

e-CODE

Windows 10 & MS Office 2016



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Computational Thinking

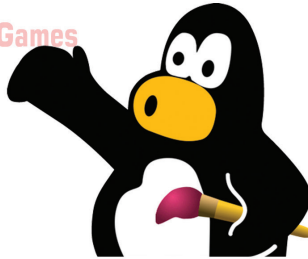
Cyber Ethics

Artificial Intelligence

Data Science

Coding

Board Games



Teacher Manual



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1. EVOLUTION OF COMPUTERS

●●● Brain Tuner ●●●

- A. 1. (b) 2. (c) 3. (a) 4. (b) 5. (b)
- B. 1. Heaven 2. Pascaline 3. Store 4. Supercomputers 5. Notepad
- C. 1. (T) 2. (F) 3. (T) 4. (T) 5. (T)
- D. 1. Abacus stands for Abundant Beads Addition and calculation utility system. It was mainly used to perform simple calculations such as counting, addition and subtraction.
2. Boolean Algebra can express the output of an expression by the use of a simple concept of true or false. It was invented by George Boole.
3. The Engine had a 'store' where numbers and intermediate results could be held and a separate 'Mill' where arithmetic processing was performed
4. These computers are the most commonly used and the fastest growing computers, they are designed for general usage. Common Microcomputers are Laptops and Desktops.
5. ENIAC was the first electronic digital computer used for general purposes, while EDVAC was one of the first electronic computers that used the binary system and had memory more than any computer invented before it.

Fun Time

- A.
- | | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Napier's Bone | Blaise Pascal | John von Neumann | Howard Aiken | J. Presper Eckert and John Mauchly |

- B.
- | | | |
|----------------------|---|------|
| 1. Napier's Bone | → | 1944 |
| 2. Analytical Engine | → | 1617 |
| 3. ENIAC | → | 1951 |
| 4. Mark 1 | → | 1837 |
| 5. UNIVAC 1 | → | 1945 |



2. CONTROL PANEL IN WINDOWS 10



••• Brain Tuner •••

- A. 1. (c) 2. (b) 3. (c) 4. (a) 5. (a)
- B. 1. Operating systems 2. First 3. Category
4. Clock and Region 5. Windows 10
- C. 1. (T) 2. (F) 3. (T) 4. (T) 5. (F)
- D. 1. An operating system is the heart of the computer system. It is what makes a computer work. It acts as an interface between the user and a computer. Some examples of operating systems are mac, Linux, windows, etc.
2. (i) It is simple to use and has better performance than older windows operating systems.
(ii) It provides better ways to manage files and folders.
3. Control Panel is a part of windows OS that allows you to view and change various settings of a computer system.
4. The three different views of control Panel are Category view, large icons view and small icons view.



3. ADVANCED EDITING FEATURES OF WORD 2016



••• Brain Tuner •••

- A. 1. (b) 2. (c) 3. (a) 4. (c)
- B. 1. Left 2. Layout 3. 13 4. Hard 5. Portrait
- C. 1. (F) 2. (T) 3. (F) 4. (T) 5. (F)
- D. 1. Orientation refers to the direction in which a page is printed. It can be portrait and landscape.

Step (i) Click the layout tab

Step (ii) Click the orientation button in the page setup group.

Step (iii) Select the landscape from the option.

2. Superscript in the text positioned slightly above the text.

Subscript is the text positioned slightly lower than the text.





3. Page margin is a blank space between the edge of the page from all sides and the text. Click the layout tab>Click the margin in the page setup group> select the Narrow page margin

4. Columns increase the readability of the word documents.
5. Step (i) Place the cursor after the line or a paragraph where you want to add a page break. Step(ii) Click Insert Tab
Step (iii) Click page break button in the page group.
6. (a) An indent determines the distance of a text from the margins of the page of a document.
(b) Header is the section of a document that appears on the top margins.
(c) Footer is the section of a document that appears in the bottom margin.

Fun Time

- A. 1. Ctrl + = 2. Ctrl + Shift + = 3. Ctrl + T 4. Ctrl + M
5. Ctrl + Shift + T 6. Ctrl + Enter

B.

