UNIVERSITY OF GHANA

B.SC INFORMATION TECHNOLOGY, FIRST SEMESTER EXAMINATIONS: 2015/ 2016

CSIT 203: COMPUTER HARDWARE FUNDAMENTALS (3 CREDITS)

INSTRUCTION:

Answer all questions in Section A in the answer booklet provided.

Answer any four (4) questions from section B in the Answer Booklet.

TIME ALLOWED:

TWO AND A HALF (2½) HOURS

SECTION A [40 Marks]

1. Reading data is performed in magnetic disk by_____.

A. Lower surface

B. Sectors

C. Tracks

D. Read/Write leads

2. The data recording format in most of the modern magnetic tape is_____.

A. 7 bit ASCII

B. 7 bit EBCDIC

C. 8 bit ASCII

D. 8 bit EBCDIC

3. IRQ 6 is commonly assigned to_____.

A. Sound card controller

B. COM1 controller

C. Floppy drive controller

D. LPT1 card controller

4. One of the following guarantees a high degree of compatibility between different brands of modem.

A. International Telecommunications Authority(ITA)

B. International Telecommunication Directorate(ITD)

C. International Telecommunication Union(ITU)

D. International Telecommunication Board(ITB)

5. Which of the following conditions most increases the likelihood that ESD will occur?

A. Hot, Dry Conditions

B. Cool, Dump Conditions

C. Cool, Dry Conditions

D. Hot, Dump Conditions

6. Which of the following is not a type of computer hard drive?

A. IDE

B. FDD

C. SCSI

D. EIDE

7. A good fuse should measure nearly_____ Ohms

A. 0

B. 1

C. 1.5

D. 0.5

8. When measuring a power supply connector the Multimeter should be set to_____ Volts.

A. AC

B. DC

C. Both A and B

D. None of the above

9. The POST programs indicate they are complete by:

A. Intermittent beep

B. More than a beep

C. No beep

D. A single beep

10. The gender of the parallel port is._____

A. Male

B. Female

C. Both A and B

D. None of the above

11. The gender of the serial port is_____

A. Male

B. Female

C. Both A and B

D. None of the above

12. How can you view system resources using Windows 7?

A. Device controller

B. Drive Manager

C. Control Manager

D. Device Manager

13. One of the following is not an adapter card

A. Multi functional I/O card

B. Modem card

C. SCSI card

D. Single purpose card

14. Which operating system support FAT?

A. DOS

B. Windows NT

C. Windows 2000

D. All the above

15. Will damage caused to a chip by ESD be immediately apparent?

A. Yes

B. No

C. Both A and B

D. None of the above

16. The serial port transmits data in_____.

A. A word by word

B. A byte by bit

C. A bit by bit

D. A byte by byte

17. A collection of tracks immediately above and beneath one another is called a _____.

A. Cylinder

B. Track

C. Sector

D. Segment

18. Which of the following is not an example of CMOS battery

A. Helix X

B. NiCad

C. Lithium

D. Alkaline

19. One of the following is not a manufacturer of a microprocessor.

A. INTEL

B. ASTEL

C. AMD

D. ARM

20. Slimline is a type of _____

A. Laptop computer

B. Midi computer

C. Desktop computer

D. Midi computer

21. Which of the following tools can one use to make loops?

A. Roundnose plier

B. Roundloop plier

C. Roundmouth plier

D. Roundturn plier

22. The_____is the number of times per second the electron beam scans the monitor and recharges the illumination of each pixel.

A. Refresh rate

B. Sharpness

C. Resolution

D. Dot pitch

23. _____ speed is measured in nanoseconds.

A. Modem

B. RAM

C. Expansion board

D. Hard disk drive

24. The total colours available for a graphical screen using 320 pixels across and 256 pixels down shows availab

ility of _____.

