COMPUTER SCIENCE HSSC-I
SECTION-A (Marks 17)
Time allowed: 25 Minutes

Note: Section-A is compulsory. All parts of this section are to be answered on the question paper itself. It should be completed in the first 25 minutes and handed over to the invigilator. Deleting/ overwriting is not allowed. Do not use lead pencil.

Q -1: Encircle the correct option. Each part carries one mark.

1. Which one of the following is the most suitable to print salary slips of 2000 employees on a very cheap cost?
   A) Dot matrix printer
   B) Laser printer
   C) Desk jet printer
   D) Plotter

2. Cache Memory works between:
   A) RAM and Processor
   B) RAM and ROM
   C) Processor and Hard Disk
   D) ROM and Hard Disk

3. In which of the following categories a memory card lies?
   A) Magnetic Memory
   B) Secondary Memory
   C) Optical Memory
   D) Flash Memory

4. How many memory locations can be addressed with 64-bit address bus?
   A) 32
   B) 64
   C) 2^{32}
   D) 2^{64}

5. Which one of the following expansion slots has highest video performance?
   A) PCI
   B) PCI Express
   C) SATA
   D) AGP

6. Which one of the following registers holds the address of the next instruction to be executed?
   A) Program Counter
   B) Instruction Register
   C) Counter Register
   D) Data Register

7. The IP Address 191.10.1.0 lies in:
   A) Class A
   B) Class B
   C) Class C
   D) Class D

8. Email sending mechanism is an example of the following mode of_____ communication.
   A) Simplex
   B) Simple Duplex
   C) Half Duplex
   D) Full Duplex

9. Which pointing device is popular with ATM machines?
   A) Touch Pad
   B) Trackball
   C) Touch Screen
   D) Light Pen

10. Which device reads the information of owner from Credit Card?
    A) Bar Code Reader
    B) Magnetic Card Reader
    C) Optical Scanner
    D) Handheld Scanner

11. Which device use spindle to hold the disk(s)?
    A) Compact Disk
    B) Compact Disk
    C) Hard Disk
    D) DRAM

12. Which device have instructions to load operating system from hard disk to RAM?

A) RAM
B) Cache
C) Cache
D) Cache

13. Which component generates a signal to execute an instruction?
A) ALU
B) Decoder
C) Cache
D) Timing & Control Logic

14. Which one of the following is uni-directional bus?
A) Data
B) Network
C) Address
D) System

15. Which one of the following is Data Transfer Instruction?
A) STORE
B) STORE
C) STORE
D) JMP

16. For which purpose Class C is used?
A) Small size network
B) Multicasting
C) Large size network
D) Broadcasting

17. Which one of the following Network devices is used to forward data packets across similar or different networks?
A) Server
B) Router
C) Router
D) Gateway

COMPUTER SCIENCE HSSC-I

Time allowed: 2:35 Hours **Total Marks Section B and C: 68**

NOTE: Answer any FOURTEEN parts from Section B and any two questions from Section C on the separately provided answer book. Use supplementary answer sheet i.e. Sheet B if required. Write your answers neatly and legibly.

SECTION-B (Marks 42)

Q-2: Attempt any FOURTEEN parts. The answer to each part should not exceed five to six lines. **[14×3=42]**

i. Differentiate between hard copy and soft copy devices along with one example of each.

ii. Write down any one application of the following scanner types:

a. Handheld scanner   b. Flatbed scanner   c. Optical scanner

iii. Define utility software, language processor and device driver.

iv. Write down three differences between SIMM and DIMM memory chips.

v. Differentiate between Client-Server and Peer-to-Peer network architecture.

vi. Categorize the following topologies as per their characteristics (Star, Ring, Bus, Mesh).

Expensive	Least Cables

vii. Why LCD is better than CRT monitors? Justify your answer with three reasons.

viii. Write down one example of each Productivity Software, Open-Source Software and Device Driver.

ix. Which pointing device is available in laptop? How it differs from a mouse? Give two reasons.

x. What are the two basic components of CPU? Illustrate with diagram.

xi. What is Memory Word? How size of Memory word affects the speed of computer?

xii. Write down the purpose of EPROM and EEPROM.

xiii. Which port is plug and play? Why is it called plug and play? Give two reasons.

xiv. Write down the functions of Memory Address Register and Program Counter? How are they linked?

xv. Write down any three differences between CISC and RISC.

xvi. State any three advantages of using flash/chip memory.

xvii. Which functions are performed by the session layer in OSI model.

xviii. State any three characteristics of LAN.

xix. Define AGP and describe its functionality.

xx. What is meant by Pixel, Resolution and Dot Pitch with respect to the feature of a monitor.

SECTION-C (Marks 26)

Note: Attempt any TWO Questions. Each carries equal marks.   [2×13=26]

Q-3:

a) Differentiate between Sequential access and Direct access storage.
b) What is an Instruction Cycle? Illustrate with diagram
c) Compare the TCP sites with OSI model.

Q-4:

a) Why IP addresses are divided into different classes and which classes are defined in TCP/IP?
b) Differentiate between circuit switching and Packet switching.
c) Discuss the Ring and Mesh topologies, with respect to advantages and disadvantages. Illustrate with the help of diagram.

Q-5:

a) Define how ALU works. Explain with an example.
b) Explain the purpose of any three layer of OSI model.
c) Differentiate between D-RAM and S-RAM with respect to their memory cell, mode of operation, and speed. Which RAM needs to be refreshed periodically and Why?