly 1 percent as the discount.

Ans. :

(a) Iten_Id : varchar(4), Product_Name:Varchar(25), Price_per_unit : int, Discount:int, Total_Price: int

(b) Select * from GroceryBill where Item ID like "A%";

(c) Select * from GroceryBill where Total price>=150;

(d) Select * from GroceryBill where Discount = 1;

Q.(21) What is hazard ? Explain any four types of hazards.

Ans. : A hazard is any source of potential damage, harm or adverse health effects of the people at workplace. Hazard is a potential source of harm to the health of the worker or employee.

Biological hazards : It is caused by bacteria, viruses, insects, plants, birds, animals and humans. It includes exposure to harm or disease associated with working with animals, people or infectious plant materials.

Chemical hazards : It depends on the physical, chemical and toxic properties of the chemical in any form. This type of hazards can cause skin irritation, illness or breathing problems.

Ergonomic hazards : It is caused by repetitive moments, improper setup of workstation etc. It normally occurs when the type of work, body posture and working conditions put a strain on your body.

Physical hazards : It can be any factors within the environment that can harm the body without necessarily touching it.

Safety hazards : These are caused by unsafe working conditions that can result in injury, illness and death. Safety hazards are the most common workplace hazards. It is caused by slipping hazards, tripping hazards etc.

Psychosocial hazards : It is caused by stress, violence etc. at workplace. This type of hazard can be caused by unwanted stress of work completion on time, quarrelling, violence or fights with colleagues, lack of control and respect etc.

………………………………………… BEST OF LUCK …………………………………………