Bandaranayake College- Gampaha

Information and Technology – Competency 1 & 2

(Past papers 2011 - 2020)

No - 01

2011 A/L

1) Who invented the Analytical Engine?
   1) Blaise Pascal
   2) Charls Babbage
   3) John Von Neumann
   4) John V. Atanasoff
   5) John Presper Eckert

2) Which of the following technologies is used in the second generation computers?
   1) Integrated Circuits (ICs)
   2) Large Scale Integration (LSI)
   3) Microprocessors
   4) Transistors
   5) Vaccum tubes

3) Answer sheet of a multiple choice question paper can be read with
   1) Digitizer
   2) Light Pen
   3) MICR
   4) OMR Scanner
   5) POS terminal

4) Computerized medical imaging systems which use echoes of transmitted pulses are called
   1) CAT scans
   2) CT scans
   3) PETT scans
   4) Ultrasound scans
   5) X-ray images

5) Consider the following properties:
   A. Density
   B. Capacity
   C. Security
   D. Cost
   E. Access time

   Which of the above are being used as the main properties to classify different types of memory?

   1) B and D only
   2) A, B and C only
   3) B, D and E only
   4) A, B,C and D only
   5) A, B, D and E only

6) Consider the following memory types
   1) Read Only Memory
   2) Secondary Storage
   3) Cache Memory
   4) Flash Memory
   5) Random Access Memory

   Which of the above can be considered as Volatile memory?
   A. A and B only
   B. A and C only
   C. C and D only
   D. C and E only
   E. D and E only

7) Consider the following statements about the Internet:
    1) The Internet is a global network of networks.
    2) People and organizations, who are connected to the Internet can access its massive store of shared information.
    3) W3C is in charge of the Internet.
    4) Data can be download only with File Transfer Protocol (FTP).
    5) Anybody can publish information or create new services on the Internet.

    Which of the above statements are correct?
    A. A, B and D only
    B. A, B and E only
    C. A, D and E only
    D. B, C and D only
    E. B, C and E only

2012 AL

8) Who is considered as the first computer programmer?
    1) John Von Neumann
    2) Blaise Pascal
    3) Charles Babbage
    4) Ada Augesta Lovelace
    5) John Presper Eckert

9) Which of the following technologies has been used in the Third Generation Computers?
    1) Integrated Circuits (IC)
    2) Large Scale Integration (LSI)
    3) Micro Processors
    4) Transistors
    5) Vacuum Tubes

10) "The data in ………………. Is read by using the laser technology." Which of the following is most appropriate to fill the blank in the above statement?
1) Floppy Disk
2) Magnetic Tape
3) Compact Disk
4) Magnetic Hard Disk
5) Flash Memory

11) The required minimum and maximum working hours per day for an employee in a factory are 5 and 12 respectively. Which of the following is the most appropriate validation check to ensure that the integer value entered as the working hours, through a web – based form, is correct?
1) Range
2) Length
3) Type
4) Numeric value
5) Number of digits

12) The components that decodes the instruction fetched into the CPU is called the
1) Primary Memory
2) Register Unit
3) Control Unit
4) ALU
5) Program Counter

13) Which of the following data storage devices provides the fastest random access?
1) Main Memory
2) Magnetic Disk
3) CD/DVD
4) Flash Drive
5) Hard Disk

14) "Video conferencing is best described as a/an ………………….. discussion through …………. Between two or more individuals in different locations". Which of the following is the most appropriate answer to fill the blanks in the above statement?
1) Video, TV
2) Audio, telephone
3) Audio, network
4) Audio visual, TV
5) Audio visual, network

15) The main advantage of creating more than one partition in a hard disk is the
1) Separation of the Operating System and program files.
2) Ability to retrieve file efficiently.
3) Easiness of making directories and subdirectories.
4) Easiness of creating multiple users.
5) Easiness of taking backups of selected files.

