5. Computer Science

New Syllabus

Course Contents

UNIT-1 Introduction and Evolution of Computer
1.1 Concept and Characteristics of Computer
1.2 Application of Computers
1.3 History of Computer: Mechanical Calculating era, Electro-Mechanical era, Electronic computers era
1.4 Generation of Computers: First, Second, Third, Fourth and Fifth Generation(AI) and its features
1.5 Computer speed and Measurement Unit

UNIT-2 Classification of Computer
2.1 On the basis of working principle – Analog, Digital and Hybrid Computers
2.2 On the basis of size – Super, Mainframe, Mini and Microcomputers
2.3 On the basis of brand – IBM PC, IBM Compatible and Apple/Macintosh
2.4 Mobile Computing

UNIT-3 Number System and Their Conversion
3.1 Decimal, Binary, Octal, Hexadecimal Number System & conversion
3.2 9's and 10's complements decimal subtraction
3.3 Calculation in Binary – addition, subtraction, One's and Two's Complement Methods of binary subtraction

UNIT-4 Logic Function and Boolean Algebra
4.1 Logic Function and Boolean Algebra
4.2 Introduction of Truth Table, Boolean Expression
4.3 Logic Gates –AND, OR, NOT, NAND, NOR, XOR and XNOR – its definition, use, truth table, logic symbol
4.4 Duality Principle
4.5 Laws of Boolean Algebra – Associative, Commutative, Distributive, Identity, Complement Laws
4.6 De Morgan's Theorem : Statement and Logic Expression
4.7 Venn diagram and its represent of logic gates(AND, OR, NOT)

UNIT-5 Computer Systems
5.1 Concept of Computer Architecture
5.2 Concept of Computer Organization
5.3 Components of Computer System – Input, Output, Processor and Storage
5.4 Microprocessor – Concepts, Components of Processor, Functions
5.5 Concept of System Buses: Data Bus, Address Bus, Control Bus
5.6 Memory – Primary and Secondary, Cache(L1, L2), Buffer, RAM, ROM
5.7 Storage Device – Definition, Use, Types: Hard Disk , Floppy Disk, Magnetic Tape, Flash Memory, Optical Disk(CD,VCD,DVD), External Storage Device
5.8 Input Devices – Keyboard, Mouse, Scanner, Light Pen, OMR, OCR, BCR, Scanner, Touch Pad Kiosk, Microphone and Digital Camera
5.9 Output Devices – Monitor, Printer, Plotter, Speaker
5.10 Computer Peripherals
5.11 Interfaces – Parallel Port, Serial Port, USB Ports, IEEE 1394 and Slots
5.12 Identification of PC Accessories and Peripherals
5.13 Specification of PC
5.14 Software and Classification
5.14.1 System software: OS, Language processor
5.14.2 Application software including Utilities Software
5.14.3 Computer Virus and Antivirus

UNIT-6 Operating System
6.1 **Fundamental Concept**
6.1.1 Introduction to Operating System
6.1.2 Role of Operating System
6.1.3 Functions of an Operating System
6.1.4 Types of Operating System: Based on Processing Method (Batch, Multitasking, Multiprocessing, Timesharing, Real Time), Based on User Interface (GUI, CUI), Based on Mode of User (Single-user & Multi-user)
6.2 **Disk Operating System (DOS)**
6.2.1 Introduction to CUI and it's feature
6.2.2 Common DOS Commands (External and Internal Commands)
6.2.3 Concept of File and Directory
6.2.4 Wildcards and Pathname

Model Question 2067

Time : 3 hrs.   Full Marks : 75
                                                                  Pass Marks : 27

Group 'A'
(Long Answer Questions)

Attempt all questions.   3×10=30
1.   Draw a well-labeled diagram of typical architecture of a computer system and explain the main function of Control Unit and ALU.   [4+3+3] [From unit 5]
2.   (a)   What is an operating system ? Explain any three functions of an operating system.   [1+6] [From unit 6]
      (b)   The 'WiMP' environment is much more user-friendly why ?   [3]
                                                                  [From unit 6]