	Group	Tab		Group	Tab
1. 	Page Layout	Layout	3. 	Header and Footer	Layout
2. 	Header and Footer	Layout	4. 	Font	Home

4. USING MAIL MERGE IN WORD 2016

●●● Brain Tuner ●●●

- A. 1. (c) 2. (b) 3. (a) 4. (b) 5. (c)
- B. 1. Mail merge 2. Three 3. Mailings 4. Merge fields 5. Data source
- C. 1. (T) 2. (T) 3. (F) 4. (T) 5. (F)
- D. 1. Mail merge allows to create multiple documents containing similar information in one go. It saves time and effort.
2. Letters, Envelopes, Labels, Directory, etc.
3. It creates a new document with all the merged information.
4. Step (i) Mailing Tab Step (ii) Start mail merge group
Step (iii) Start mail
5. Mail merge requires three types of documents
(a) Main document (b) Data source (c) Merge document

Fun Time

- (i) Mailings (ii) Start Mail Merge (iii) Type
- (i) Main document (ii) Insert Merge field, Write and insert fields (iii) Merge fields

Coding Time

- Only one of the given alternative fit in the place of the question mark. Find the missing blank code? D4 H8 L12 P16
- Find the next letter in the series. ZA YD XH WM VS UZ



5. MORE ON POWERPOINT 2016




Brain Tuner

1. (c) 2. (b) 3. (c) 4. (c) 5. (c)
1. Placeholders 2. Template 3. Shift + F5 4. Slide Show 5. Insert
1. (F) 2. (F) 3. (T) 4. (F) 5. (T)
1. To create a blank presentation in powerpoint by default, the presentation only contain a title slides.
2. PowerPoint themes consist of colours, fonts, effects and background styles, while Template bring together a Powerpoint theme and slide layouts along with any additional customization.
3. Yes, you can change the colour scheme of a theme applied to a presentation. Step (i) Click the design tab then click the more button on the right side of a variant group. Step (ii) Place the cursor on the colors option on the drop down list. Step (iii) Select the desired colour scheme. The colour in all the slides will be changed.
4. Smart Art is a set of graphics that helps you present the information graphically. You can create different kinds of lists, process diagrams, cycles, pyramids. etc.
5. There are total six views in powerpoint 2016 are Normal, outline view, Slide sorter, Notes page, Reading view, Slide show.
6. It allows you to select, rearrange, adjust and add text to your pictures.
1. Click the design tab> Click more () button on the button-right corner of the themes group.
2. On the insert tab>click SmartArt. Choose SmartArt Graphic dialog box on the left, select the process category>select the flowchart you want.

6. WORKING WITH SLIDES IN POWERPOINT

••• Brain Tuner •••

- A. 1. (a) 2. (a) 3. (c) 4. (c) 5. (c)
- B. 1. Two Content 2. Insert 3. Text box 4. Text shadow 5. Vertical
- C. 1. (T) 2. (F) 3. (T) 4. (F) 5. (F)
- D. 1. Title slide layout is used to give a title and a subtitle to the presentation, while Title only is used to place only a title on the slide.
2. Click the Slide Sorter view button in the bottom left corner of the page and click the slide you want to move. Hold down the mouse button and drag the slide to its new location.
3. Text Box is a placeholder in which you can enter and edit text.
- Step (i) Click the Text box button in the text group on the insert tab
A cursor like sign (↓) appears on the screen which shows position of Text box.
- Step (ii) Single click in the slide and then drag to draw text box of the size you want
- Step (iii) Click inside the box and start typing
4. Character Spacing () button in the font group is used to set spaces between the characters in a sentence.
5. Vertical alignment adjusts the text in the placeholder with respect to the top and bottom margins. The three vertical alignment options available in powerpoint are top alignment. Middle alignment and bottom alignment.
- E. 1. Two Content
2. Select the text or WordArt that you want to format. On the format tab under text styles, Click effects, paint to shadow and then click the shadow styles that you want.

Fun Time

1. Ctrl + D 2. Ctrl + Enter 3. Ctrl + E = center text Ctrl + L = Left align text Ctrl + R = Right align text 4. Ctrl + Shift + C to copy a format. Ctrl + Shift + V to paste a format. 5. Ctrl + T

Coding Time


1. (a) gills (b) Sky 2. (a) 4 days



7. PROGRAMMING IN SCRATCH



••• Brain Tuner •••

- A. 1. (a) 2. (a) 3. (a) 4. (a)
- B. 1. Variable 2. Light blue 3. New Variable 4. Operators
- C. 1. (F) 2. (T) 3. (F) 4. (T) 5. (T)
- D. 1. Blocks that can detect the keyboard and mouse input while running the script.  This block checks whether the mouse button is clicked or not.
2. Variable is a stored value in the memory of scratch.
- Step (i) Click the make a variable button in the variable category. The new variable dialog box appears.
- Step (ii) Name the variable you want to declare.
- Step (iii) Select the option for all sprites or for this sprite only to apply the variables to all the sprites or to the selected sprite only.
- Step (iv) Click ok button.
3. Strings are sequences of binary computer characters including spaces, more commonly known as letters and numbers.
4. Operators block contains the blocks which perform mathematical and string handling operations. Sensing Data and operators categories to make sprite perform mathematical operations.
5. Operator blocks and string Handling.
- E. 1. "Length of ()" operator block calculate the length of his school name
2. Neeta compare two numbers in comparisons block.

