

**UNIVERSITY OF KERALA**  
**First Degree Programme in Computer Applications**  
**Model Question Paper**  
**Semester I**  
**Course Code- CP 1121**  
**Introduction to Computer Science**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [Very Short Answer type]**

*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. Which is a spread sheet package?  
a) Word                      b) Excel                      c) Quattro Pro                      d) All of the above
2. What is the function of Recycle Bin?  
a) Store deleted file      b) Store temporary file                      b) Store corrupted file d) Store Document file
3. Data is a collection of  
a) Facts and entities relevant to user b) Raw material                      c) Numbers and alphabets  
d) Input material for a computer
4. Select the smallest memory size.  
a. Terabyte                      b) Gigabyte                      c) Kilobyte                      d) Megabyte
5. Binary equivalent of (63)<sub>10</sub> is
6. What is WORM?
7. ----- is a hardware interface between a network and a workstation.
8. ----- is a commonly used web browser.
9. What is a Compiler?
10. What is URL?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.*

*Each question carries TWO marks]*

**8 x 2 – 16 marks**

11. What is Booting?
12. What is an operating system?
13. What is a Modem?
14. Define ISP.
15. What do you mean by an Assembler?
16. What is called System Software?
17. What is Web Browser?
18. Define WWW.
19. What is a Word Processor?
20. Give the main difference between RAM and ROM.
21. What is MICR?
22. What is a Free Software?

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Explain the term protocol. Give an example.
24. What are the types of memories available in the computer system?
25. What is system utility? Explain.
26. What is an email and how does it work?
27. What are the different types of Operating system?
28. Explain any two input devices.
29. What is difference between impact and non-impact printers?
30. Differentiate LAN, WAN and MAN.
31. What are pointing devices? Explain.

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. Discuss the various secondary storage devices
33. Explain the application of IT in education and commerce.
34. What is meant by topology? Discuss the different topologies.
35. What are the different types of operating systems? Explain the features of any two GUI operating systems.

**UNIVERSITY OF KERALA**  
**First Degree Programme in Computer Applications**  
**Model Question Paper**  
**Semester I**  
**Course Code- CP 1132**  
**Digital Electronics**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [*Very Short Answer type*]**

*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. \_\_\_\_ is an electronic circuit that is constructed entirely on a single small chip  
a) multiplexer circuit    b) Adder circuit    c) Integrated circuit    d) All of the above
2. ASCII is a \_\_\_\_ bit alphanumeric code  
a)4    b)2    c)7    d)8
3. Which one of the following is used as the passive component in electronic circuits  
a) resistor    b) Vacuum triode    c) transistor    d) tunnel diode
4. The complement of a variable is always  
a) 0    b) 1    c) equal to the variable    d) inverse of the variable
5. Unit of Capacitance is -----  
a) Ohms    b)Ampere    c )Farad    d) None of these
6. An example of a data storage device is  
a) logic gate    b) flip-flop    c) comparator    d) decoder
7. Data selectors are basically the same as  
a) Decoder    b) DEMUX    c) Multiplexer    d) Encoder
8. BCD of decimal number 67 is \_\_\_\_
9. What is an inverter?
10. What is ASCII code?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.  
Each question carries TWO marks]*

**8 x 2 – 16 marks**

11. What is the difference between digital and analog system?
12. What are the various components of a digital circuit?
13. What are Flip flops?
14. Draw a half adder logic diagram.
15. What are known as basic gates?
16. What is an inductor? What is the unit of inductance?
17. Draw the circuit diagram for the expression  $A+B(A+C)+D$
18. Define Comparator.
19. Briefly explain about the counter?
20. List three types of latches?
21. Define pulse?
22. Define gray code with suitable example.

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Define edge triggered flip flop
24. Write short note of shift registers?
25. a) Convert the binary number 100111001 to hexa decimal  
b) Convert the decimal number 123.345 to binary  
c) Subtract 10111 from 110001
26. Develop a truth table for the standard SOP expression  $A'B'C+AB'C'+ABC$
27. Describe the function of Full Adder Circuit
28. What is the function of a rectifier? List the different types of rectifier?
29. Explain briefly about universal gates
30. Differentiate Decoder and Encoder circuit
31. What is meant by molecular electronics?

