



**Q.1. Give short answer to the following questions. (15x2=30)**

1. What is difference between System Software and Application Software?
2. What is meant by Expansion Slots?
3. Differentiate between Bandwidth and Throughput?
4. What are Registers? Which register is used to hold address of Next Executable Instruction?
5. What is Pipelining?
6. What is purpose of VeriChip?
7. What is Radio Frequency Identification (RFID) Readers?
8. What are Multimedia elements?
9. What is difference between HTML and XHTML?
10. How you will differentiate between Half Duplex and Full Duplex Transmission?
11. Name two commands used to create a file in Linux Terminal.
12. List the problems faced by humanity which could be solved using Information Technology.
13. Convert 1001110 in base 2 into a decimal number?
14. What is a Hot-swappable device?
15. What is the difference between a Bridge and Repeater?

**Q.2. Answer the following questions. (3x10=30)**

1. List several types of networking hardware and explain the purpose of each.
2. Answer the following questions. [5 +5]
  - a. Identify the major parts of a personal computer and enlist their features and examples.
  - b. Explain the structure of Magnetic Hard Disks in terms of sectors, tracks, clusters, and cylinders.
3. Describe device and connection options for connecting to the Internet, as well as some considerations to keep in mind when selecting an ISP.



# UNIVERSITY OF THE PUNJAB

First Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig. ....

Roll No. in Words. ....

PAPER: Introduction to Computing  
Course Code: IT-101 Part-I (Compulsory)

MAX. TIME: 15 Min.  
MAX. MARKS: 10

Signature of Supdt.:

**Attempt this Paper on this Question Sheet only.**

**Please encircle the correct option. Division of marks is given in front of each question.**

**This Paper will be collected back after expiry of time limit mentioned above.**

**Q.1. Encircle the right answer, cutting and overwriting is not allowed. (1x10=10)**

- Before a disk drive can access any record, it has to know the record's disk address. What information does this address specify?  
a) Track number  
b) Sector number  
c) Surface number  
d) All of these.
- The disadvantages of DBMS are \_\_\_\_\_  
a) Increased size  
b) Increased complexity  
c) High impact of failure  
d) All of these
- High level languages are easily understandable by \_\_\_\_\_  
a) Compilers  
b) Computers  
c) Humans  
d) All of these
- Which of the following is necessarily nested tag in HTML?  
a) <li>  
b) <br>  
c) <ul>  
d) <ol>
- Suppose you have established a small network of 10 computers using a BUS topology in which the central link (bus) is half-duplex channel running on 10Mbps. Each computer in the network is capable of receiving data at 5Mbps. What is the maximum data rate that these computers can receive over the network?  
a) 5 Mbps  
b) 10 Mbps  
c) 15 Mbps  
d) 2 Mbps
- \_\_\_\_\_ is the transmission capacity of a communications channel.  
a) Network topology  
b) Network protocol  
c) Bandwidth  
d) Transmission mode
- Assume cell A1=2, B1=3, C1=4; then which of the following will result 3 in Excel?  
a) =Min(A1:C1)  
b) =Max(A1:C1)  
c) =Average(A1:C1)  
d) =C1+(A1-A1/A1)
- \_\_\_\_\_ is used to copy the formatting of the selected text.  
a) Format Painter  
b) Quick Access Toolbar  
c) Mini toolbar  
d) None of these
- Which of the following is not a type of web browser.  
a) Google chrome  
b) Internet explorer  
c) Wikipedia  
d) Firefox
- Which of the following is a correct way to insert a hyperlink in a webpage.  
a) <a source="www.google.com"> click here </a>  
b) <a src="http://google.com" > click here </a>  
c) <a href="http://google.com"> click here </a>  
d) <hyperlink src="click here"> www.google.com </hyperlink>



# UNIVERSITY OF THE PUNJAB

First Semester – 2019

Examination: B.S. 4 Years Program

Roll No. ....

PAPER: Introduction to Computing

Course Code: IT-101 Part – II

MAX. TIME: 2 Hrs. 45 Min.