Fun Time

1. This block is used to display an input box in which you type the value and it stores the value in the answer variable.
2. This block combines the two string values entered in the boxes.
3. This block picks a random number within a specified range.
4. Shows the variable on the stage.

8. INTRODUCTION TO EXCEL 2016



••• Brain Tuner •••

- A. 1. (b) 2. (a) 3. (b) 4. (c) 5. (a)
- B. 1. VisiCalc 2. Formulae 3. Left 4. Three 5. Cell
- C. 1. (T) 2. (T) 3. (F) 4. (F) 5. (T)
- D. 1. Alt + Enter 2. Ctrl + Home 3. Ctrl + F10 4. Shift + F11 5. F12
- E. 1. A spreadsheet also referred to as worksheet is a sheet of paper or an electronic document that comprises a grid of cells arranged in rows and columns.
2. (i) It is powerful yet an easy to use software
(ii) It allows you to use formulae to perform repetitive and complex calculations easily.
3. Name Box shows the address of the active cell while Formula box shows the value or the formula used in an active cell.
4. Each workbook contains one or more worksheets while Excel document that appears on the screen is called a workbook.
5. AutoSum feature allows you to quickly find the total of the selected cell contents. AutoSum feature in the editing group of the ribbon.
6. To delete the worksheet> Click the delete button in the cell group on the Home tab> Select delete sheet option from the drop-down list.

Fun Time

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

A1
C2
E5, G5
B6
D7
B11
D14
G15

Coding Time

1. SR × 4C 2. 5R × 4C 3. 34 4. 5R 5. 4C

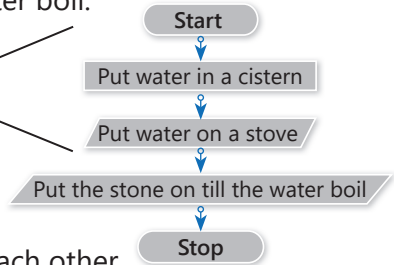


9. ALGORITHMS AND FLOWCHARTS



••• Brain Tuner •••

- A. 1. (b) 2. (c) 3. (b)
- B. 1. Rectangular 2. Connector 3. Flowchart 4. Start, Stop
- C. 1. (T) 2. (F) 3. (F) 4. (T) 5. (T)
- D. 1. Algorithm is a set of rules that must be followed when solving a problems.
2. (i) It should be clean, exact and well defined.
(ii) It should always begin with the word start and end with the word stop.
3. Step (i) Algorithm Put water in a cistern.
Step (ii) Put the water on a stove.
Step (iii) Put the stove on till the water boil.



4. Flowchart is another problem solving tool that represents an algorithm in pictorial form.

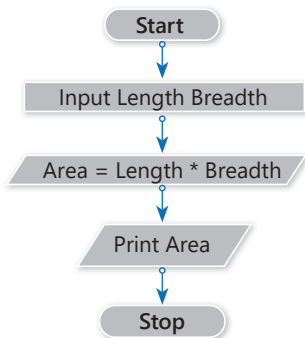
5. (i) A flowchart can have only one stout and one stop symbol.

(ii) The flow lines should not cross each other.

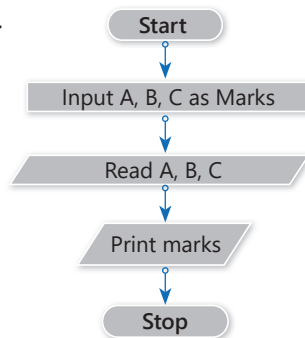
6. (a) It is used for a input and output instructions in a flowchart,
(b) It is used to show a processing instruction in a flowchart.

(c) This symbol is used to connect various sections of a flowchart together.

E. 1.



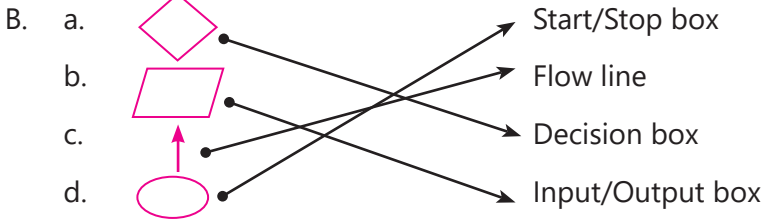
2.