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. a) Explain about Multiplexer and De-multiplexer  
b) State De Morgan's theorem and apply it on the expression  $(A+B+C)' + (D'E)'$
33. Explain briefly about Numeric codes with suitable examples.
34. What are active and passive components? Explain in detail about the applications of electronics?
35. Discuss the different CMOS and ECL families

**UNIVERSITY OF KERALA**  
**First Degree Programme in Computer Applications**  
**Model Question Paper**  
**Semester I**  
**Course Code- CP 1141**  
**Programming in C**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [Very Short Answer type]**

*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. Which of the following is valid variable name?  
a) case b) Mark\_1 c) 2sum d) For
2. The operator ++ is a,  
a) Unary operator b) binary operator c) Ternary operator d) conditional operator
3. Control automatically passes to the beginning of loop by using,  
a) break statement b) goto statement c) continue statement d) none of these
4. '&' is a ----- operator.  
a) Unary operator b) Value operator c) Address operator d) none of these
5. do.....while is \_\_\_\_\_ control loop.  
a) exit b)entry c) count d)all of these
6. Which is the correct way to declare a pointer?  
(a) Int \*ptr (b) int ptr\* (c) \* int ptr (d) none of these
7. Which of the following belongs to derived data type.  
a) structures b)union c)pointers d) enumeration
8. which function used to read a character form a file  
a)getc() b)getf() c) gets() d)getshar()
9. What are pointers?
10. What is meant by recursion?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.*

*Each question carries TWO marks]*

**8 x 2 – 16 marks**

11. Why do we need to use comments in programs?
12. Explain sizeof() operator?
13. Define C tokens?
14. Write a program to reverse a number.
15. What is meant by conditional operator? With suitable examples?
16. Define implicit Type conversion?
17. What you meant by recursion?
18. What do you mean by dynamic memory allocation?
19. Explain the switch case and it syntax
20. Describe the symbols used in the flow chart
21. Write a program to reverse a number?
22. What is the need define statement in a program?

### SECTION C [short essay]

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Write a short note on structure of C programs?
24. What is the difference between structure and union? Explain with example?
25. Distinguish between call by value and call by reference.
26. What is the use of malloc( )?
27. Write a program to read a list of number and store the odd numbers to the file "ODD" and store the even numbers the file "EVEN"?
28. Write a program to find the product of two metrics?
29. Write a C program to accept a number in numerals and convert it into words  
(Eg: 134 will be displayed as -> one three four)
30. What are language translators?
31. What are loops? Discuss different types

### SECTION D [Long Essay]

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. Write a program to create files and store data on that file and retrieve data from that file and print it on the screen?
33. What is the string handling functions? Explain any 4 of them with suitable example.
34. Discuss the different class of pointers in C
35. What are structures? Write a program to discuss the operations on structures?

**UNIVERSITY OF KERALA**  
**First Degree Programme in Computer Science**  
**Model Question Paper**  
**Semester I**  
**Course Code- CS 1121**  
**INTRODUCTION TO INFORMATION TECHNOLOGY**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [*Very Short Answer type*]**  
*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. The number of bits that a computer can process at a time in parallel is called  
(a) bit            (b) byte            (c) word length            (d) megabyte
2. The component that allows a computer to retain data permanently is known as  
(a) CPU            (b) Memory            (c) Mass Storage Device            (d) VDU
3. ASCII codes upto  
(a) 7 characters (b) 8 characters (c) 256 characters            (d) 128 characters
4. The input device that uses a light sensitive detector to select objects on a display screen is  
(a) touch screen (b) touch pad (c) Light pen            (d) Joystick
5. The ability of an operating system to execute different parts of a program is called  
(a) multitasking (b) multiuser (c) multithreading            (d) multiprocessing
6. What are registers?
7. What is meant by time sharing system?
8. What is firmware?
9. What is IP address?
10. What are search engines?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.  
Each question carries TWO marks]*

**8 x 2 = 16 marks**

11. What is a workstation?
12. State two characteristics of digital signals.
13. What is a MODEM?
14. What is a binary digit?
15. What is flash memory?
16. Give differences between CD – R and CD – RW.
17. Expand the term POST
18. State features of a GUI system
19. What is LaTeX?
20. What is HTTP?
21. What is a URL?
22. Write notes on pointing devices?