MAX. MARKS: 50

**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**QUESTION # 2**

[20 marks]

Write short answers to all of the following questions:

1. What is response time with respect to multiprocessing?
2. How a worm and a virus are different from each other?
3. Briefly explain the term router.
4. What is a firewall?
5. Differentiate between impact and non-impact printers.
6. What is risk, vulnerability and threat in terms of cyber security?
7. List three e-commerce business models.
8. What is data redundancy in the context of database management system?
9. What is communication protocol?
10. List some classical applications of Artificial Intelligence.

**PART – III (Subjective)**

**QUESTION # 3**

[10 marks]

- a) What is virtual memory and how it works? [4]
- b) Discuss the following computer memories: [6]
  - i. RAM
  - ii. ROM
  - iii. Cache memory
  - iv. Registers

**QUESTION # 4**

[10 marks]

- a) Explain the following types of programming errors with examples of each: [5]
  - i. Run-time error
  - ii. Syntax error
  - iii. Logical error

**P.T.O.**

- b) Discuss the following LAN topologies with respect to performance, fault tolerance and scalability. [5]
- i. BUS
  - ii. Star
  - iii. Mesh
  - iv. Ring

**QUESTION # 5**

**[10 marks]**

- a) Calculate pay of an employee based on the hours worked. The input includes, the employee's total hours worked this week and their hourly pay rate. The employee is to be paid their basic wage for the first 40 hours worked and time-and-a-half (i.e. 50% more) for all hours above 40 (overtime pay). Output the regular pay, overtime pay, and total pay for the week on the console. If the employee worked 40 hours or less, do not output any information about overtime pay. [5]
- b) Write HTML code to produce the following: [5]



1. Here, the text "Fruits" should be a first level heading and has green color.
2. Next line is in center. It has blue color, font-size 20 and in "impact" font.
3. Next a table with 1 row and 2 columns with border. Column one has list. Column two has an image "fruit.jpg" with width and height 100.
4. Next line is simple but contains a hyper link to page <https://fruits.com>





**UNIVERSITY OF THE PUNJAB**

First Semester – 2019

**Examination: B.S. 4 Years Program  
(Clash)**

Roll No. ....

**PAPER: Introduction to Computing  
Course Code: IT-101 Part – II**

**MAX. TIME: 2 Hrs. 45 Min.  
MAX. MARKS: 50**

**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**QUESTION # 2**

[20 marks]

Write short answers to all of the following questions:

1. Briefly explain the term Ergonomics.
2. What is the purpose of cache memory in a computer system?
3. What is RAID?
4. Differentiate between half-duplex and full-duplex transmission.
5. What is a Gateway in networking?
6. Briefly explain the concept of pipelining.
7. What is a system clock?
8. Write the steps that a CPU takes while executing a programs.
9. Explain the term "primary key" in database and why it is important for a table?
10. What is data dictionary?

**PART – III (Subjective)**

**QUESTION # 3**

[10 marks]

- a) Discuss ethics in computing with the focus on user, programmer and professional computing issues. [5]
- b) Explain various database models in detail. [5]

**QUESTION # 4**

[10 marks]

- a) Explain the physical structure and data organization of a magnetic disk. [5]
- b) Discuss different types of communication media. [5]

[10 marks]

**P.T.O.**

### QUESTION #5

- a) Write a program that takes any number of digits from the user, and combines them in the form of one integer variable. The program should first input the number of digits to be taken. Then inputs the digits one by one and calculates the resulting integer value. [5]
- b) Write HTML code to produce the following output: [5]  
Here, the text "Programming Languages" is a first level heading in Cambria font and is centered aligned. The text "Following are few examples of programming languages:" is a regular paragraph followed by an ordered and unordered list. The table with three columns and four rows where first row is table headings and rest is content. The last line contains a hyper link "click here" to [https://en.wikipedia.org/wiki/Programming\\_language](https://en.wikipedia.org/wiki/Programming_language).

## Programming Languages

Following are few examples of programming languages:

1. Low Level Languages
  - Machine language
  - Assembly language
2. High Level Languages
  - C++
  - Java

Language	High Level	Low Level
C++	Yes	No
Assembly	No	Yes
Java	Yes	No

For more information on programming languages [click here](https://en.wikipedia.org/wiki/Programming_language).