3. Diamond symbol or Decision box is used for the instructions which involves a condition with two options 'Yes' and 'No' to choose from.

Fun Time

A. 1. Start 2. Product = A*B 3. Read A, B 4. Print Product 5. Stop



10. INTERNET SERVICES



Brain Tuner

- A. 1. (c) 2. (c) 3. (a) 4. (c)
- B. 1. Facebook 2. Microblogging 3. LinkedIn 4. Insta 5. Videos
- C. 1. (T) 2. (F) 3. (T) 4. (T) 5. (T)
- D. 1. Social networking sites refer to an online group of people who share their data and services using some social networking sites.
Ex- Facebook, Instagram.
2. The short messages that you post on twitter are known as tweets.
3. The practice of creating and posting microblogs is known as microblogging.
4. Instagram is a social networking site similar to Facebook however with a different interface and types of services it provides.
5. Step (i) Click into your Google account
Step (ii) Click Google apps and select Drive option
Step (iii) Click my drive then click upload files
Step (iv) Choose desired file and click open button.
6. You Tube is a social networking platform through which you can stream, upload and share videos for free.
- E. 1. www. youtube. com 2. LinkedIn

Fun Time

1. Facebook 2. Twitter 3. Messenger 4. LinkedIn 5. Google Drive
- (a) 2012 (b) 2008 (c) 2003 (d) 2006 (e) 2004
-

REVISION SHEET-1

- A. 1. (a) 2. (b) 3. (c) 4. (c) 5. (c) 6 (c)
- B. 1. Pascaline 2. Microcomputers 3. Operating system
4. Right-hand 5. Header 6. Mailings
- C. 1. (T) 2. (F) 3. (T) 4. (T) 5. (F)
- D. 1. Normal View 2. Outline View 3. Slide sorter
4. Notes page 5. Reading View
- E. 1. Boolean Algebra can express the output as expression by the use of a simple concept of true or false. It was invented by Google Boole.
2. Step (i) Open the control panel window.
Step (ii) Select the programs category.
Step (iii) Select the Uninstall a program option under programs and features section.
Step (iv) Select the application you would like to Uninstall and click the Uninstall button on the bar.
3. A page margin is the blank space between the edge of the page from all sides and the text. The four margins are top, bottom left, right.
4. An indent determines the distance of the text from the margins fo the page of document. There are four margins on a page.
(i) First line indent (ii) Left indent
(iii) Hanging indent (iv) Right indent
5. Mail merge feature in MS-Word allows users to easily form letters/emails/labels from text in a document.
6. The two types of slide layouts in PowerPoint are: Title slide and content layout.
- F. 1. Microcomputer
2. To access mouse settings, select the start button, then select setting> Ease of Access>Mouse.
3. Click Pagelayout>Orientation>Click Landscape (horizontal)
4. Select format Background by right click margin of the slide> In Format Background Pane> Choose Picture> Under Insert Picture from, Choose Where to get the Picture from:

REVISION SHEET-2

- A. 1. (c) 2. (a) 3. (a) 4. (a) 5. (c) 6. (b)
- B. 1. Variable 2. Formulae 3. Left 4. Social networking
5. Flowchart 6. Vertical
- C. 1. (T) 2. (T) 3. (T) 4. (T) 5. (T) 6. (T)
- D. 1. Character Spacing Ctrl + D
2. Format painter Ctrl + Shift + C = Copy Ctrl + Shift + V = Paste
3. Text shadow Ctrl + Enter 4. Insert table Ctrl + T
5. Alignment text Ctrl + E = Centre text Ctrl + L = Left align text
Ctrl + R = Right align text
- E. 1. Social networking refers to an outline group of people who share their data and services using some social networking sites. Ex- Facebook, Insta, Twitter, LinkedIn, etc.
2. The operator category contains the blocks which perform mathematical and string handling operations. Arithmetic operators make the sprite perform mathematical operation.
3. Vertical alignment adjusts the text in the placeholder with respect to top and bottom margins. Top, middle and Bottom are the three vertical alignment options available in PowerPoint.
4. Character Spacing button in the font group is used to set spaces between the characters in a sequence.
- F. 1. MS Excel 2. Length of Apple 3. Comparison block
4. We can find the images in PowerPoint. On the Insert tab in the text group, Click images. To save the image in PowerPoint Right Click on an image and select Same As Picture.

Cyber Olympiad

1. (a) 2. (b) 3. (c) 4. (a) 5. (c) 6. (c) 7. (c) 8. (c) 9. (c) 10. (b)
11. (b) 12. (a) 13. (a) 14. (b) 15. (d) 16. (b) 17. (c) 18. (b)
19. (a) 20. (a)