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Describe the Von Neumann model.
24. Classify computers according to size.
25. Differentiate between RAM and ROM.
26. Distinguish between CRT and LCD.
27. Compare Compilers and Interpreters.
28. Differentiate between a word processor and spreadsheet.
29. List the various types of internet connections.
30. Distinguish between Internet and WWW.
31. Explain the types of RAMs

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. Give a brief history on the evolution of computers
33. Classify the various types of Operating Systems.
34. Describe the components required in building a network.
35. Discuss various output devices

**UNIVERSITY OF KERALA**  
**First Degree Programme in Computer Science**  
**Model Question Paper**  
**Semester I**  
**Course Code- CS 1132**  
**Digital Electronics & Data Communication**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [Very Short Answer type]**

*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. Digital circuits mostly use
  - a. Diodes
  - b. Bipolar transistors
  - c. Diode & Bipolar transistors
  - d. Bipolar transistors & FETs
2. A Karnaugh map with 4 variables has
  - a. 2 cells
  - b. 4 cells
  - c. 8 cells
  - d. 16 cells
3. The total number of input states for 4 input or gate is
  - a. 20
  - b. 16
  - c. 12
  - d. 8
4. TTL uses
  - a. multi emitter transistors
  - b. multi collector transistors
  - c. multi base transistors
  - d. multi emitter or collector transistors
5. Octal number 12 is equal to decimal number
  - a. 8
  - b. 11
  - c. 9
  - d. none
6. The number of inputs and outputs in a full adder are
  - a. 2 and 1
  - b. 2 and 2
  - c. 3 and 3
  - d. 3 and 2
7. An 8 bit binary number is to be entered into an 8 bit serial shift register. The number of clock pulses required is
  - a. 1
  - b. 2
  - c. 4
  - d. 8
8. What is meant by VLSI design?
9. What is a parallel adder?
10. What is a multiplexer?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.*

*Each question carries TWO marks]*

**8 x 2 = 16 marks**

11. What is function of Overflow bit.
12. How to build derived gate.
13. List out the basic laws of Boolean algebra.
14. What is clocked D flip-flop?
15. What is J-K flip-flop?
16. Explain 1's & 2's complement.
17. What are inductors?
18. What do you mean by fanout?
19. What are oscillators and where it is used?
20. What are shift registers?
21. What is a truth table, give an example.
22. What do you mean by SSI and MSI

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Explain Gray code in brief?
24. Describe ASCII code in detail.
25. Convert  $(268.75)_{10}$  to binary, octal, hexadecimal A92H
26. What is RC Coupled Feedback Amplifiers?
27. What are the uses of Resistors and Capacitors?
28. What are the challenges of Floating point representation?
29. What do you mean by Universal Gates?
30. Write a short note in full and half adders.
31. Differentiate between minterm and maxterm

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. What are flip flops? Explain the different types of flip flops with neat diagrams.
33. Explain the different types of multiplexers and demultiplexers and describe advantages and disadvantages of multiplexer and demultiplexer.
34. What are Karnaugh maps. Explain the use of Karnaugh maps with suitable example.
35. Explain the concept of number system bases – binary, decimal and hexadecimal number systems and conversion between each.

**UNIVERSITY OF KERALA**  
**First Degree Programme in Computer Science**  
**Model Question Paper**  
**Semester I**  
**Course Code- CS 1141**  
**Introduction to Programming**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [Very Short Answer type]**

*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. Which of the following #define statement is valid?  
(a) #define x=10      (b) #define x 10;      (c) #define x 10      (d) # Define x 10
2. While loop is \_\_\_\_\_ control loop.  
(a) exit      (b) entry      (c) count      (d) all of these
3. The goto statement causes control to go to  
(a) an operator      (b) a label      (c) a variable      (d) a function
4. Each case statement in switch () is separated by  
(a) break      (b) continue      (c) goto      (d) none of these
5. Number of bytes required for enumerated data type in memory is  
(a) 2 bytes      (b) 4 bytes      (c) one byte      (d) 3 bytes
6. The union holds  
(a) one object at a time      (b) multiple objects      (c) both a and b      (d) none of these
7. How to declare a pointer?
8. What is the use of storage classes?
9. What is the basic difference between Union and structure?
10. What are escape sequences?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.*