Or

      (a)   What is cell addressing and explain different types of cell addressing used in Spreadsheet.   [5] [From unit 8]
      (b)   Explain about the following HTML tag with example: <A>, <input>   [5]
                                                                  [From unit 10]
3.   (a)   Define flow-chart and pseudo-code. Explain their significance in programming.   [5] [From unit 7]
      (b)   Write a pseudo-code to accept any three numbers and outpuut the largest among them.   [5] [From unit 7]

Group 'B'
(Short Answer Questions)

Attempt any Nine questions.   9×5=45
4.   Classify the computers according to their generation based on the technology used.   [5] [From unit 1]
5.   Differentiate between analogue and digital computer, explain with examples. [5]
                                                                  [From unit 2]
6.   What do you mean by number system ? Why do digital computers use binary numbers for their operation ?   [2+3] [From unit 3]
7.   Convert these number   [5] [From unit 3]
      a) $(126)_{10} = (?)_2$
      b) $(11011)_2 = (?)_{10}$
      c) $(57)_8 = (?)_2$

Perform following operations
a) $1011 - 1001$
b) $1110 + 1110$

8.   State the Demorgan's theorem and verify it.   [5] **[From unit 4]**
9.   What are logic gates ? Construct the truth table of NOR operation.   [5]
                                                                [From unit 4]
10.   Write short notes on (any two):   [5] **[From unit 5]**
      (i) IDE   (ii) SCSI   (iii) Wave Camera
11.   What are uses of internet ? Write any five search engine name. [5] **[From unit 9]**
12.   Differentiate between System Software and Application Software with
      examples.   [5] **[From unit 5]**
13.   What are DTP features in MS-Word ? Write three features of Presentation
      Packages.   [2+3] **[From unit 8]**
14.   Write an algorithm and flow chart to print the word "Hello" ten times using
      "while" loop.   [5] **[From unit 7]**

HSEB Questions

Unit 1: Introduction and Evolution of Computer

1.   Discuss about how the development of the PCs (Personal Computer) has
      extended the use of computer at present days.   **[Group-A, Q.N. 3, 2058]**
2.   Explain the evolution of computer describing the technologies used in
      different generations.   **[Q.N. 1, 2059]**
3.   Compare the distinctions between third and fourth generation computers.
                                                                [Q.N. 4, 2060]
4.   What do you mean by the generation of computer ? Explain the characteristics
      of third generation computers.   **[Q.N. 4, 2061]**
5.   Write brief notes on the achievement of the following computer scientists.
      (a) Howard Aiken   (b) Herman Hollerith   **[Q.N. 4, 2062]**
6.   Describe at least five ways in which information technology can help students
      studying subjects other than computing.   **[Q.N. 3, 2062]**
7.   State the characteristics of the 4th generation computers.   5 **[Q.N. 4, 2064]**
8.   Explain any five areas of computer applications   7.5 **[Q.N. 3, 2064]**
9.   What are the application areas of computer ? Explain in detail.   12.5
                                                                [Q.N. 3, 2065]
10.   Explain the different generation of computers.   5 **[Q.N. 9, 2065]**
11.   Discuss the generation of computers.   5 **[Q.N.5, 2066]**
12.   What do you mean by generation of computer? Explain the technology used
      in differnt generation of computers.   5+7.5 **[Q.N. 3, 2067]**
13.   What are the application areas of computer ? Explain in brief.   2+3
                                                                [Q.N. 5, 2067]
14.   Describe the usage of computer in five different areas of real time applications.
                                                            10 **[Q.N.4, 2068]**
15.   Explain the technologies used in different generations of computer.
                                                            5 **[Q.N.6, 2068]**
16.   Write short note on:
      (a) Charles Babbage   **[Q.N. 13(a), 2064]**
17.   What is computer generation? Explain the features of first and second
      generation computer.   2+8 **[Q.N. 4, Supp. 2068]**
18.   Why computer is known as versatile and diligent device? Explain.
                                                            5 **[Q.N. 5, 2069]**
19.   Explain any five fields of usage of computer in present days.
                                                            10 **[Q.N. 4, Supp. 2069]**
20.   Explain the technologies used in different generations of computer.
                                                            5 **[Q.N. 5, Supp. 2069]**
21.   Describe the terms *Hardware*, *"Software"* and *"Firmware"*.
                                                            5 **[Q.N. 12, Supp. 2069]**
26.   Describe the major characteristics of forth generation computer.
                                                            5 **[Q.N. 5, 2070 'C']**

