Version No.			
3	1	2	1

ROLL NUMBER

Answer Sheet No._____

Sign. of Candidate _____

Sign. of Invigilator _____

Section – A is compulsory. All parts of this section are to be answered on this page and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. **Do not use lead pencil.**

COMPUTER SCIENCE
HSSC–I
SECTION – A (Marks 15)
Time allowed: 20 Minutes

حصہ اول لازمی ہے۔ اس کے جوابات اسی صفحہ پر دے کر ناظم مرکز کے حوالے کریں۔ کاٹ کر دوبارہ لکھنے کی اجازت نہیں ہے۔ لیڈ پنسل کا استعمال ممنوع ہے۔

ہر سوال کے سامنے دیے گئے درست دائرہ کو پر کریں۔

Fill the relevant bubble against each question:

#	Question				
1.	Which part of computer system is responsible to perform arithmetic and logic operations?	○ Keyboard	○ Mouse	○ Central Processing Unit	○ Monitor
2.	The **intermediate form** between hardware and software is:	○ Shareware	○ Firmware	○ Freeware	○ Trial-ware
3.	One (1) terabytes is equal to:	○ 1024^4 bytes	○ 1024^2 bytes	○ 1024^6 bytes	○ 1024 bytes
4.	Which of the following topologies is the **most** suitable to make network of 5 computers?	○ Tree topology	○ Bus topology	○ Ring topology	○ Mesh topology
5.	The data transfer instruction MOV A, B will:	○ Load values of register A to register B	○ Move values of register B to register A	○ Move values of register A to register B	○ Move values of A & B to Memory Buffer Register
6.	**STOP** and **Halt** are examples of:	○ Zero address instruction format	○ One address instruction format	○ Two address instruction format	○ Three address instruction format
7.	Which of the following components of system unit is responsible to convert Alternating Current to Direct Current?	○ Central Processing Unit	○ Hard disk	○ Power supply	○ Motherboard
8.	The **fastest** serial transmission port is:	○ Parallel port	○ LPT 1	○ USB port	○ Firewire port
9.	Physical layer of OSI Model uses which of the following protocol?	○ X.25 & Ethernet	○ Point to point protocol	○ Net BIOS	○ TCP / IP
10.	In packet switching network, each packet contains:	○ Protocol, sender address, sequence number	○ Sender address, destination address, sequence number	○ Protocol, sender address, destination address	○ Protocol, sender address
11.	It is an example of line of sight communication:	○ WiMAX	○ WiFi	○ Infrared	○ Bluetooth
12.	Wireless application protocol (WAP) is used to:	○ Provide internet access to wireless devices	○ Modify signal frequency	○ Convert messages from text to electronic signal	○ Increase signal strength
13.	Creating users in RDBMS is the task of:	○ DDL	○ DML	○ DCL	○ DXL
14.	[STUDENT]—◇ helps is an example of:	○ Unary relationship	○ Binary relationship	○ Ternary relationship	○ Modality
15.	Which of the following data types can store upto 255 characters?	○ Currency	○ Date and time	○ Memo	○ Text

COMPUTER SCIENCE HSSC–I

Time allowed: 2:40 Hours   **Total Marks Sections B and C: 60**

NOTE: The Questions of sections B and C are to be answered 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 36)

Q. 2   Answer any TWELVE parts. All parts carry equal marks.   (12 x 3 = 36)

(i)   Differentiate between Shareware and Freeware.

(ii)   Briefly explain the following types of computers:
         (a) Mini computer (b) Micro computer

(iii)   Write any three differences between volatile and non-volatile memory.

(iv)   What is RAM? Write two differences between static and dynamic RAM.

(v)   Label the following diagram which depicts the working of Arithmetic and Logic Unit.

         ALU Output   Control Input
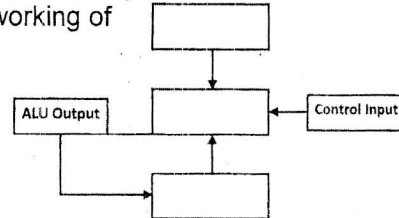
(vi)   Name four special purpose registers and explain working of any one of these.

(vii)   Briefly explain any two types of system Buses.

(viii)   Write down the importance of cooling system in computer system.

(ix)   Label the following diagram of Coaxial cable.

         Insulating material
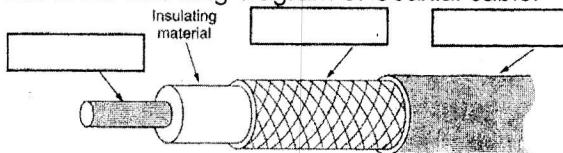
(x)   Write down the uses of the following database objects provided by MS-Access:
         a) Table   b) Query   c) Report

(xi)   Describe the following types of ROM:
         a) PROM   b) EPROM

(xii)   Write down any three differences between WiFi and WiMAX.

(xiii)   What is GPS? Write its importance in wireless communication.

(xiv)   A college has many departments and one department must belong to one college. Observe the situation carefully and draw the following:
         a) E-R diagram   b) Identify the cardinalities

(xv)   Transform the following E-R diagram to the Relational Schema
         a) Transform Entities.   b) Transform Relationship

         COUNTRY — has — PRESIDENT

(xvi)   What is 'query'? Write its purpose with one example.

SECTION – C (Marks 24)

Note: Attempt any THREE questions. All questions carry equal marks.   (3 x 8 = 24)

Q. 3   Describe the following Motherboard components.   (2x4)

(a)   BIOS   (b)   Memory Slot
(c)   Disk controller   (d)   Expansion slot

Q. 4   What is OSI Model? Write down the protocols and devices used on each layer: (1+7)

Sr. No.	Layer	Protocol	Devices
i			
ii			
iii			
iv			
v			
vi			
vii			

Q. 5   Describe the following output devices.   (2x4)

a)   LCD monitor   b)   Dot Matrix Printer
c)   Inkjet Printer   d)   Plotter

Q. 6   A doctor sees many patients and a patient may have many doctors. Many doctors may consult on a test and recommend it. A doctor can recommend many tests to a patient. Patients have a token number, name and age. Doctor has name, qualification, specialization and contact no. likewise test has name, date, time and result of test. Patient, doctor and test have unique identifiers.   (3+1+4)

Observer the above scenario and answer the following:

a)   List the entities   b)   List attributes for each entity
c)   Draw an E-R diagram and assign cardinalities