*Each question carries TWO marks]*

**8 x 2 = 16 marks**

11. What is the difference between two operator = and ==? Explain with example.
12. Differentiate between call by value and call by reference.
13. Write a C statement to evaluate the equation  $h = b^2 + a^2$ .
14. Distinguish between logical and bitwise operators.
15. What are the escape sequences?
16. Write a program to find the simple interest.
17. What is a loop? Why it is necessary in the program?
18. Mention the difference between character array and integer array
19. What is pre-processor directive?
20. How structure elements are stored in memory?
21. What is meant by dynamic memory allocation?
22. Compare between printf and fprintf function.

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. What is initialization? Why is it important?
24. Describe the four basic data types. Explain it with suitable example.
25. Write a program to find the sum of the squares of 10 numbers.
26. How does an append mode differs from a write mode?
27. What is a union in C? How data is stored using union?
28. Write a program to arrange a list of numbers in ascending order using function.
29. What is recursion? Explain types of recursions.
30. What is the NULL character? Why is it important?
31. Write a program to check whether the given number is Armstrong or not.

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. Write a program to combine contents of two files in a third file. Add the line number at the beginning of each line.
33. Write a program to add two matrices using pointers.
34. Explain various predefined macros in ctype.h
35. Discuss different control structures in C

**UNIVERSITY OF KERALA**  
**First Degree CBCSS BSc Degree Examinations**  
**Model Question Paper**  
**Semester I**  
**Course Code: CS1131.2/CS1131.3**  
**Introduction to Information Technology**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [*Very Short Answer type*]**

*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. The number of bits that a computer can process at a time in parallel is called  
(a) bit                      (b) byte                      (c) word length                      (d) nibble
2. The component that allows a computer to retain data permanently is known as  
(a) CPU                      (b) Memory                      (c) Mass Storage Device                      (d) VDU
3. Areas in a computer where data and instructions are held temporarily during processing is called  
(a) register                      (b) RAM                      (c) ROM                      (d) CPU
4. A device that is used as a pointing device  
(a) Monitor                      (b) scanner                      (c) plotter                      (d) Joystick
5. Which of the following are video standards  
(a) VGA                      (b) SVGA                      (c) XGA                      (d) all of these
6. What is meant by multi-tasking?
7. What is firmware?
8. What is meant by auxiliary storage?
9. What is WWW?
10. What is IP address?

**SECTION B [short answer]**

*[Not to exceed one paragraph, Answer any EIGHT questions.*

*Each question carries TWO marks]*

**8 x 2 = 16 marks**

11. What is a Workstation?
12. Compare digital and analog computers.
13. Define a Database.
14. What is a binary digit?
15. What are the essential components of a digital computer?
16. Give differences between Static and Dynamic RAM.
17. What are peripherals?
18. State the features of a GUI operating system.
19. What is LaTeX?
20. Explain about free and open source software.
21. Differentiate between a switch and a router.
22. What is a browser?

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Describe the Von Neumann model.
24. Classify computers according to size.
25. What is RDRAM?
26. Distinguish between Primary and Secondary memory.
27. Explain the term booting.
28. Differentiate between a word processor and spreadsheet.
29. What are utility programs?
30. Distinguish between Internet and WWW.
31. How to protect computers from viruses?

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. What are the various input devices used in a computer? Discuss.
33. Discuss the features of word processors.
34. Describe the components required in building a network
35. Explain classification of computers

**UNIVERSITY OF KERALA**  
**First Degree CBCSS BA Degree Examination November/December 2013**  
**Model Question Paper**  
**Semester I**  
**Course Code- CS 1131.1**  
**INTRODUCTION TO INFORMATION TECHNOLOGY**  
**(for English) (2013 admission)**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [Very Short Answer type]**  
(one word to maximum of one sentences, Answer **ALL** questions)

**10 x 1 = 10 marks**

1. The number of bits that a computer can process at a time in parallel is called  
(a) bit (b) byte (c) word length (d) megabyte
2. The component that allows a computer to retain data permanently is known as  
(a) CPU (b) Memory (c) Mass Storage Device (d) VDU
3. Areas in a computer where data and instructions are held temporarily during processing is called  
(a) register (b) RAM (c) ROM (d) CPU
4. ASCII codes upto  
(a) 7 characters (b) 8 characters (c) 256 characters (d) 128 characters
5. An example for auxillary storage is  
(a) RAM (b) ROM (c) Hard disk (d) all of these
6. What are computer viruses?
7. What is meant by firmware?
8. What is IP address?
9. What is WWW?
10. What are plotters?