27. Differentiate between second and third generation computer.
   5 [Q.N. 10, 2070 'D']

Unit 2: Classification of Computer

1. Compare and contrast Analogue and Digital computer with appropriate examples. [Group-B, Q.N. 1, 2057]
2. Write short notes on: (a) Microcomputer [Group-B, Q.N. 1(a), 2058]
   (b) Super computer [Group-B, Q.N. 1(b), 2058]
3. Differentiate between analog and digital computers. [Q.N. 6, 2060]
4. What are super computers and explain their applications in real life situation. [Q.N. 6, 2061]
5. Differentiate between "Mini" and "Mainframe" computers. 5 [Q.N. 5, 2064]
6. Differentiate between analog and digital computers. 2.5+2.5 [Q.N. 7, 2065]
7. Differentiate between Mini and Mainframe computers. 2.5+2.5[Q.N.6, 2066]
8. What are the super computers ? Explain their applications in real life situation. 2+3 [Q.N. 4, 2067]
9. What is super computer ? Explain its application in real life situation. [Q.N.5,2068]1+4
10. What is mobile computing ? Explain the importances of mobile computing in communication. [Q.N.11,2068]
11. Differentiate between mainframe computer and personal computer. [Q.N.11(Or),2068]5
12. What is mobile computing? Explain. 5[Q.N. 5, Supp. 2068]
13. Differentiate between analog and digital computer. 5[Q.N. 5(Or), Supp. 2068]
14. What is mobile computing? Explain. 5 [Q.N. 6, 2069]
15. Differentiate between analog and digital computer. 2.5+2.5[Q.N. 6(Or), 2069]
16. List any five features of mobile computing. 5[Q.N. 6, Supp. 2069]
17. Classify the computers on the basis of size. [Q.N. 6(Or), Supp. 2069]
18. Explain the advantages of mobile computing. 5[Q.N. 6, 2070 'C']
19. Describe the application areas of super computer. 5[Q.N. 6(Or), 2070 'C']
20. Explain the importance of mobile computing. 5 [Q.N. 7, 2070 'D']
21. Differentiate between analog and digital computer. 5[Q.N. 7(Or), 2070 'D']
22. Write short notes on:
   (a) Analog computer. [Q.N. 10(a), 2062]
   (b) Micro computer. [Q.N. 10(b), 2062]
   (c) IBM PC and IBM compatibles [Q.N. 4(a), 2063]
   (d) Digital computers [Q.N. 4(b), 2063]

Unit 3: Number System and Their Conversion

1. Convert 333_{10} Denary number into Hexadecimal and back to base two number system. [Group-B, Q.N. 2, 2057]
2. Convert the following numbers according to the given instruction
   a. 240_{10} into Octal Number [Group-B, Q.N. 2(a), 2058]
   b. ABC_{16} into Binary number [Group-B, Q.N. 2(b), 2058]
3. What is octal number system? Convert 356_{10} into base 8. [Q.N. 8, 2059]
4. What is binary number system ? Convert 520_{10} into base 16. [Q.N. 7, 2060]
5. What is Hexadecimal number system ? Convert 11 10 11_2 into base 16. [Q.N. 5, 2061]
6. What is binary number system ? Convert $(A5B)_{16}$ into decimal number. [Q.N. 9, 2062]
7. What is hexadecimal number system ? Convert 637_{10} into hexadecimal system. [Q.N. 11, 2063]
8. What is binary number ? Convert $(BBA)_{16}$ into binary. 2+3 [Q.N. 6, 2064]