**QUESTION # 1.** Give short answers of the following: (15x2=30)

1. List six types of computers that are designed for use by a single person.
2. How does OCR software translate scanned text into text that you can edit?
3. Describe a specific advantage of some new photo printers.
4. Describe the role of the computer's system clock?
5. What are average access times for hard disks?
6. Name five special purpose ports and write the use of each.
7. Why is task switching a necessary feature of a multitasking operating system?
8. List four benefits that networks provide to their users.
9. How are Internet newsgroups organized?
10. What is the primary difference between an intranet and an extranet?
11. What is the difference between a spreadsheet and a worksheet?
12. What are common data types of a field in a database?
13. Define green computing.
14. What are the steps of system development cycle?
15. Define an information system. Why do we use it?

Give brief answers of the followings. (3x10=30)

**QUESTION # 2.** [10 Marks]

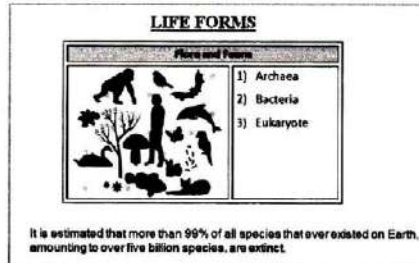
- a) In context of resource allocation, how does an operating system manage memory? [5]
- b) Explain following terms with respect to computer security. [5]
  - a. Piggybacking
  - b. Denial of Service
  - c. Data diddling

**QUESTION # 3.** [10 Marks]

- a) Discuss different LAN components. [5]
- b) Define DBMS. What are the advantages of Database approach? [5]

**QUESTION # 4.** [10 Marks]

- a) Write a program that calculates either area of a rectangle (area = Length \* Width) or the area of a triangle (area =  $\frac{1}{2}$  \* base \* height) after prompting the user to type the first character of the figure type (R or T). [5]
- b) Write HTML code to produce the following. [5]



Here,

1. The text "Life Forms" is a first level heading.
2. Next is a table with border and a header row containing center aligned "Flora and Fauna".
3. First column of table contains an image "life.jpg" with width and height 150.
4. Second column of table has an ordered list only.



Number	First Name	Last Name	Points
1	Mohsin	Riaz	50
2	Sohaib	Javid	100
3	Asim	Rasool	150
4	Zeeshan	Shabbir	200
5	Ali	Ahamd	250

Write the html code for above table by using following attribute values:

Page title = table

Cellpadding= 10

Table alignment = center

Cellspacing = 6

Table color = Blue

**QUESTION # 5**

**[10 marks]**

- a) Draw a flow chart OR write a program that takes 10 numbers from user and display their sum.



# UNIVERSITY OF THE PUNJAB

First Semester 2017

Examination: B.S. 4 Years Programme

Roll No. ....

PAPER: Introduction to Computing  
Course Code: IT-101 /11394

TIME ALLOWED: 2 hrs. & 30 mins.  
MAX. MARKS: 50

*Attempt this Paper on Separate Answer Sheet provided.*

## PART – II (Short Questions)

### QUESTION # 2

[20 marks]

Write short answers to all of the following questions:

1. Explain how a cache memory helps in improving the overall processing speed of computer system.
2. Why ROM is needed in the computer system? What kind of programs/instructions are stored in the ROM?
3. Differentiate between high level and low level languages also give examples of each type.
4. What is a system bus? Name three types of computer buses.
5. What is a computer software? Differentiate between a system software and an application software.
6. What is a computer virus? How it effects a computer system?
7. List the major benefits of e-commerce.
8. What are the various areas where AI (Artificial Intelligence) can be used?
9. Describe the concept of data integrity in DBMS.
10. How simplex and duplex transmission modes work?

## PART – III (Subjective)

### QUESTION # 3

[10 marks]

- a) Describe how the program instructions are executed by a computer. Briefly explain all the steps involved in instruction life cycle. [5]
- b) Explain the following CPU sharing techniques: [5]
  - i. Multiprocessing
  - ii. Multiprogramming
  - iii. Time-shared multiprogramming

### QUESTION # 4

[10 marks]

- a) Explain various kinds of communication media with the significance of each type. [5]
- b) Explain the concept of track, sector and cylinder by using a labeled diagram, while discussing magnetic disk storage. [5]

### QUESTION # 5

[10 marks]

Draw a flow chart OR write a program that keeps taking input numbers from user (both even and odd) until user enters a sentinel value -1 and display the sum of all even numbers entered by the user.



