# SAMPLE QUESTION PAPER (SOLVED)

# **CLASS X**

# **ESSENTIALS OF INFORMATION TECHNOLOGY (402)**

Max. Time: 2 Hours Max. Marks: 50

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- 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):
  - (a) This section has 05 questions.
  - (b) Marks allotted are mentioned against each question/part.
  - (c) There is no negative marking.
  - (d) Do as per the instructions given.
- 7. SECTION B—SUBJECTIVE TYPE QUESTIONS (26 Marks):
  - (a) This section has 16 questions.
  - (b) A candidate has to do 10 questions.
  - (c) Do as per the instructions given.
  - (d) Marks allotted are mentioned against each question/part.

1. Answer any 4 out of the given 6 questions on Employability Skills.

## SECTION A—OBJECTIVE TYPE QUESTIONS

(i)	Aisha moved from Egypt to Germany for work but finds it difficult to adjust because she is n	ot familiar with
	German customs and workplace etiquette, which affects her interactions with colleagues	. This situation
	illustrates a:	(1)

(a) Interpersonal barrier

(b) Cultural barrier

 $(1 \times 4 = 4 \text{ marks})$ 

(c) Physical barrier

(d) Linguistic barrier

Ans. (b) Cultural barrier

(ii) Rohan has been working long hours every day without a break. Over time, he starts experiencing headaches, anxiety and fatigue. This is likely caused by prolonged: (1)

(a) Stress

(b) Discipline

(c) Timeliness

(d) Goal - Setting

Ans. (a) Stress

(iii) When Ayaan switches on his computer, a particular software starts running automatically and manages all the hardware and other software. Which software is this? (1)

(a) Web Browsers

(b) Designing Software

(c) Office Software

(d) Operating System

Ans. (d) Operating System

(iv) An entrepreneur must be ready to take a ...... and remain open to new ideas to grow their business.

(a) Satisfying human need

(b) Product and Service

(c) Calculated Risk

(d) Regular Production

Ans. (c) Calculated Risk

(v) The Sustainable Development Goals (SDGs) aim to tackle key challenges faced by businesses, governments, and society, such as:

(a) Gender Equality

(b) Energy & Climate Change

(c) Biodiversity

(d) All of the above

Ans. (d) All of the above

(vi)	The SMART method helps in setting effective a	oald	for career and personal growth. In this method, what
(VI)	does the 'A' stand for?	Uais	(1)
	(a) Abrupt	(b)	Accountable
	(c) Achievable	(d)	Admirable
Ans.	(c) Achievable		
2. Ans	wer any 5 out of the given 6 questions.		(1 × 5 = 5 marks)
(i)		ng e sto I Fo Ime + <b>Shi</b>	rmat button again or pressing <b>Esc</b> nt
Ans.	(a) Use Fill Format option; stop it by clicking Fil		rmat button again or pressing Esc
(ii)	not want to create a new style, but rather update style is used. Which option should he choose after	te th	defined paragraph style in his Writer document. He does ne existing one so that the changes apply wherever that formatting the text?  Update Selected Style
	(c) AutoFormat	(d)	Fill Format
	(b) Update Selected Style		
(iii)	at the beginning of the report that lists all topic clicking on it. Which feature of Writer should sh	s in e us (b)	eadings and sub-headings. She wants to create a section order and allows her to jump directly to any section by se? (1)  Hyperlink Tool  Bookmark
Ans.	(c) Table of Contents		
(iv)	which no predefined function exists.		eated as a function to perform repetitive calculations for (1)
	arguments, perform operations, and return results.  (a) Both A and R are true, and R is the correct of the corr	ults. expl rect	explanation of A
	(a) Both A and R are true, and R is the correct		
(v)			LibreOffice Calc by calculating the average marks of words and X-B.ods. Which feature of Calc will help her (1)
Ans.	(b) External References to other documents		
(vi)	Which menu path in LibreOffice Calc is u spreadsheet?  (a) Tools → Review Changes → Manage		to <b>accept or reject changes</b> made in a shared (1) File → Ontions → Track Changes