9. What is Hexadecimal number ? Convert $(BCA)_{16}$ Hexadecimal number into base 8 number system. 2+3 [Q.N. 8, 2065]

10. What is binary number system? Convert $(BEEF)_{16}$ into binary. 2+3[Q.N.7, 2066]

11. What is hexadecimal number ? Convert $(B8C)_{16}$ Hexadecimal number into base 8 number system. 2+3 [Q.N. 7, 2067]

12. What is hexadecimal number ? Convert $(ABC)_{16}$ hexadecimal number into $(.........)_8$ octal number. [Q.N.7,2068]1+4

13. Perform the following: 2.5+2.5
    (a) 11111 - 10001 [Q.N.15(a),2068]
    (b) 1111 + 1111 [Q.N.15(b),2068]

14. What is octal number system? Convert $(AB5)_{16}$ into octal number system. 1+4 [Q.N. 6, Supp. 2068]

15. Perform the following operation: 2.5+2.5
    (a) 1011 – 1001 [Q.N. 15(a), Supp. 2068]
    (b) 1110 + 1110 [Q.N. 15(b), Supp. 2068]

16. Convert $(110111101)_2$ binary number into octal number. 5 [Q.N. 7, 2069]

17. Subtract $(1100)_2$ from $(1111)_2$ 1's and 2's complement method. 2.5+2.5[Q.N. 14, 2069]

18. Convert $(5634)_8$ octal number into binary number. 5[Q.N. 7, Supp. 2069]

19. Subtract $(1010)_2$ from $(1011)_2$ using 1's and 2's complement method. 2.5+2.5[Q.N. 14, Supp. 2069]

20. What is octal number system? Convert $(BAC)_{16}$ hexadecimal number into binary number system. 1+4 [Q.N. 7, 2070 'C']

21. Subtract $(11111)_2$ from $(11000)_2$ using 1's and 2's complement method. 5 [Q.N. 13, 2070 'C']

22. What is number system? Convert $(111111)_2$ binary number into octal number. 1+4 [Q.N. 5, 2070 'D']

23. Subtract $(111)_2$ from $(1000)_2$ using 1's and 2's complement methods. 2.5+2.5[Q.N. 12, 2070 'D']

Unit 4: Logic Function and Boolean Algebra

1. Define Booleam functions. Construct truth table for AND operation of Boolean algebra. [Group-B, Q.N. 5, 2057]

2. Construct the truth table of the AND and OR operations of Boolean algebra. [Group-B, Q.N. 10, 2058]

3. Write truth table for NAND operation of Boolean algebra. [Q.N. 6, 2059]

4. Write truth table for NOR operation of boolean algebra. [Q.N. 8, 2060]

5. Construct truth table for NAND operation. [Q.N. 12, 2061]

6. Define a NOR gate and draw its logic symbol. [Q.N. 8, 2062]

7. What is NOR gate and construct its truth table. [Q.N. 9, 2063]

8. Construct the truth table of XOR and XNOR operations of Boolean algebra. 2.5+2.5 [Q.N. 7, 2064]

9. What are logic gates ? Differentiate between "NAND" and "NOR" gate with truth tables. 2+3 [Q.N. 5, 2065]

10. What are the logic gates ? Explain the NAND gate with truth table. 2+3[Q.N.10, 2066]

11. What are the computer gates ? Differentiate between NAND and NOR gate with an example. 2+3 [Q.N. 6, 2067]

12. What is boolean algebra ? Differentiate between NAND and NOR gate with truth table. [Q.N.8,2068]1+4

13. What is truth table? Differentiate between OR and AND gate. 1+4 [Q.N. 7, Supp. 2068]

14. What is Boolean algebra? Describe AND gate, OR gate, NOT gate and NAND gate with gate symbol and Truth Table. 2+8 [Q.N. 4, 2069]

