

**April 2019**

Time - Three hours  
(Maximum Marks: 75)

*[N.B: (1) Q.No. 8 in PART - A and Q.No. 16 in PART - B are compulsory. Answer any FOUR questions from the remaining in each PART - A and PART - B*

*(2) Answer division (a) or division (b) of each question in PART - C.*

*(3) Each question carries 2 marks in PART - A, 3 marks in Part - B and 10 marks in PART - C.]*

PART - A

1. What is RTC?
2. What is a chipset?
3. What is a wait state?
4. What is key bouncing?
5. What is a power good signal?
6. What is a TFT display?
7. What is ESD?
8. What are the various IC's used in mobile phones?

PART - B

9. Write briefly about hardware, software and firmware.
10. Differentiate a north/south bridge architecture from a hub architecture.
11. Explain the formatting of a HDD.
12. Explain about the working of a optical mouse.
13. Distinguish between cold and warm booting.
14. Explain briefly about the post error and beep codes.
15. Describe the uses of battery booster.
16. Differentiate between active maintenance and passive maintenance.

[Turn over....

PART - C

17. (a) Explain in detail about the various motherboard components with a neat block diagram.

(Or)

(b) (i) Explain about the hub architecture with a neat block diagram.

(ii) Explain about the USB bus standard with a neat block diagram.

18. (a) (i) Explain about the different types of main memory.

(ii) Draw the troubleshooting flowchart of a mouse and explain.

(Or)

(b) (i) Explain about the various blu-ray disc parameters and the recording principle.

(ii) With a neat block diagram explain the operation of a laser printer.

19. (a) Explain the operation of a SMPS with a neat block diagram.

(Or)

(b) Explain with a neat block diagram, the functioning of a video capture card.

20. (a) (i) Explain the working principle of a laptop with block diagram.

(ii) Explain in detail about formatting and partitioning of a laptop hard disk.

(Or)

(b) (i) Explain in detail about the various types of batteries used in a laptop.

(ii) Explain in detail about the upgrading of memory and BIOS of a computer systems.

21. (a) (i) Explain in detail about the various components of a mobile.

(ii) Explain about flashing and formatting of mobiles.

(Or)

(b) (i) Explain briefly about the various troubleshooting techniques for a mobile.

(ii) Explain in brief about mobile viruses and precautions to be taken.

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