Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur
Regular/Back Exam – 2081/2082 Chaitra/Baishakh

Program:	**Diploma in Computer Engineering**	**Full Marks: 40**
Year/Part:	**III/I (2022)** © Arjun	**Pass Marks: 16**
Subject:	**Computer Repair and Maintenance**	**Time: 1½ hrs.**

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt any EIGHT questions

1. Define computer. Write down the importance of computer repair and maintenance. [1+4]

2. Explain the concept of form factors in system cases. How do they influence compatibility with motherboards and other components. [2+3]

3. Explain working principle of SMPS with block diagram. [5]

4. List and describe the main parts of a motherboard. [5]

5. Define ALU. Write down cycle of CPU for execution of an instruction. [1+4]

6. What are the common issues that can occur in scanners and how can they be diagnosed? [5]

7. What are the most common issues encountered in printers and how can they be diagnosed? [5]

8. How do you troubleshoot overheating issues in a computer and what steps can you take to improve cooling? [5]

9. What is disaster recovery and how does it differ from data backup? [5]

10. Write short notes on: (any **TWO**) [2×2.5]

    a. UPS
    b. SSD
    c. Hard disk formatting
    d. Virus detection and protection

Good Luck !

Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur
Back Exam-2081, Bhadra/Aswin

AC

Program: **Diploma in Computer Engineering**	**Full Marks: 80**
Year/Part: **II/II (2018)** © **A r j u n**	**Pass Marks: 32**
Subject: **Computer Repair & Maintenance**	**Time: 3 hrs.**

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt any **EIGHT** questions.

1. What is data, program, software and information? Explain different types of computer on the basis of size. [4+6]

2. Draw and explain the block diagram of SMPS. [10]

3. List out the mother board component. Explain different types of buses in brief. [4+6]

4. What is microprocessor? Explain the different component of microprocessor with diagram. [4+6]

5. Define BIOS. Explain PROM, EPROM, EEPROM. Why do we need cache memory? Explain with example. [2+4+4]

6. What are the different types of monitor?, Explain the working principle of CRT monitor. [4+6]

7. Differentiate between impact and non-impact printer with example. [10]

8. Explain how the computer system be cared? Explain about the backup and disaster recovery method. [5+5]

9. Write short notes on (any **FOUR**) [4×2.5]
   a) UPS
   b) Drive Bay
   c) SATA
   d) Light-pen
   e) Form factor

Good Luck !

Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur
Regular Exam-2081 Jestha/Ashadh

Program: **Diploma in Computer Engineering**   **Full Marks: 40**
Year/Part: **III/I (2022)** © Arjun   **Pass Marks: 16**
Subject: **Computer Repair and Maintenance**   **Time: 1½ hrs.**

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt ALL questions.

1.	a.	Differentiate between hardware and software.	[3]
	b.	What is drive bay? Explain.	[3]
2.	a.	Define ratings. Explain the concept of SMPS.	[1+2]
	b.	Describe about BIOS.	[3]
3.	a.	What is processor? Describe its parts.	[1+3]
	b.	Define UPS. Explain the importance of UPS.	[1+2]
4.	a.	Define scanner. Explain types of scanner.	[1+3]
	b.	Differentiate between external HDD and SSD.	[4]
5.	a.	Define monitor. Explain types of printer.	[1+3]
	b.	Define backup scheduling. What are backup methods? Explain.	[1+4]
6.		Describe data problems detection.	[4]

OR

Define system care. Explain some of the preventive [1+3]
maintenance.

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Good Luck !

Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur
Back Exam – 2080 Magh/Phagun

Program: Diploma in Computer Engineering	**Full Marks: 80**
Year/Part: II/II (2013, 2018) © Arjun	**Pass Marks: 32**
Subject: Computer Repair and Maintenance	**Time: 3 hrs.**

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

🌐 **www.arjun00.com.np**

Attempt any FIVE questions.