15. Differentiate between NAND and NOR gate with truth table.5[Q.N. 9, Supp. 2069]

16. Describe any five logic gates with Truth Table and gate symbol. 10[Q.N. 1, 2070 'C']

17. What is logic gate? Describe any four logic gates with truth table and gate symbol. 2+8 [Q.N. 2, 2070 'D']

Unit 5: Computer Systems

1. What do you understand by storage media ? Why CD ROMs are more reliable than the floppy diskettes ? [Group-B, Q.N. 3, 2057]
2. Define the term computer peripheral. Discuss about different types of printers with their merits and demerits. [Group-B, Q.N. 3, 2058]
3. Write the importance of primary and secondary storage in a computer system. [Group-B, Q.N. 7, 2058]
4. With a logical structural diagram, explain functions of elements of a computer system. [Q.N. 2, 2059]
5. What is a "bus" in computer architecture? [Q.N. 4, 2059]
6. Distinguish between the terms. 'Hardware', 'Software' and 'Firmware'. [Q.N. 7, 2059]
7. What do you mean by 'Volatility'? Explain RAM and ROM with the concept and term. [Q.N. 9, 2059]
8. What is a purpose of a 'MODEM' and where it could be used? [Q.N. 10, 2059]
9. Show with reference to a block diagram, the structure of a digital computer system and the inter-connection of various units. Explain the functions of various units briefly. [Q.N. 1, 2060]
10. Explain the terms hardware interrupts and software interrupts. [Q.N. 5, 2060]
11. Write short notes on touch pads and light pens. [Q.N. 9, 2060]
12. Describe the terms spooling and buffering. [Q.N. 12, 2060]
13. Discuss the term computer architecture. Draw block diagram and explain the main components of a computer system. [Q.N. 2, 2061]
14. What do you mean by the term 'Virtual memory' ? How does it differ from 'main memory' and 'secondary memory' ? Discuss. [Q.N. 3, 2061]
15. Describe the differences between serial and parallel interfaces. [Q.N. 7, 2061]
16. What are the main types of memory in a computer, and explain how do they differ from one another ? [Q.N. 2, 2062]
17. Differentiate between impact and non impact printers. [Q.N. 5, 2062]
18. Explain work done by the control unit and ALU of a computer. [Q.N. 12, 2062]
19. Explain the role of memory in a computer and differentiate between main memory and auxiliary storage. [Q.N. 2, 2063]
20. What do you mean by peripherals ? Differentiate between impact and non-impact printers. [Q.N. 3, 2063]
21. Differentiate between the terms hardware, software and firmware. [Q.N. 5, 2063]
22. Differentiate between compiler and interpreter. [Q.N. 8, 2063]
23. Explain briefly the functions of input unit and control unit of a computer. [Q.N. 12, 2063]
24. What is memory ? Differentiate between primary and secondary memory. Why hard disk is popular than floppy disk ? Explain. 2.5+5+5 [Q.N. 2, 2064]
25. What do you mean by system software and application software ? 5 [Q.N.3, 2064]
26. Explain the functions of CPU. 5 [Q.N. 8, 2064]
27. What is an output device ? Differentiate between hardcopy and softcopy output. 1+4 [Q.N. 9, 2064]
28. Explain the components of computer system with block diagram. 12.5 [Q.N. 2, 2065]
29. What is memory ? Explain the main memory and secondary memory. 1+4 [Q.N. 6, 2065]
30. Differentiate between Impact and Non-impact printers. 2.5+2.5 Q.N. 12, 2065]
31. Draw block diagram and explain the main components of a computer system. 12.5[Q.N.3, 2066]
32. What is printer? Differentiate between soft copy and hard copy output. 5[Q.N.4, 2066]
33. What is memory? Differentiate between primary and secondary memory. 1+4[Q.N.11, 2066]

