

QP CODE: 24900183



Reg No:.....

Name:.....

MAHATMA GANDHI UNIVERSITY, KOTTAYAM
FIRST SEMESTER MGU-UGP (HONOURS) REGULAR
EXAMINATION NOVEMBER 2024

First Semester

**Discipline Specific Core Course - MG1DSCMOS100 - PC HARDWARE AND
SMARTPHONE TROUBLESHOOTING**

(2024 ADMISSION ONWARDS)

Duration: 1.5 Hours

Maximum Marks: 50

**Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Interest (I),
Appreciation (Ap), and Skill (S)**

*Students should attempt atleast one question from each course outcome to enhance their overall
outcome attainability.*

[Learning Domain][CO No(s)]

Part A

Multiple Choice Questions

Answer all questions. Each question carries 1 mark

- 1 Which part of the PC is responsible for temporarily storing data and programs that are actively used? [U] [1]

a) CPU	b) RAM
c) Hard Drive	d) Power Supply

- 2 What is the primary function of a socket on a motherboard? [U] [1]

a) Connects external peripherals	b) Holds the CPU
c) Provides power	d) Manages memory

- 3 What is the primary function of the CPU in a smartphone motherboard? [K] [2]

a) Manage battery life	b) Process instructions
c) Store data	d) Connect to Wi-Fi

- 4 If a flowchart-based troubleshooting process leads to no solution after several attempts, what should be the next step? [A] [2]
- a) Escalate to a more advanced support team
 - b) Abandon the troubleshooting process
 - c) Keep repeating the same steps
 - d) Ignore the issue
- 5 If an SMPS fails to power on, what could be a simple diagnostic step? [U] [2]
- a) Replacing the motherboard
 - b) Shorting the green and black wires
 - c) Checking the fan
 - d) Replacing the CPU
- 6 What might be the cause if a system fails to load the OS after a BIOS update? [A] [2]
- a) Incorrect OS configuration
 - b) Corrupted OS files
 - c) The boot mode is set incorrectly
 - d) Insufficient RAM capacity
- 7 What is the primary purpose of using a flowchart in troubleshooting methodologies? [U] [2]
- a) To document the problem
 - b) To provide a visual guide for decision-making
 - c) To track the time spent on troubleshooting
 - d) To replace technical manuals
- 8 Which component is responsible for rendering graphics in a smartphone? [K] [3]
- a) CPU
 - b) RAM
 - c) GPU
 - d) RF SECTION
- 9 How does the PMIC contribute to battery life? [U] [3]
- a) By providing high voltage output
 - b) By regulating power consumption for various components
 - c) By increasing RAM capacity
 - d) By enhancing graphical performance
- 10 In a mobile game that requires tilting the device to control movement, which sensors are primarily utilized? [A] [2]
- a) Proximity sensor and magnetometer
 - b) Accelerometer and gyroscope
 - c) Light sensor and camera
 - d) Acetometer and temperature

sensor

(10 × 1 = 10)

Part B

Short Answer Questions

Answer 4 questions. Each question carries 5 marks

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|----|--|-----|-----|
| 11 | Draw the block diagram of a PC and give its working. | [K] | [1] |
| 12 | Explain how the voltage regulator, BIOS ROM, CMOS battery, and RAM work together to ensure the smooth operation of a computer. | [U] | [1] |
| 13 | What is the purpose of the RF unit on a smartphone motherboard? | [K] | [2] |
| 14 | Name three common types of connectors found on the back panel of a motherboard. | [U] | [2] |
| 15 | Compare the functions of the accelerometer and gyroscope in a smartphone. | [U] | [2] |
| 16 | Describe how GPS (Global Positioning System) functions in a smartphone. | [U] | [2] |

(4 × 5 = 20)

Part C

Essay Questions

Answer 2 questions. Each question carries 10 marks

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|----|---|-----|-----|
| 17 | Explain the working principle of a Switched Mode Power Supply unit in a PC. | [U] | [1] |
| 18 | What is a chipset? Explain the working of each component of a chipset. | [U] | [2] |
| 19 | Explain the role of the RF Unit in smartphones and Discuss the types of antennas used in smartphones, | [A] | [2] |
| 20 | Draw and explain the typical functional diagram of smart phone | [U] | [3] |

(2 × 10 = 20)

END OF THE QUESTION PAPER