(c) Edit  $\rightarrow$  Track Changes  $\rightarrow$  Manage

**Ans.** (c) Edit  $\rightarrow$  Track Changes  $\rightarrow$  Manage

(d) View  $\rightarrow$  Track Changes  $\rightarrow$  Review

. Ans	wer any 5 out of the given 6 questions.		(1 × 5 = 5 mar	·ks)
(i)		ollo nar , H efo	in his LibreOffice Writer document. However, when owing is the MOST likely reason for this issue? nges eading 2, etc.) to his document headings ore inserting ToC ontents"	-
(ii)	During an audit, it is observed that employees are screens cause glare. Which hazards are most release.  (a) Physical and Fire Hazards	sit eva b)	ting for long hours with poor posture, and the compu	iter (1)
		b)	ogether to uniquely identify a record, it is called: Foreign Key Candidate Key	(1)
(iv)	If a database field is defined as VARCHAR(50) a allocated?  (a) 50 bytes	b)	the user enters 20 characters, how much storage 20 bytes 255 bytes	e is (1)
(v)	A database designer wants to create a system was related data from these tables efficiently. Which (a) Relational Data Model (	da b)	re multiple tables are connected, allowing retrieva ta model should the designer use? Network Data Model All of these	l of (1)
. ,		b)	ided into how many parts? Two Four	(1)
. Ans	wer any 5 out of the given 6 questions.		(1 × 5 = 5 mar	rks)
(i)	Which keyboard shortcut is used to open the <b>Te</b> l default templates?  (a) Ctrl + Shift + T  (c) Ctrl + Shift + N	b)	Ctrl + Alt + N Ctrl + N	-
	the data into a single sheet to identify overall to	rer	ferent sheets in LibreOffice Calc. He wants to comb ads and relationships. He also wants any change in solidated sheet. Which feature and option should	the

(c) Use Data Validation with 'Cell Range' enabled(d) Use Scenario Manager with 'Copy Results To' optionAns. (b) Use Consolidate with the 'Link to source data' option enabled

3.