34. What is bus in computer architecture ? Explain. 5[Q.N.12, 2066]
35. Define computer architecture. Draw a block diagram of computer system along with logical connections. Explain each block in detail. 5+7.5 [Q.N. 1, 2067]
36. Differentiate between impact printers and non-impact printers. 5 Q.N. 9, 2067]
37. What is output ? Distinguish between CRT monitor and LCD monitor. 1+4 [Q.N. 10, 2067]
38. Define software. Explain the different types of software in detail. 1+4 [Q.N. 11, 2067]
39. Differentiate between RAM and ROM. 5[Q.N. 12, 2067]
40. Define memory. Explain the types of memory in details. [Q.N.3,2068]2+8=10
41. Define the term "BUS". Explain different types of BUS. [Q.N.10,2068]2+3
42. What is an output device ? Differentiate between Impact and Non-Impact printers with examples. [Q.N.12,2068]1+4
43. What is computer system? Draw block diagram of digital computer. Explain. 2 + 8 [Q.N. 1, Supp. 2068]
44. What is cache memory? How it increases the performance of computer? 1+4 [Q.N. 12, Supp. 2068]
45. Differentiate between compiler and interpreter. 5 [Q.N. 13, Supp. 2068]
46. What is memory in the computer system? Explain primary and secondary memory. 2+8 [Q.N. 2, 2069]
47. What is BUS in terms of computer architecture? Explain. 5[Q.N. 8, 2069]
48. Differentiate between Impact and Non-Impact printers with examples. 2.5+2.5 [Q.N. 9, 2069]
49. What is CPU? Write down the functions of CPU. 1+4[Q.N. 12, 2069]
50. What is computer system? Explain the major units of computer system. 2 + 8[Q.N. 2, Supp. 2069]
51. What is laser printer? List the features of laser printer. 1+4[Q.N. 8, Supp. 2069]
52. Describe the major units of computer system with logical diagram. 10 [Q.N. 2, 2070 'C']
53. Differentiate between primary and secondary memory with examples. 5[Q.N. 8, 2070 'C']
54. What is laser printer? List out the major features of laser printer. 1+4 [Q.N. 9, 2070 'C']
55. What is computer architecture and computer organization? Describe the different units of computer system. 2+8 [Q.N. 3, 2070 'D']
56. What is memory? Differentiate between SRAM and DRM. 1+4 [Q.N. 6, 2070 'D']
57. What is an application program? List the major features of application program. 1+4 [Q.N. 9, 2070 'D']
58. Describe the Non–Impact printers with examples. 5 [Q.N. 13, 2070 'D']
59. Define the following terms. 2.5+2.5
    a) utility software [Q.N. 14(a), Supp. 2068]
    b) system files [Q.N. 14(b), Supp. 2068]
60. Write short notes on: 2.5+2.5
    (a) MICR [Q.N. 13(b), 2064]
    (b) Laser printer [Q.N. 13(c), 2064]
    (c) Scanner [Q.N. 13(a), 2065]
    (d) Light Pen [Q.N. 13(b), 2065]
    (e) Laser Printer [Q.N. 13(c), 2065]
    (f) Joystick [Q.N.13 (a), 2066]
    (g) Modem [Q.N.13 (b), 2066]
    (h) Cache Memory. 2.5[Q.N. 13(b), 2067]
    (i) Compiler versus Interpreter. 2.5 [Q.N. 13(c) 2067]
    (j) Modem [Q.N.14(a),2068]
    (k) MICR [Q.N.14(b),2068]
    (l) Modem [Q.N. 15(i), 2069]
    (m) Trackball [Q.N. 15(ii), 2069]
    (n) Memory [Q.N. 15(a), Supp. 2069]
    (o) MICR [Q.N. 15(b), 2070 'C']
    (p) Bar Code Reader [Q.N. 15(a), 2070 'D']

