1. Nov/2020/Paper_11/No.2a

Ron is attending a music concert. He has bought three tickets.

Each ticket number is displayed as a hexadecimal number.

(a) Complete the table to show the **12-bit binary** values and the **Denary** values for each Hexadecimal ticket number.

Hexadecimal ticket number	12-bit binary value	Denary value
028		
1A9		
20C		

[6]

Working space

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2. Nov/2020/Paper_12/No.1b,c

Tina is creating a website for charity events. She uses HTML to create the website.

(a) State what is meant by HTML.

.....

..... [1]

(b) She uses the hexadecimal colour code #43B7F0 as the background colour for her website.

(i) State whether background colour is an example of **structure** or **presentation**, in the website.

..... [1]

(ii) The hexadecimal colour code **#43B7F0** is stored in three **8-bit** registers.

Give the **8-bit binary** values for each part of the hexadecimal code.

43								
B7								
F0								

[6]

(c) Tina uses a microphone to record a welcome message for her website.

(i) State whether the microphone is an **input** or **output** device.

..... [1]

3. Nov/2020/Paper_13/No.3b

(a) **Four** denary to 8-bit binary conversions are given.

Tick (✓) to show if each denary to 8-bit binary conversion is **Correct** or **Incorrect**.

Denary	Binary Conversion	Correct (✓)	Incorrect (✓)
145	10010001		
179	10110101		
11	00010011		
100	01100010		

[4]

(b) Convert the **12-bit** binary number into hexadecimal.

1	1	0	0	0	1	0	0	0	0	0	0

..... [3]

4. Mar/2020/Paper_12/No.3d

Priya studies music at school. She is buying a new computer to complete her school work at home.

(a) Priya has a choice between an internal Hard Disk Drive (HDD) and an internal Solid State Drive (SSD) to store data.

(i) Give **one** similarity between an HDD and an SSD.

.....

..... [1]

(ii) Explain **three** differences between an HDD and an SSD.

1 .....

.....

.....

2 .....

.....

.....

3 .....

.....

.....

[3]

(b) Priya needs to transfer files between the school and her home computer.

Identify **one** off-line storage device she could use to transport the files.

..... [1]

(c) Priya is using sound editing software to record and edit different music tracks.

(i) Identify **two** input devices she would use for this task.

Device 1 .....

Device 2 .....

[2]

(ii) Identify **two** output devices she would use for this task.

Device 1 .....

Device 2 .....

[2]

(d) Priya shares her sound files with other students. Before sharing the sound files, she compresses the files using lossless compression.

Describe how lossless compression reduces the size of a sound file.

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.....

.....

..... [2]

(e) Priya currently uses MIDI files to store her music. Priya's friends have asked her if they can have an MP3 version of the file.

(i) Give **two** features of a MIDI file.

1 .....

.....

2 .....

.....

[2]

(ii) Give **two** features of an MP3 file.

1 .....

.....

2 .....

.....

[2]

5. Mar/2020/Paper_12/No.5

Programmers can use denary and hexadecimal values. These values are stored in a computer system using binary.

(a) Explain why binary is used to store data in a computer system.

.....

.....

.....

..... [2]

(b) Complete the table to show how the denary value would be stored as binary in an 8-bit register.

Denary value	8-bit register
129	
56	

[2]

Working space

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(c) Complete the table to show how the hexadecimal value **3A9** would be stored as binary in a 12-bit register.

[3]

(d) Identify **two** uses of hexadecimal values in computer science.

1 .....

2 .....

[2]

6. Jun/2020/Paper_11/No.3c

Carla's computer has a USB port.

Carla uses the USB port to connect her mobile device to her computer, to transfer her photos.

(a) Give **three** benefits of using a USB port to connect the mobile device to the computer.

Benefit 1 .....

.....

Benefit 2 .....

.....

Benefit 3 .....

.....

[3]

(b) State the type of data transmission used when transferring data using a USB port.

..... [1]

(c) Carla wants to reduce the file size of the photos she has transferred to her computer. She does not want the quality of the photos to be reduced, so she uses lossless compression.

Describe how lossless compression reduces the file size of the photos.

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..... [4]

7. June/2020/Paper_11/No.8b

Benny is a photographer and prints his photos using an inkjet printer.

(a) Benny is printing some photos and the paper gets jammed in the printer.

A signal is sent to alert the computer about the paper jam.

State the name of this type of signal.

..... [1]

(b) Identify **one** benefit and **two** drawbacks of Benny using an inkjet printer, instead of a laser printer, to print his photos.

Benefit .....

.....

Drawback 1 .....

.....

Drawback 2 .....

.....

[3]

(c) **Four** statements are given about printers.

Tick (✓) to show whether the statement applies to an **Inkjet** printer or a **Laser** printer.

Statement	Inkjet (✓)	Laser (✓)
Uses a rotating drum to transfer the image to the paper		
Uses powdered toner		
Uses nozzles to spray droplets on to the paper		
Uses a print head mechanism that moves side to side		

[4]

8. June/2020/Paper_12/No.7

(a) Give the **denary** value of each of the three 12-bit binary values.

(i) 000000001100

..... [1]

(ii) 000011000110

..... [1]

(iii) 010011000001

..... [1]

Working space

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(b) 12-bit binary values can also be represented as hexadecimal values.

Give the **hexadecimal** value of the 12-bit binary value.

000011101001

..... [3]

9. June/2020/Paper_13/No.13

Pradeep is reading hexadecimal values for a project he is working on.

(a) The first three hexadecimal values he reads are **15**, **102** and **A9**.

Give the **denary** values for the three hexadecimal values.

15 .....

102 .....

A9 .....

[3]

Working space

.....

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.....

(b) Pradeep has two 8-bit binary values that he needs to convert to hexadecimal values for his project.

Give the **hexadecimal** values for the two 8-bit binary values.

01010000 .....

00111101 .....

[4]