	(b) Each field control in a form consists	of a label and a field value text box.			
	(c) Forms can include graphics, titles, and additional text for better presentation.				
	(d) Forms are used to permanently sto	re data like tables.			
Ans.	(d) Forms are used to permanently sto	re data like tables.			
(iv)	Which approach is most effective in reconstruction (a) Conflict resolution training and prospective (b) Only installing ergonomic chairs (c) Providing fire extinguishers		agues. (1)		
	(d) Routine electrical inspections				
Ans.	(a) Conflict resolution training and pro	moting hobbies			
(v)	interest rate, and loan duration (years) be exactly ₹12,000 per month.	culate the EMI for a car loan. The EMI depends on the loan an . She fixes the loan amount and interest rate, but wants the I			
	Which feature of Calc should she use, a	nd why?	(1)		
	<ul><li>(b) Scenario Manager – because it allow</li><li>(c) Consolidate – because it combines</li></ul>	uput (loan duration) to reach the exact target output (EMI = ₹12) ws creating multiple possible outcomes with different sets of i data from different sheets into one summary.			
A a		ts the type of values that can be entered into a cell.	000)		
		put (loan duration) to reach the exact target output (EMI = ₹12,0			
(vi)	Materials in a workplace are classified b material class with its description?	by risk to prevent fires. Which of the following correctly match	es the (1)		
	(a) Class A – liquids, grease, and gas; C	lass B – wood, cloth, paper			
	(b) Class C – electrical materials; Class	D – volatile metals like magnesium and sodium			
	(c) Class B – electrical equipment; Clas	s C – paper and cloth			
	(d) Class D – liquids and gas; Class A –	electrical materials			
Ans.	(b) Class C – electrical materials; Class	D – volatile metals like magnesium and sodium			
		4			
	swer any 5 out of the given 6 questions.	•	marks)		
(1)	Shena is hrenaring ill different hrolect i	reports for her company. Each report requires the same heade			
	the company logo, a footer with the lega	al notice, and predefined formatting for headings and text. Inst	ead of		
	the company logo, a footer with the legal manually inserting and formatting these		ead of should		
	the company logo, a footer with the legal manually inserting and formatting these she use?	al notice, and predefined formatting for headings and text. Instead e elements in each report, which feature of LibreOffice Writers	ead of		
	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles	al notice, and predefined formatting for headings and text. Instead text and predefined formatting for headings and text. Instead teachers are elements in each report, which feature of LibreOffice Writers (b) Macros	ead of should		
Anc	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates	al notice, and predefined formatting for headings and text. Instead e elements in each report, which feature of LibreOffice Writers	ead of should		
	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates	al notice, and predefined formatting for headings and text. Instead text and predefined formatting for headings and text. Instead to be elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents	tead of should (1)		
	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components open	al notice, and predefined formatting for headings and text. Instead to the elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base?	ead of should		
	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (b) Templates (c) Templates Which of the following components open (a) Report Builder	al notice, and predefined formatting for headings and text. Instead of the elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base?  (b) Add Fields dialog box	tead of should (1)		
(ii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components operations of the following components operations are supported by the second seco	al notice, and predefined formatting for headings and text. Instead to the elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base?	tead of should (1)		
(ii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (b) Templates (c) Templates Which of the following components open (a) Report Builder	al notice, and predefined formatting for headings and text. Instead of the elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base?  (b) Add Fields dialog box	tead of should (1)		
(ii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components oper (a) Report Builder (c) Both (a) and (b) (c) Both (a) and (b)	al notice, and predefined formatting for headings and text. Instead of the elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base?  (b) Add Fields dialog box	tead of should (1)		
(ii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components operations of the following components operations are shown in the f	al notice, and predefined formatting for headings and text. Instead to be elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base?  (b) Add Fields dialog box (d) Neither (a) nor (b)	tead of should (1)		
(ii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components operations of the following components operations are shown in the f	al notice, and predefined formatting for headings and text. Instant elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base? (b) Add Fields dialog box (d) Neither (a) nor (b)  as been assigned the task of conducting regular	tead of should (1)		
(ii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components operate (a) Report Builder (c) Both (a) and (b) (c) Both (a) and (b) Rohini works as a floor manager. She has ensure the safety of life in case of any components of the safety of life in case of any components.	al notice, and predefined formatting for headings and text. Instead of the elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base? (b) Add Fields dialog box (d) Neither (a) nor (b)  as been assigned the task of conducting regular	tead of should (1)		
(ii) Ans. (iii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components oper (a) Report Builder (c) Both (a) and (b) (c) Both (a) and (b) Rohini works as a floor manager. She had ensure the safety of life in case of any contact of the safety o	al notice, and predefined formatting for headings and text. Instant elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base? (b) Add Fields dialog box (d) Neither (a) nor (b)  as been assigned the task of conducting regular	tead of should (1)		
(ii) Ans. (iii)	the company logo, a footer with the legal manually inserting and formatting these she use?  (a) Styles (c) Templates (c) Templates Which of the following components operations of the following components operates (a) Report Builder (b) Both (a) and (b) (c) Both (a) and (b) Rohini works as a floor manager. She have ensure the safety of life in case of any components operates (a) Cultural assembly (b) Evacuation drill	al notice, and predefined formatting for headings and text. Instant elements in each report, which feature of LibreOffice Writers  (b) Macros (d) Table of Contents  en along with the Report Wizard in LibreOffice Base? (b) Add Fields dialog box (d) Neither (a) nor (b)  as been assigned the task of conducting regular	tead of should (1)		

(iii) Which of the following statements about forms in a database is incorrect?

(a) A form provides a user-friendly interface for entering and modifying data.



(1)

- (iv) Ramesh notices that a colleague has slipped and sustained a serious injury at work. Which sequence of actions demonstrates the correct approach to handling the accident according to safety protocols? (1)
  - (a) Attend to injured person  $\rightarrow$  inform supervisor  $\rightarrow$  assist supervisor
  - (b) Report to supervisor  $\rightarrow$  attend to injured person  $\rightarrow$  assist supervisor
  - (c) Assist supervisor  $\rightarrow$  attend to injured person  $\rightarrow$  inform supervisor
  - (d) Ignore minor injury  $\rightarrow$  continue work  $\rightarrow$  report at the end of the day
- **Ans.** (a) Attend to injured person  $\rightarrow$  inform supervisor  $\rightarrow$  assist supervisor
  - (v) Sonia works in a busy office where spills, broken glass, and clutter are common. To maintain a safe and productive workplace, which combination of actions should she prioritize? (1)
    - (a) Clean her own workstation, report faulty lights, leave spills for cleaning staff
    - (b) Clean her workstation, clear spaces around machines, immediately clean spills, report faulty lighting
    - (c) Focus only on her own desk, ignore common areas, and wait for maintenance to fix lighting
    - (d) Only clean common areas and ignore her personal workspace
- Ans. (b) Clean her workstation, clear spaces around machines, immediately clean spills, report faulty lighting
- (vi) A company's finance team is preparing the **quarterly budget report**. Two managers, Mr. Raj and Ms. Meera, work on the same spreadsheet file separately (*Budget\_Raj.ods and Budget\_Meera.ods*).