Unit 6: Operating System

1. "An operating system is an interface between human operators and an application software". Justify this statement with examples of operating systems known to you. **[Group-A, Q.N. 2, 2057]**
2. Distinguish between on-line and real time processing. What applications would you suggest appropriate for real time processing ? **[Group-B, Q.N. 6, 2057]**
3. Discuss about the advantages of GUI operating system (MS-Windows) over Text based operating system (DOS). **[Group-B, Q.N. 4, 2058]**
4. Distinguish between batch processing of on-line processing. **[Q.N. 5, 2059]**
5. What is an operating system ? Why is GUI operating system more popular than text based operating system ? Justify clearly. **[Q.N. 3, 2060]**
6. What is an operating system ? Explain its major functions. **[Q.N. 11, 2061]**
7. What do you mean by data sequencing ? Differentiate between random access and sequential access. **[Q.N. 13, 2061]**
8. Define an operating system. What is its purpose ? List the functions. **[Q.N. 1, 2062]**
9. What is an operating system (OS) ? Explain why GUI OS is more popular than text based OS. **[Q.N. 1, 2063]**
10. Explain the importance of an operating system. Differentiate between GUI (Graphical User Interface) and CUI (Character User Interface) operating system with examples. **6+6.5 [Q.N. 1, 2064]**
11. What is an operating system ? Explain the functions of an operating system. **5+7.5 [Q.N. 1, 2065]**
12. What is software ? Why graphical user interface (GUI) operating system is more popular than character user interface (CUI) operating system ? Justify. **2+3 [Q.N. 11, 2065]**
13. What is an operating system? Explain its major functions. **5+7.5[Q.N.2, 2066]**
14. What is an operating system ? Explain the different types of operating system with suitable examples. **5+7.5 [Q.N. 2, 2067]**
15. What is an operating system ? Explain the functions of operating system in brief. **[Q.N.2,2068]2+8=10]**
16. What is OS? Explain the fucntions of OS. **2+8 [Q.N. 2, Supp. 2068]**
17. Describe the types of computer booting. **5 [Q.N. 14, 2070 'C']**
18. What is an operating system? Explain the functions of operating system. **2 + 8 = 10[Q.N. 1, 2069]**
19. What is operating system? Describe the types of operating system on the basis of process. **2 + 8[Q.N. 1, Supp. 2069]**
20. What is an operating system? Explain the types of operating system. **2+8 [Q.N. 4, 2070 'D']**
21. What is operating system? Describe GUI and CUI operating systems in detail. **2+8 [Q.N. 3, 2070 'C']**
22. What is computer booting? Describe the types of computer booting. **5 [Q.N. 14, 2070 'D']**

Unit 7: Programming Concepts & Logics

1. What do you understand by 4GL ? Give examples. **[Group-B, Q.N. 4, 2057]**
2. Draw a diagram showing semantics of case statement and syntax in structure English. **[Group-B, Q.N. 8, 2057]**
3. What is flowchart? Write the advantages of drawing flowcharts. **[Group-B, Q.N. 6, 2058]**
4. Logical errors are difficult to find than the syntax errors. Justify. **[Group-B, Q.N. 8, 2058]**
5. Distinguish the terms "Operation", "Operator" and "Operand" with example. **[Q.N. 11, 2059]**
6. Draw a flowchart to test condition 'if-then-else' in program design process.

7. Explain the difference between syntax and semantics. [Q.N. 12, 2059] [Q.N. 13, 2059]
8. What is program logic ? What are symbols used to draw a flowchart ? [Q.N. 10, 2060]
9. What are the two types of programming errors ? How are they detected ? [Q.N. 13, 2060]
10. What is program documentation ? Why documentation is important for the successful implementation of a system ? [Q.N. 1, 2061]
11. What is flow chart ? Differentiate between program flow chart and system flow chart. [Q.N. 9, 2061]
12. What is program debugging ? Differentiate between 'syntax error' and 'logical error'. [Q.N. 10, 2061]
13. What are the characteristics necessary for programming to be considered as a high level language ? [Q.N. 6, 2062]
14. What is an algorithm ? Write an algorithm to compute a sales person's commission based on a sales volume shown below: [Q.N. 7, 2062]

Sales Amount	Commission (% of sales)
(a) Under Rs. 500/-	2%
(b) Rs. 500 or more but under Rs. 5000	5%
(c) Rs. 5000 and above	10%