1. a. Define computer. Compare analog, digital and hybrid computer. [2+6]

   b. Explain the role of computer. [8]

2. a. List out the different types of motherboard component. Explain chipset and controller. [4+4]

   b. What is SMPS? Explain the working principle of power supply with block diagram. [2+6]

3. a. What are different types of storages used in computer system? Differentiate between RAM and ROM. [3+5]

   b. Define resolution. List different types of input devices and explain any one briefly. [2+2+4]

4. a. Define form factor. Explain the working principle of CRT monitors. [5]

   b. What do you mean by switches? Explain construction and operation of hard disk. [2+6]

5. a. Describe how the computer system can be cared well? [8]

   b. Define backup and recovery. Explain backup methods and devices. [2+6]

6. Write short notes on: (any **FOUR**) [4×4]

   a. UPS

   b. Buses

   c. BIOS

   d. Printer

   e. Super Computer

Good Luck !

Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur

Regular/Back Exam-2079/2080, Chaitra/Baishakh

Program: **Diploma in Computer Engineering**	Full Marks: 80
Year/Part: II/II (2018 New) © A r j u n	Pass Marks: 32
Subject: **Computer Repair & Maintenance**	Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

www.arjun00.com.np

Attempt Any Five Questions.

1. a) Describe the term data and information. Explain the role of computer. [2+6]

    b) Classify the computer on the basis of size. [8]

2. a) Draw the block diagram of SMPS. Explain the working principle of SMPS. [2+6]

    b) List out the mother board component. Explain different types of buses in brief. [3+5]

3. a) Define BIOS. List out the different types of input device. Explain Keyboard in brief. [2+3+3]

    b) Explain computer system with basic block diagram. [8]

4. a) Explain the memory used in computer system. Describe the importance of cache memory in computer. [4+4]

    b) Define cache and flash memory. Explain the construction and working principle of hard disk in brief. [2+6]

5. a) Define UPS. Explain the working principle of CRT monitor. [2+6]

    b) Write in details how the computer system can be cared well? [8]

6. Write short notes: (**Any Four**) [4x4=16]

    i) General and special computer

    ii) LED and LCD

    iii) Disaster Recovery

    iv) Address Bus, data Bus and control Bus

Good Luck!

Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur
Regular/Back Exam-2078/2079, Chaitra/Baishakh

Program: Diploma in Computer Engineering   **Full Marks: 80**

Year/ Part: II/II (2013, 2018 New+Old) © Arjun   **Pass Marks: 32**

Subject: **Computer Repair & Maintenance**   **Time: 3 hrs.**

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt Any Eight Questions.

1. Define the terms data, program, software and information.   [4x2.5=10]

2. What are general and special purpose computer? Differentiate between analog and digital computer.   [2+8]

3. Define form factor and drive bay. Explain in detail the working principle of SMPS.   [2+8]

4. Differentiate between :   [5+5]
   a) RAM and ROM   b) CRT and LCD

5. Define monitor. List out its characteristics. Explain how CRT works.   [2+3+5]

6. What is UPS? Differentiate between Impact and non-impact printer.   [3+7]

7. Write in details how the whole computer system can be cared well.   [10]

8. Define system software and application software. Write short notes on 3 types of viruses you have encountered. What measures you have applied for its solution?   [3+3+4]

9. Write short notes on : (Any Two)   [2x5=10]
   i) Back up and Disaster recovery
   ii) Machine cycle
   iii) BIOS

Good Luck !

Program: **Diploma in Computer Engineering**   Full Marks: **80**

Year/Part: **II/II (2018,2013 New+Old)** © Arjun   Pass Marks: **32**

Subject: **Computer Repair & Maintenance**   Time: **3 hrs.**

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt Any EIGHT questions.

1. Explain the types of computer on the basis of working principle. Explain them with suitable example. [10]

2. What is system case? Explain the working mechanism of power supply with block diagram. [4+6]

3. a) Explain the different parts of motherboard in brief. [5]

   b) Explain the roles of chipset on motherboard. [5]

4. Why Microprocessor is considered as a brain of Computer? Describe the different units of Microprocessor with diagram. [4+6]

5. What is primary Memory? Explain different types of RAM with suitable examples. [4+6]

6. Define secondary storage device with reference diagram. Explain magnetic storage device construction and its operation. [5+5]

7. Explain the working principle of CRT monitor. [10]

8. a) Describe the preventive maintenance for System Care. [5]

   b) Explain in brief about cylinder and sector. [5]

9. Write short notes on : **(Any Two)** [2×5=10]
   a) Ink-jet printer   b) Backup and disaster recovery
   c) UPS   d) Interfaces and ports UPS

Good Luck !