Now, before submitting the final report to the CEO, the team needs to:

(1)

- (a) Check the differences in both versions.
- (b) Merge the approved changes into one final file.

As the data entry operator, which steps will you follow in LibreOffice Calc?

- (a) Directly open Budget\_Raj.ods and overwrite it with Budget\_Meera.ods.
- (b) Open *Budget\_Raj.ods*, use **Compare Document** to review differences, then use **Merge Document** to finalize.
- (c) Open Budget\_Meera.ods and delete conflicting data manually.
- (d) Use only Merge Document, since it automatically compares files too.
- **Ans.** (b) Open *Budget\_Raj.ods*, use **Compare Document** to review differences, then use **Merge Document** to finalize.

## SECTION B—SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills in 20-30 words each.

 $(2 \times 3 = 6 \text{ marks})$ 

**6.** Explain any two C's of effective communication.

(2)

- **Ans.** (a) **Clear:** Always say clearly, what you want to say.
  - (b) **Concise:** Always use simple language and say only what is required.
  - (c) **Concrete:** Always use proper words and phrases in the sentences.
  - (d) **Correct:** Always use correct spelling and grammar in the sentences.
  - (e) **Coherent:** Your word should be related to the main topic and your word should make sense.
  - (f) **Complete:** Your message should be complete and have all the needed information.
  - (g) Courteous: Be honest, respectful and friendly with others.
  - 7. Maya often gets frustrated at work and reacts impulsively in stressful situations. She wants to improve her ability to handle emotions and respond calmly. Which steps can help her manage emotional intelligence effectively?

(2)

**Ans.** Maya can manage her emotional intelligence by following these steps:

- (a) **Understand her emotions:** Reflect on her behaviour and identify areas where she needs to improve, focusing on personal growth.
- (b) Rationalize: Avoid quick reactions; analyze situations logically before responding.
- (c) **Practice:** Stay calm through meditation, yoga, or other relaxation techniques.

#### Ans.

Aspect	Self-Employment	Wage Employment			
Definition	Running your own business	Working for someone else			
Risk	Taking business risks	Low risk; employer bears risks			
Competition/Growth	Staying competitive and expanding after stability	Career growth depends on performance and meeting standards			
Reward	Profit depends on business success	Fixed wage with performance-based rewards			

9. What are the major problems related to sustainable development concerning food and water?

(2)

#### Ans. Food:

- (a) Increasing use of land for non-agricultural purposes reduces fertile soil for crops like wheat and rice.
- (b) Overuse of chemical fertilizers depletes soil nutrients and contaminates the soil.

#### Water:

- (a) Freshwater from rivers and ponds is used for drinking and cleaning, but dumping garbage contaminates it.
- (b) This pollution can lead to a shortage of clean water for human consumption in the future.
- 10. Sara is worried about her personal and work data being stolen or infected by viruses. What steps can she take to protect her data effectively?
  (2)

Ans. Sara can protect her data by following these measures:

- (a) Use strong passwords: Create passwords that are hard to guess by including:
  - (i) Small letters
  - (ii) Capital letters
  - (iii) Numbers
  - (iv) Special characters
- (b) Install antivirus and firewall: These tools help protect data from viruses and hackers.
- (c) Encrypt data: Keep information in an encrypted format to prevent unauthorized access.
- (d) Open only secure websites: Ensure website addresses start with https://, which indicates a secure site.

## Answer any 4 out of the given 6 questions in 20-30 words each.

 $(2 \times 4 = 8 \text{ marks})$ 

- 11. Aarav is learning to format documents in LibreOffice Writer. His teacher asked him to explain any two style categories along with one feature of each. What should Aarav write? (2)
- **Ans.** (a) **Page Style:** Controls overall page layout such as page size, margins, header, footer, footnote settings, borders and background. A document can have multiple page styles.
  - (b) **Paragraph Style:** Applies formatting to entire paragraphs. It includes alignment, line spacing, tab stops, borders and may also include character attributes.
  - (c) **Character Style:** Used for specific words or letters within a paragraph. It controls text color, font size, highlighting and emphasis without affecting the whole paragraph.
  - (d) **Frame Style:** Used for formatting frames (containers that hold text, graphics, or lists). It specifies frame size, position, borders and text wrapping around the frame.
  - (e) **List Style:** Applies formatting to numbered or bulleted lists. It allows changing bullet symbols, numbering formats and levels of lists.
  - (f) **Table Style:** Used to format tables. It controls borders, text alignment inside cells, colors and patterns for better presentation of tabular data.
- 12. (a) What must you do before enabling the Record Changes feature?