15. Define flow chart and algorithms with examples. [Q.N. 7, 2063]
16. What is an algorithm ? Explain the advantages of an algorithm. 2+3 [Q.N. 10, 2064]
17. What is programming ? Differentiate between flowchart and algorithms with suitable examples. 1+2+2 [Q.N. 4, 2065]
18. What are the programming languages? Explain each of them in detail. 5+7.5[Q.N.1, 2066]
19. Differentiate between algorithm and flowchart with suitable examples. 2.5+2.5[Q.N.8, 2066]
20. What is programming ? Differentiate between flowchart and alogorithms. 1+4 [Q.N. 8, 2067]
21. What is programming language? Explain the types of programming languages with merits and demerits. [Q.N.1,2068]2+8=10
22. What is programming language? Define machine level, low level and high level programming language. 2 + 8 [Q.N. 3, Supp. 2068]
23. Differentiate between algorithm and flow chart. 5 [Q.N. 11, Supp. 2068]
24. What is programming? Differentiate between compiler and interpreter. 2 + 8 = 10[Q.N. 3, 2069]
25. Explain the types of programming errors with examples. 5 [Q.N. 13, 2069]
26. What is programming language? Explain different types of programming languages. 2 + 8[Q.N. 3, Supp. 2069]
27. What are programming errors? Explain. 5[Q.N. 13, Supp. 2069]
28. What is programming? Describe the types of programming languages with appropriate examples. 2+8 [Q.N. 4, 2070 'C']
29. Differentiate between logical error and syntax error with examples. 5[Q.N. 12, 2070 'C']
30. Explain different types of programming languages with their merits and demerits. 10[Q.N. 1, 2070 'D']
31. Describe algorithm and flowchart with examples. 5[Q.N. 8, 2070 'D']
32. Write short notes on:
    (a) Flowchart [Q.N. 15(a), 2070 'C']

Unit 8: Application Package

1. What do you understand by formatting a document? Give the significance of speller and thesaurus of modern word processing packages. [Group-B, Q.N. 9, 2058]
2. Explain the following terms used in different software packages:
    (a) Cut and Paste. (b) Text justification. [Q.N. 13, 2062]

3. What do you mean by word processing ? Distinguish between word processing and data processing software. **[Q.N. 6, 2063]**

4. Explain briefly the followings:
   a. Document formatting in word processing package **[Q.N. 13(a), 2063]**
   b. Cell referencing in spread sheet package **[Q.N. 13(b), 2063]**

5. What is a spread sheet package ? State the advantages of spread sheet package. 2+3 **[Q.N. 11, 2064]**

6. What is word processor ? State the advantages of word processor in document designing. **[Q.N.9(Or),2068]**1+4

7. What is word processing? Explain the features of word processing package. 1+4 **[Q.N. 8, Supp. 2068]**

8. What is spreadsheet? Explain the application of spreadsheet. 1+4**[Q.N. 9(Or), Supp. 2068]**

9. Explain the features of word processor. 2.5 + 2.5**[Q.N. 10(Or), 2069]**

10. Explain the features of spread sheet package. **[Q.N. 10(Or), Supp. 2069]**

11. Describe the major features of spread sheet. 5**[Q.N. 10(Or), 2070 'C']**

12. Write short notes on:
    (a) Word processor **[Q.N. 15(b), Supp. 2069]**

Unit 9: Internet and E-mail

1. What is internet ? List out the positive and negative impacts of internet in our society. **[Q.N.9,2068]**1+4

2. What is internet? Write down the used of internet. 1+4 **Q.N. [10, Supp. 2068]**

3. What is internet? Write down the uses of internet. 1+4 **[Q.N. 10, 2069]**

4. What is web page? List the features of web page. 1+4 **[Q.N. 11, 2069]**

5. List the positive and negative impacts of internet in our daily life. 5**[Q.N. 10, Supp. 2069]**

6. List out the advantages and disadvantages of Internet. 5 **[Q.N. 10, 2070 'C']**

7. Write short notes on:
   (a) Uses of Internet **[Q.N. 15(b), 2070 'D']**

Unit 10: Web Page Designing

1. Define HTML. Explain the importances of HTML in web page designing. **[Q.N.13,2068]**1+4

2. What is HTML? Write its importance in web page designing. 1+4 **[Q.N. 9, Supp. 2068]**

3. Define *HTML*. Explain the uses of *HTML* in web page designing. 1+ 4**[Q.N. 11, Supp. 2069]**

4. What is HTML? Describe the types of links which are used in web page design. 1+4 **[Q.N. 11, 2070 'C']**

5. What is HTML? Describe the objectives of HTML. 1+4 **[Q.N. 11, 2070 'D']**