# UNIVERSITY OF THE PUNJAB

Roll No. ....

First Semester 2017

Examination: B.S. 4 Years Programme

PAPER: Introduction to Computing  
Course Code: IT-101 /11394

TIME ALLOWED: 30 mins.  
MAX. MARKS: 10

Attempt this Paper on this Question Sheet only.

PART - I (Objective)

## QUESTION # 1

[10 marks]

Select the best option for each of the following MCQs. Overwriting will result ZERO in credit.

- Examples of volatile storage media include all of the following except \_\_\_\_\_
  - Floppy disks
  - Registers
  - Main Memory
  - Cache Memory
- \_\_\_\_\_ followed by \_\_\_\_\_ is the sequence of keys to cut and paste selected text in Microsoft Office.
  - Ctrl+C, Ctrl+V
  - Ctrl+X, Ctrl+V
  - Ctrl+C, Ctrl+P
  - Ctrl+X, Ctrl+P
- \_\_\_\_\_ is a device that converts sound waves into audio signals.
  - Keyboard
  - Keyboard
  - Scanner
  - Microphone
- Which of the following is not true about personal computers?
  - The PC was introduced by IBM in 1981
  - Uses the DOS or windows operating system developed by Microsoft Corporation.
  - They are analogue machine.
  - They are general purpose computers.
- \_\_\_\_\_ is the software that verifies that user is not another computer.
  - Password
  - Encryption
  - Virus
  - Captcha
- In HTML the entire document is enclosed between \_\_\_\_\_ and \_\_\_\_\_ tags.
  - <table>, </table>
  - <head> </head>
  - <html>, </html>
  - <uol>, </uol>
- Consider the following HTML and CSS code snippet

```
<head>
<style type = "text/css">
  <p style = "text-align : center">Introduction to Computing!<p>
</style>
</head>
```

According to the above code:
  - The text "Introduction to computing" will appear bold and underlined.
  - The text "Introduction to computing" will appear as hyperlink.
  - The text "Introduction to computing" will appear centered.
  - Nothing will appear at all.
- \_\_\_\_\_ is the study of computer systems that attempt to model and apply the intelligence of human mind:
  - Artificial Intelligence
  - E-commerce
  - Computer Security
  - Cyber ethics
- In DBMS, \_\_\_\_\_ is a collection of related fields that makeup a single database entry.
  - Table
  - Record
  - Field
  - none of these
- A \_\_\_\_\_ is an electrical channel along which the bits transfer within the circuitry of computer.
  - Chip
  - System BUS
  - PC Card
  - RAM



# UNIVERSITY OF THE PUNJAB

First Semester 2015

Examination: B.S. 4 Years Programme

Roll No. ....

PAPER: Introduction to Computing  
Course Code: IT-101

TIME ALLOWED: 2 hrs. & 30 mins.  
MAX. MARKS: 50

*Attempt this Paper on Separate Answer Sheet provided.*

## PART – II (Short Questions)

### QUESTION # 2

[20 marks]

Write short answers to all of the following questions:

1. List the functions of control unit in CPU.
2. Consider three processes P1, P2 and P3 in memory. P1 takes 5 ns; P2 takes 3 ns and P3 takes 12ns to complete its execution. What is the total turnaround time if they are executed in Time Shared OS environment having 4 ns for each clock cycle?
3. What is OSI model?
4. What is the difference between database and data base management system?
5. What are cyber ethics? Explain with examples?
6. Write any two applications of Microsoft excel that how it provides ease in business record management.
7. What is Hyperlink in Power Point?
8. Difference between RAM and ROM?
9. List any two methods/algorithms used for information security.
10. What are registers? Name any 4 registers and their purpose.

## PART – III (Subjective)

### QUESTION # 3

[10 marks]

- a) What is CPU? Explain its role and its different parts? [5]
- b) What is the difference between File processing system (FPS) and Database management system (DBMS).discuss in detail. [5]

### QUESTION # 4

[10 marks]

- a) What are the functions of operating system? Discuss in detail. [5]
- b) Consider the following table: [5]

P.T.O.



# UNIVERSITY OF THE PUNJAB

First Semester 2018  
Examination: B.S. 4 Years Programme

Roll No. ....