**SECTION B [short answer]**  
[Not to exceed one paragraph, Answer any **EIGHT** questions.  
Each question carries **TWO** marks]

**8 x 2 = 16 marks**

11. What is a workstation?
12. State two characteristics of digital signals.
13. What is a MODEM?
14. What is a binary digit?
15. What is flash memory?
16. Give differences between CD – R and CD – RW.
17. Expand the term POST
18. State features of a GUI system
19. What is LaTeX?
20. What is HTTP?
21. Name two popular E-mail software
22. What is a URL?

**SECTION C [short essay]**

[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]

**6 x 4=24 marks**

23. Describe the Von Neumann model.
24. Classify computers according to size.
25. Differentiate between RAM and ROM.
26. Distinguish between CRT and LCD.
27. Compare Compilers and Interpreters.
28. Differentiate between a word processor and spreadsheet.
29. List the various types of internet connections.
30. Distinguish between Internet and WWW.
31. Write notes on free softwares

**SECTION D [Long Essay]**

[Answer any **TWO** questions. Each question carries **15** marks]

**2 x 15 = 30 marks**

32. Give a brief history on the evolution of computers
33. Explain the various types of Operating Systems.
34. Describe the components required in building a network.
35. Discuss the uses of Internet

**UNIVERSITY OF KERALA**  
**First Degree CBCSS Examination in November/December 2013**  
**Model Question Paper**  
**Semester I**  
**Course Code- PC 1171**  
**FUNDAMENTALS OF COMPUTER**

**TIME : 3 hrs**

**Maximum Mark: 80**

**SECTION A [Very Short Answer type]**  
*(one word to maximum of one sentences, Answer ALL questions)*

**10 x 1 = 10 marks**

1. What is ASCII?
2. Convert  $(01002)_2$  to octal.
3. What you mean by word-length of a computer?
4. Draw the truth table of OR gate
5. What is flip-flop?
6. IBM-1407 is
  - a. First Generation b. Second generation c. Third generation d. Fourth generation
7. What is SDLC?
8. What is access time?
9. What is meant by track in a CD.
10. What you mean by the base of a number system?

**SECTION B [short answer]**  
*[Not to exceed one paragraph, Answer any EIGHT questions.*  
*Each question carries TWO marks]*

**8 x 2 = 16 marks**

11. What is cache memory?
12. Explain about assembly and machine level languages.
13. Difference between static and dynamic RAM.
14. Illustrate MOV, ADD, LDA instructions.
15. What is an interrupt.
16. What is meant by boot sector of a hard disk?
17. What is an instruction cycle?
18. What is magnetic disk?
19. What is POST?
20. What are the advantages of database over file systems.
21. Explain flash memory, with an example?
22. What are the fact finding techniques used for developing a system?

**SECTION C [short essay]**

*[Not to exceed 120 words, Answer any **SIX** questions.  
Each question carries **FOUR** marks]*

**6 x 4=24 marks**

23. Difference between RAM and ROM
24. Explain about printers.
25. Differentiate between a half adder and a full adder?
26. Write a program to add two numbers using 8085 microprocessor instructions. Explain
27. Write down the differences between Compiler and Interpreter.
28. Explain Combinational circuit and Sequential circuit?
29. Describe DMA transfer
30. What is a real time operating system?
31. Explain the concept of virtual memory.

**SECTION D [Long Essay]**

*[Answer any **TWO** questions. Each question carries **15** marks]*

**2 x 15 = 30 marks**

32. Explain the internal architecture of 8085 microprocessor.
33. Discuss the working of J K flip-flop.
34. Explain input output devices in detail.
35. Describe functions of an operating system.