(2)

- (b) How can you confirm that sharing has been disabled in the spreadsheet?
- Ans. (a) Disable Shared Spreadsheet mode.
  - (b) The word (shared) disappears from the spreadsheet title bar.



Ans.

Aspect	One-to-Many	Many-to-Many
Definition	One record in the master table corresponds	Multiple records in the master table correspond
	to multiple records in the related table.	to multiple records in the related table.
Example	One teacher can teach multiple students.	Students can enroll in multiple courses and
		each course can have multiple students.

- **14.** What are the common causes of electrical hazards at the workplace? Suggest one safety measure to prevent them. (2)
- **Ans.** Causes: Exposed or worn-out wiring, overloading electrical outlets, ungrounded or faulty equipment, unsafe use of electrical devices.

**Safety Measure:** Provide basic training on electrical safety, keep water and food away from electrical equipment and carry out routine inspections of wiring and equipment.

**15.** What is a Macro? List any two real life situations where they can be used.

(2)

**Ans.** A macro is a single instruction that executes a set of instructions.

#### Real-life uses:

- (a) Preparing a monthly sales report where the same formatting and calculations are applied every time.
- (b) Creating attendance sheets with repeated formatting and formulas.
- **16.** While inspecting a machine, Rohan notices a colleague stuck to a live wire. What steps should Rohan follow to safely rescue the victim? (2)
- Ans. (a) Do not touch the victim directly or any conductive surfaces while they are energized.
  - (b) **Switch off the electrical circuit** if possible, or use non-conductive materials (like a wooden stick) to separate the victim from the conductor.
  - (c) Wear protective equipment such as gloves and shoes and ensure hands and feet are dry before attempting rescue.
  - (d) Call emergency services (108) immediately.

# Answer any 3 out of the given 5 questions in 50-80 words each.

 $(4 \times 3 = 12 \text{ marks})$ 

17. Case Study (4

A publishing company is designing an e-magazine in LibreOffice Writer. The editor wants to insert images of articles and advertisements in such a way that the layout looks attractive and professional. While working, the team faces some challenges:

- In one article, two images overlap and only part of the required picture is visible.
- For the cover page, the editor wants the main image to stay fixed in the center, no matter how much text is added or removed.
- In another section, the designer wants text to flow smoothly around the images so that the page looks balanced.
- For an advertisement, the client requests that the product image should appear above all other elements.
- (a) Which feature should the team use to solve the problem of overlapping images?
- (b) Which setting will help the editor keep the main image fixed in the center of the cover page?
- (c) Which positioning option will make the text flow smoothly around the images in the article?
- (d) Which arrangement tool should be used to ensure the advertisement image appears above all other elements?
- **Ans.** (a) **Arrangement:** It is used to manage overlapping images (*e.g.*, Forward One, Back One, Send to Back, Bring to Front).
  - (b) Anchoring + Alignment: Anchoring keeps the image fixed (to Page) and Alignment places it at the center.
  - (c) **Text Wrapping:** Options like *Page Wrap* or *Optimal Page Wrap* allow text to flow smoothly around the image.
  - (d) Bring to Front: This arrangement tool places the advertisement image above all other elements.

**18.** Consider the table given below and answer the questions that follow:

Student Name	Roll Number	Class	Marks	
Aryan Sharma	101	10A	450	
Priya Singh	102	10B	470	
Rohan Mehta	103	10A	480	
Ananya Kapoor	104	10C	460	

- (a) Name all the fields in the given table.
- (b) Which field should be made the primary key?
- (c) Suggest a possible alternate key, if any.
- (d) Explain how a primary key differs from a foreign key with an example.

