

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 opensource software and licensed software with one example each.	03	OR	What is Bluetooth? Enlist any two applications of Bluetooth.	1+2															
(ii)	Which chip memory is faster SRAM or DRAM ? Give two reasons of your selection.	1+2	OR	What is MAN? Write down its two characteristics.	1+2															
(iii)	Write two comparison points between 'volatile' and non-volatile' memories with one example each.	03	OR	Why is ' Cache ' memory used? (Give three reasons.)	03															
(iv)	Complete the following table for the following types of instructions: <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Instruction Type</th> <th style="width: 25%;">Number of operands</th> <th style="width: 50%;">Example</th> </tr> </thead> <tbody> <tr> <td>Zero-address</td> <td></td> <td></td> </tr> <tr> <td>One-address</td> <td></td> <td></td> </tr> <tr> <td>Two-address</td> <td></td> <td></td> </tr> </tbody> </table>	Instruction Type	Number of operands	Example	Zero-address			One-address			Two-address			03	OR	Draw an ER Diagram that shows cardinality and modality for the following situation: Each student may be registered for one or more courses. A course may have at least one student registered or have several students registered.	03			
Instruction Type	Number of operands	Example																		
Zero-address																				
One-address																				
Two-address																				
(v)	What is system bus? Write down the purpose of data bus.	1+2	OR	How is Form useful in database? Give three reasons	03															
(vi)	What is the purpose of an expansion slot? Identify the most efficient expansion slot as well.	2+1	OR	How is a Super computer different from Microcomputer? Justify with three reasons.	03															
(vii)	Which expansion card is required to connect to the internet? Give reasons of using this card.	1+2	OR	What is query? Enlist names of four queries.	1+2															
(viii)	Compare Half-duplex and Full-duplex communication modes. (Any three points)	03	OR	Enlist three factors that affect the processing speed of a computer system.	03															
(ix)	Compare Mesh and Bus network topologies in terms of architecture, reliability and expansion.	1x3	OR	Enlist any three roles of Database administrator.	03															
(x)	What is WML? Write down its two features.	1+2	OR	Why is LCD better than CRT monitor? Justify your answer with three reasons.	03															
(xi)	State any three tasks of Data Manipulation Language.	03	OR	Differentiate between Client-Server and Peer-to-Peer network architectures. (Any three points)	03															
(xii)	What is control unit? List down three main components of control unit.	03	OR	Compare 'field' and 'record' with one example of each.	03															
(xiii)	Identify the Primary key in the given MS-Access table, also mention suitable data type for any four fields: <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Book ID</th> <th style="width: 15%;">Title</th> <th style="width: 15%;">Available</th> <th style="width: 15%;">Publish Date</th> <th style="width: 15%;">Price</th> </tr> </thead> <tbody> <tr> <td>7110</td> <td>Python</td> <td>No</td> <td>26/12/21</td> <td>550</td> </tr> <tr> <td>7111</td> <td>Oracle</td> <td>Yes</td> <td>22/01/23</td> <td>660</td> </tr> </tbody> </table>	Book ID	Title	Available	Publish Date	Price	7110	Python	No	26/12/21	550	7111	Oracle	Yes	22/01/23	660	1+2	OR	What is Program control instruction? Give an example as well.	2+1
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7110	Python	No	26/12/21	550																
7111	Oracle	Yes	22/01/23	660																
(xiv)	What is report? Enlist any two report layouts.	1+2	OR	Is BIOS hardware or software? How is it helpful in performance of the computer system?	1+2															

SECTION – C (Marks 20)

Attempt the following questions.

(4 x 5 = 20)

Q.3	What is an application software? Explain any two types of application software with one example each.	1+2+2	OR	Why is wireless communication more popular? Give five reasons.	1x5
Q.4	What is an optical disk? Describe its working mechanism with an advantage.	2+3	OR	What is the purpose of OSI model? Explain the functions of Transport layer and Application layer.	1+2+2
Q.5	What is register? Differentiate between any TWO examples of Special-purpose registers.	1+4	OR	What are Pointing input devices? Explain the purpose and application of any TWO devices.	1+4
Q.6	What is database model? How is Hierarchical database model different from Network database model? Give at least four reasons.	1+4	OR	What is a Port? How are USB and HDMI ports helpful for the working of computer system?	1+2+2