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt Any EIGHT questions.

1. Explain the different types of computers. What are the [5+5] features of third and fourth generation computers?

2. a) Computer is also known as versatile and diligent device. [5] Why? Explain.

   b) What are the factors determining a well system care? Give [5] short brief.

3. a) With reference to a diagram, explain system bus. [5]

   b) Explain the working mechanism of power supply. [5]

4. Describe all types of primary memory in detail. [10]

5. Define secondary storage device. Describe in brief about [2+8] magnetic hard disk in terms of its operation and disk geometry.

6. Differentiate between (Any Two): [2×5=10]
   (i) Impact Vs Non-Impact printer
   (ii) CRT VS LCD Monitor
   (iii) SRAM VS DRAM

7. a) Write down the steps to follow while assembling a computer. [5]

   b) What is a processor? Describe its components. [1+4]

8. What are the threats too data? What preventive measures [3+7] should be adopted in order to minimize the risk of data?

9. Write short notes on (Any TWO) [2×5=10]
   a) Backup and disaster recovery
   b) Virus detection and Protection
   c) Ups   d) Pixel and Resolution

Good Luck !

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt ALL questions.

1. Define computer. Explain application areas of computer. [2+6]

2. Explain generation of computer along with major Development in each generation. [8]

   OR

   Explain briefly history of computer.

3. Explain and write form factors of **any two**: [4+4]
   a) System Case   b) Drive bay   c) RAMS

4. Define following terms: **(any four)** [4×2=8]
   a) Pixel   b) Resolution   c) BIOS
   d) True color   e) Buses

5. Explain major functions of control unit and arithmetic logic unit. [8]

6. Define printer. Write difference between impact and non impact printer. [8]

7. Write short notes on **(Any TWO)** [4+4]
   a) Cache memory
   b) Flash memory working principle
   c) Secondary storage devices

8. Write color book specification of CD. Explain hard disk with neat diagram. [2+4]

9. Explain working principle of **(with diagram)** [4+4]
   a) CRT monitor   b) Power supply

10. Write in your own word how can you handle and maintain your computer. Also state the problem and its solution you face in your system. [8]

Good Luck !

Council for Technical Education and Vocational Training
Office of the Controller of Examination
Sanothimi, Bhaktapur

Regular/Back Exam Bhadra/Ashwin, 2071

Program: Diploma in Computer Engineering

NEW COURSE
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Year/Part: II /II

Subject: Repair and Maintenance

Full Marks: 80

Pass Marks: 32

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt All questions.

1. What do you mean by computer? Write down differences between Analog and Digital computer. — 3+5=8

2. What do you mean by generation of computer? Explain the technology used in different generation — 1+7=8

3. Explain the working principle of power supply along with block diagram. — 4+4=8

4. What is bus in computer system? List and explain different types of bus. — 2+6=8

5. Write down the importance of Cache memory in computer. Write down differences between RAM & RM. — 3+5=8

6. Explain the construction and operation mechanism of hard disk. — 8

7. Differentiate: (Any Two) — 4+4=8
   a. Impact and non-impact printer
   b. CRT and LCD
   c. Data and information

8. What are the various preventive maintenance technique used for caring a system? Explain. — 8

Council for Technical Education and Vocational Training
Office of the Controller of Examination
Sanothimi, Bhaktapur
Regular/Back Exam Bhadra/Ashin, 2070

Program: Diploma in Computer Engineering

NEW COURSE

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Full Marks: 80

Year/Part: II /II

Pass Marks: 32

Subject: Repair and Maintenance

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

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Attempt All questions.

1. Define computer in terms of data and program. Differentiate between hardware and Software. — 8

2. Classify computer according to its size and speed. — 8

3. Explain the major parts inside the computer system. — 8

4. What is SMPS? Explain its working principle. — 3+5

5. Define briefly about machine cycle. What are various types of busses. Also write in functions. — 3+5

6. What is input device? Explain any three input device with their working principle. — 2+6

7. What are storage devices? Differentiate RAM and ROM. — 4+4

8. What is DVD Rom? How data is stored in DVD? Differentiate it with hard disk in terms of technology. — 2+2+4

9. How image is displayed in LCD monitor? Explain with diagram. — 8

10. Why should we take preventive measure on system? Explain various preventive measure that we take. — 2+6

The End