A. Eight colours

B. Sixteen colours

C. Two colours

D. Four colours

25. A very small area of the screen is called_____.

A. High resolution

B. Low resolution

C. Medium resolution

D. Pixel

26. A device that can be used to switch current without any mechanical movement is called_____.

A. Transistor

B. Resistor

C. Actuators

D. Stationery actuators

27. The sixteen colours available is shown with 25lines of text with each line character number is_____.

A. 80

B. 60

C. 40

D. 20

28. On a monochrome screen, each pixel needs_____.

A. One bit of storage

B. Five bits of storage

C. Eight bits of storage

D. Ten bits of storage

29. The display technology that uses gas between two glass sheets is classified as_____.

A. Less emitting diodes

B. Low emitting display

C. Plasma diodes

D. Plasma displays

30. Which of the following would need to use a modem_____?

A. Parallel port

B. Serial port

C. SCSI port

D. None of the above

31. A kilobyte of storage is precisely equivalent to_____.

A. 1,000 bytes

B. 1,024 bytes

C. 1,042 bytes

D. 1,442 bytes

32. One of the following is a type of bus that allows IRQ sharing.

A. COM1

B. LPT1

C. ISA

D. PCI

33. One of the following is for short distance transmission_____.

A. Serial port

B. Parallel port

C. Both A and B

D. All the above

34. The power connectors for floppy disks and hard disks carry two levels of voltage?

A. 5 and 12 volts AC

B. 5 and 12 volts DC

C. 5 and 15 volts AC

D. 5 and 15 volts DC

35. One of the following is a keyboard port_____.

A. PATA

B. SATA

C. AT

D. ATA

36. One of the following is not a(an) utility.

A. Screen s aver

B. Data recovery

C. Back up

D. Open recovery

37. One of the following is not stored in CMOS

A. Heatsunk OS

B. Printer driver

C. Monitor resolution

D. Date and time

38. One of the following is not a RAM .

A. CMOS

B. Cache

C. BIOS

D. FPM

39. What type of cable does an RJ-45 connector use?

A. Co-axial

B. Twisted-pair

C. Fiber-optic

D. None of the above

40. Which statement is valid about magnetic tape?

A. It is a plastic ribbon

B. It is coated on both sides with an iron oxide

C. It can be erased and reused

D. All the above

SECTION B [60 Marks]

Answer any four (4) questions from section B in the Answer Booklet.

QUESTION 1   [15 MARKS]

A) i) State 3 precautionary measures to be taken when opening a computer system.

ii) For each precautionary measure explain why the need for such a measure. **[6 Marks]**

iii) Explain the use of each of the following tools in hardware:

a) Torx   **[1 Mark]**

b) Tweezer   **[1 Mark]**

c) Loopback Adapter   **[1 Mark]**

d) Compressed Air   **[1 Mark]**

e) Multimeter   **[1 Mark]**

B. i) Define Hardware handshaking.   **[2 Marks]**

ii) List the 2 signals that are used by Hardware handshaking.   **[2 Marks]**

QUESTION 2   [15 Marks]

. **A)** Differentiate between the following:

i) Expansion Slots and Expansion Cards   **[3 Marks]**

ii) PCI and ISA slots   **[3 Marks]**

iii) Northbridge and Southbridge   **[3 Marks]**

iv) CD-R and CD-RW   **[3 Marks]**

v) ATX and WTX   **[3 Marks]**

QUESTION 3   **[15 Marks]**

A) Briefly write on the following:

i) Cinch connector   **[3 Marks]**

ii) AGP   **[3 Marks]**

iii) DVI   **[3 Marks]**

iv) SATA connection   **[3 Marks]**

v) Ports   **[3 Marks]**

QUESTION 4   **[15 Marks]**

A) One of the biggest problem in troubleshooting, servicing or upgrading a system is having a proper system documentation.

i) What is system documentation?   **[2 Marks]**

ii) What is the importance of system documentation?   **[2 Marks]**

iii) Identify and explain the three types of system documentation that

   you know of.   **[6 Marks]**

iv) Identify 4 requirements to look out for in procuring a computer system   [**4 Marks**]

QUESTION 5   **[15 Marks]**

A). i) Give four features of PCI express bus.   **[4 Marks]**

   ii) State the meaning of the following terms.

   a) Tracks   **[1 Mark]**

   b) Cylinder   **[1 Mark]**

   c) Sector   **[1 Mark]**

   iii) List and explain any two runtime problems of a PC.   **[4 Marks]**

   iv) Give two features each of Simplex and Half Duplex communications.   **[4 Marks]**