#### Ans. (a) Fields in the table:

- (i) Book Title
- (ii) Author Name
- (iii) Price
- (iv) Publisher
- (b) Primary key:

**Book Title:** because each book in the table is unique and can identify a record.

(c) Alternate key:

**Author Name** could serve as an alternate key if no two books have the same author.

(d) Difference between Primary Key and Foreign Key:

Aspect	Primary Key	Foreign Key		
<b>Definition</b>   A field that uniquely identifies a record		A field in one table that refers to the primary key		
	in a table	of another table		
Purpose	Ensures uniqueness of records	Establishes a relationship between two tables		
Example Book Title in the Books table		Publisher in Books table referring to PublisherID in Publisher table		

- Musculoskeletal problems affect different parts of the body like neck, back, chest, arms, shoulders and feet.
   These problems happen due to wrong posture or uncomfortable chairs while working on a computer. List four ways to avoid this problem.
   (4)
- Ans. Ways to avoid musculoskeletal problems:
  - (a) Keep the monitor at eye level and at arm's length distance.
  - (b) Keep **neck straight** and monitor directly ahead.
  - (c) Sit with your back fully against the chair's backrest.
  - (d) Adjust armrests so elbows are at 100-110°.
  - (e) Keep hands slightly lower than elbows while typing.
  - (f) Avoid twisting your wrists.
  - (g) Use a **keyboard palm rest** only when not typing.
  - (h) Take small breaks to stretch muscles and rest eyes.
- 20. Ruhi is managing a Sports Day database in LibreOffice Base. She has a master table called EventCategory and a transaction table called Events. (4)
  - (a) What is **referential integrity**? Give an example from Ruhi's database.
  - (b) Ruhi wants to **stop deletion** of any category that is being used in the Events table. Which option should she use?
  - (c) If a CategoryID is **changed** in EventCategory, how does the **Update Cascade** option affect the Events table? Give an example.
  - (d) If the **Set NULL** option is used and a master record is deleted, what happens in the Events table? How is it different from **Set Default**?
- **Ans.** (a) **Referential Integrity:** It ensures that every foreign key in the transaction table matches a primary key in the master table.
  - Example: If CategoryID C003 is in Events, it must exist in EventCategory.



- (b) **No Action:** Prevents deletion of a master record if related records exist in the transaction table. This avoids breaking links or losing related data.
- (c) **Update Cascade:** If a master record is updated, all related foreign key values in the transaction table are automatically updated.

*Example:* If CategoryID C003 is changed to C010 in EventCategory, all Events records with C003 are updated to C010.

(d) Set NULL vs Set Default:

**Set NULL:** Related fields in the transaction table are set to NULL when the master record is deleted or updated.

**Set Default:** Related fields are set to a predefined default value instead.

Example: Master CategoryID C003 is deleted:

- Set NULL: Events table CategoryID becomes NULL.
- **Set Default:** Events table CategoryID becomes the default value (*e.g.*, C001).
- 21. Arjun is preparing a project report in LibreOffice Calc that contains multiple spreadsheets. He wants smooth navigation between different sheets and also plans to include data from a government website. Initially, he uses an absolute hyperlink but later realizes it breaks when he shares the report with his teacher because the file path is different on another computer. His friend suggests trying a relative hyperlink instead. While inserting a hyperlink, Arjun notices the option Target in Document, which allows him to connect directly to a particular sheet. He also discovers the Link to External Data option to fetch live tables from a web page into his spreadsheet.
  - (a) Why did the absolute hyperlink fail when Arjun shared the file and how does a relative hyperlink solve this problem?
  - (b) How does the Target in Document option increase the usefulness of hyperlinks in large spreadsheets?
  - (c) Arjun wants to ensure that anyone viewing his report can update data directly from a government website. Which feature should he use and why is it beneficial?
  - (d) If Arjun wants to edit or remove a hyperlink later, what steps should he take?
- **Ans.** (a) The absolute hyperlink failed because it stored the complete path (specific to Arjun's computer). On another system, the same path did not exist. A relative hyperlink solves this by linking relative to the folder where the spreadsheet is stored, so it works even if moved.
  - (b) Target in Document helps by allowing navigation directly to a specific sheet, table, or section inside the document, saving time in large spreadsheets.
  - (c) He should use Link to External Data, which imports live tables from a web page. This is beneficial because data stays updated automatically without manual entry.
  - (d) Arjun should right-click the hyperlink  $\rightarrow$  choose Edit Hyperlink to modify it or Remove Hyperlink to delete it.