

# COMPUTER SCIENCE HSSC-I

**Time allowed: 2:40 Hours**

**Total Marks Sections B and C: 62**

## SECTION – B (Marks 42)

**Q. 2 Answer the following questions briefly.**

**(14 x 3 = 42)**

(i)	Differentiate between shareware and freeware with one example each.	03	<b>OR</b>	Why is non-impact printer better than impact printer? Justify your answer with three reasons.	03															
(ii)	Write down any three differences between sequential access and direct access devices.	03	<b>OR</b>	How is 'query' useful in database? Give three reasons.	03															
(iii)	Why is EEPROM preferred over ROM? Mention three reasons.	03	<b>OR</b>	What is form? Enlist names of four views of forms.	1+2															
(iv)	Complete the following table by identifying the registers as General or Special purpose. Also write down their use: <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Register</th> <th style="width: 20%;">General/Special</th> <th style="width: 20%;">Use</th> </tr> </thead> <tbody> <tr> <td>MBR</td> <td></td> <td></td> </tr> <tr> <td>Program Counter</td> <td></td> <td></td> </tr> </tbody> </table>	Register	General/Special	Use	MBR			Program Counter			03	<b>OR</b>	Draw an ER Diagram that shows cardinality and modality for the following situation: Each student may be assigned to one or more projects or may not be assigned to a project. A project may have at least one student assigned or may have several students assigned.	03						
Register	General/Special	Use																		
MBR																				
Program Counter																				
(v)	What is system bus? Write down the purpose of control bus.	1+2	<b>OR</b>	What is GPS? Enlist any two applications of GPS.	1+2															
(vi)	Which chip memory is faster DIMM or SIMM? Give two reasons of your selection.	1+2	<b>OR</b>	How is a Mainframe computer different from Microcomputer? Justify with three reasons.	03															
(vii)	Which port is considered as 'Plug and Play'? Why?	1+2	<b>OR</b>	What is Relational database model? Give example.	2+1															
(viii)	Compare Synchronous and Asynchronous transmissions. (Any three points)	03	<b>OR</b>	What is VPN? Write down its two characteristics.	1+2															
(ix)	Compare Star and Ring network topologies in terms of architecture, reliability and expansion.	03	<b>OR</b>	Differentiate between Circuit switching and Packet switching with one example each.	03															
(x)	Write down any three limitations of Mobile communication system.	03	<b>OR</b>	What is Data transfer instruction? Give an example as well.	2+1															
(xi)	State any three tasks of Data Definition Language.	03	<b>OR</b>	Is a Disk controller hardware or software? How is it helpful in performance of the computer system?	1+2															
(xii)	List down the purposes of three steps of Instruction Cycle.	03	<b>OR</b>	Write down the difference between entity and attribute with examples.	03															
(xiii)	Identify the Primary key in the given MS-Access table, also mention suitable data type for any <i>four</i> fields: <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Emp ID</th> <th style="width: 15%;">Name</th> <th style="width: 10%;">On Leave</th> <th style="width: 10%;">DOB</th> <th style="width: 15%;">Salary</th> </tr> </thead> <tbody> <tr> <td>2001</td> <td>Alex</td> <td>No</td> <td>26/03/95</td> <td>70000</td> </tr> <tr> <td>2002</td> <td>Zeta</td> <td>Yes</td> <td>22/10/98</td> <td>65000</td> </tr> </tbody> </table>	Emp ID	Name	On Leave	DOB	Salary	2001	Alex	No	26/03/95	70000	2002	Zeta	Yes	22/10/98	65000	1+2	<b>OR</b>	What is memory word? How does its size affect the processing speed of a computer system?	1+2
Emp ID	Name	On Leave	DOB	Salary																
2001	Alex	No	26/03/95	70000																
2002	Zeta	Yes	22/10/98	65000																
(xiv)	What is a foreign key? Give example.	2+1	<b>OR</b>	Compare 'RAM' and 'Cache'. (Any three points)	03															

## SECTION – C (Marks 20)

**Attempt the following questions.**

**(4 x 5 = 20)**

Q.3	What is system software? Explain any two types of system software with one example each.	1+2+2	<b>OR</b>	What is wireless communication? Explain the use of any two types of short distance wireless communication.	1+2+2
Q.4	What is magnetic disk? Describe its working mechanism with an advantage.	2+3	<b>OR</b>	What is the purpose of OSI model? Explain the functions of Session layer and Physical layer.	1+2+2
Q.5	What is instruction format? Differentiate between one-address and two-address instructions with one example each.	1+2+2	<b>OR</b>	What are scanning devices? Explain the purposes and applications of any two devices.	1+2+2
Q.6	Differentiate between File management system and Database management system. (Any five points)	05	<b>OR</b>	What is an expansion card? How are sound card and modem card helpful for the working of a computer system?	1+2+2