PAPER: Introduction to Computing  
Course Code: IT-101

TIME ALLOWED: 2 hrs. & 30 mins.  
MAX. MARKS: 50

*Attempt this Paper on Separate Answer Sheet provided.*

## PART – II (Short Questions)

### QUESTION # 2

[20 marks]

Write short answers to all of the following questions:

1. A computer has 5 MB of memory. How many words can be stored in it at a time? Where each word consists of 16-bits.
2. How a worm and a virus are different from each other?
3. What is data compression? Why and where it is used?
4. What is a firewall?
5. What is a computer terminal? Explain.
6. List various branches of AI (Artificial Intelligence).
7. What is software reliability in e-commerce?
8. Describe some of the advantages of DBMS over file system.
9. What is a computer topology? Discuss some commonly used LAN topologies.
10. What is kernel? Why it is important?

## PART – III (Subjective)

### QUESTION # 3

[10 marks]

- a) How an optical disk is different from magnetic disk? Briefly discuss the physical organization of both the storage devices. [5]
- b) Discuss the concept of parallel processing and pipelining? How it helps improving the overall performance of a computer? [5]

### QUESTION # 4

[10 marks]

- a) Describe the following methods that computer criminals use to gain illegal access to computer systems: [5]
  - i. Denial of service attacks

(P.T.O.)

- ii. Trojan Horse
- iii. Zapping
- iv. Piggybacking
- v. Data diddling

b) What is a modem? Discuss different types of modems. [5]

**QUESTION # 5**

[10 marks]

- a) Write code to print the count of digits in an array named **A** of type **char** of size 20. You may test whether a **char c** is digit or not by using conditional expression `c >= '0' && c <= '9'`. [5]
- b) Write HTML code to produce the following form: [5]  
Here, the text "Sign Up Page" should be a first level heading and "Go Back" should be a hyperlink to home page named *home.html*

## Sign Up Page

First Name

Last Name :

Email :

Password :

Gender \*  Male  Female

Country : Pakistan ▾

[Go Back](#)





# UNIVERSITY OF THE PUNJAB

Roll No. ....

First Semester 2015

Examination: B.S. 4 Years Programme

PAPER: Introduction to Computing  
Course Code: IT-101

TIME ALLOWED: 30 mins.  
MAX. MARKS: 10

Attempt this Paper on this Question Sheet only.

## PART – I (Objective)

### QUESTION # 1

[10 marks]

Select the best option for each of the following MCQs. Overwriting will result ZERO in credit.

1. A domain name is a text version of \_\_\_\_\_.  
a) A webpage  
b) An IP address  
c) A proxy server  
d) Memory address
2. \_\_\_\_\_ memory has the least access time.  
a) Magnetic Tape  
b) Main Memory  
c) Register  
d) Cache
3. \_\_\_\_\_ interprets and carries out the basic instructions that operate a computer.  
a) Cache  
b) Motherboard  
c) Memory  
d) CPU
4. The disk's storage locations are divided into pie-shaped sections called \_\_\_\_\_.  
a) Platters  
b) Tracks  
c) Cylinders  
d) Sectors
5. The process of transferring data electronically from one place to another is called \_\_\_\_\_.  
a) Data Processing  
b) Data Communication  
c) Data sequencing  
d) Data Transferring
6. Linux is \_\_\_\_\_ software.  
a) Application  
b) System  
c) Packaged  
d) E-commerce software
7. \_\_\_\_\_ tag is used for unordered list.  
a) `<ul> </ul>`  
b) `<uol> </oul>`  
c) `<ol> </ol>`  
d) `<dl> </dl>`
8. The more widely used \_\_\_\_\_ are Internet Explorer, Firefox, Opera, Safari, and Google Chrome, etc.  
a) Search engines  
b) Operating systems  
c) Device drivers  
d) Browsers
9. \_\_\_\_\_ deceleration case of *doctype* is acceptable in html document.  
a) `<!DOCTYPE html>`  
b) `<!doctype html>`  
c) `<!DOCTYPE HTML>`  
d) `<!Doctype Html>`
10. RAM is defined as \_\_\_\_\_.  
a) Memory that follows instructions from control Unit  
b) Memory that holds data permanently into it for usage  
c) Memory that holds data temporarily into it for usage  
d) All of above