2013 A/L

16) A high speed temporary storage, which is a part of the microprocessor that holds data and instructions during the execution, is called ……..
1) Registers
2) RAM
3) Virtual Memory
4) EPROM
5) Flash Memory

17) Microprocessors are usually compared by their clock speed, measured in ………… or by their word size, measured in ………………… that can be processed in a single clock cycle, which of the following is most appropriate to fill the blanks in the above statement?
1) Bits, Megahertz
2) Bytes, Gigahertz
3) Gigahertz, Bytes
4) Megahertz, Bits

5) Seconds, Bits

18) Typically the cache memory is used to store …………………………
   1) A large volume of data temporary.
   2) The least frequently accessed data permanently.
   3) The least frequently accessed data temporary.
   4) The most frequently accessed data temporary.
   5) The most frequently accessed data permanently.

19) Babbage's Difference Engine is based on …………………
   1) Mechanical Technology
   2) Vacuum tube technology
   3) Transistor technology
   4) Integrated Circuit (IC) technology
   5) Very Large Scale Integrated (VLSI) Circuit Technology

20) Which of the following components is located outside the microprocessor?
   1) Arithmetic Logic Unit (ALU)
   2) RAM
   3) Control Unit
   4) Registers
   5) Level 1 cache memory

21) Consider the following technique:
   A. Computer Aided Learning (CAL)
   B. Computer Based Learning (CBL)
   C. Computer Based Assessment (CBA)

Which of the above techniques is/are used in ICT based Teaching and Learning?

   1) A only
   2) B only
   3) A and B only
   4) B and C only
   5) All A, B and C

22) Consider the following statements about Firmware:
  - A. Firmware is the program required to boot-up a computer system.
  - B. Firmware is incorporated in washing machines.
  - C. Firmware can be easily changed later on.

Which of the above statements is/are correct?

  1) A only
  2) B only
  3) A and B only
  4) A and C only
  5) B and C only

2014 AL

23) One of the principal inventors of the Electronic Numerical Integrator and Computer (ENIAC) was
  1) Blaise Pascal
  2) Charles Babbage
  3) John Von Neumann
  4) Ada Augesta Lovelace
  5) John Presper Eckert

24) Which of the following statements is correct with respect to the evolution of computing devices?
  1) Vacuum tubes were used by Blaise Pascal to build the Pascaline.
  2) The Pascaline is considered as a first generation computing device.
  3) Computers built using vacuum tubes are considered as second generation computers.
  4) Electronic Numerical Integrator and Computer (ENIAC) was built using Vacuum tubes.
  5) Apple I and Apple II are two examples for second generation computers.

2015 AL

25) Charles Babbage is considered as the "father of the computer" by some people. That is because he
   1) Invented the mechanical calculator Pascaline.
   2) Invented the first re-programmable electronic computing machine
   3) Took the leadership in building the first personal computer at IBM
   4) Introduced the concept of "Input, Process and Output" that is used in modern computers, for the first time.
   5) Is the founder of the first electronic digital computer ENIAC (Electronic Numerical Integrator And Computer)

26) The first generation computers were based on
   1) Very Large Scale Integration (VLSI) technology
   2) Large Scale Integration (LSI) technology
   3) Integrated Circuits (ICs)
   4) Transistors
   5) Vacuum Tubes

27) Random Access Memory (RAM) modules are often compared by their capacity, measured in ………. And by their speed, measured in ……….. .

Most suitable words to fill the blanks of the above statements are respectively

   1) Kilobytes, Gigabytes
   2) Gigabytes, Megabits per second
   3) Gigabytes, Megahertz
   4) Megahertz, Kilohertz
   5) Gigabits, Megabits per second

28) An application which requires more memory space than the maximum memory space available in the primary memory of a computer is ready for execution. Which of the followings is used by the operating system of that computer to satisfy this need?
    1) Random Access Memory (RAM)
    2) Read Only Memory(ROM)
    3) Cache Memory
    4) Virtual Memory
    5) Extended Memory

29) The feature in modern Operating Systems which allows the automatic installation of new hardware devices connected to a computer is commonly known as
    1) Add/Remove Hardware
    2) Easy Installer
    3) Plug and Play
    4) Add Hardware Utility
    5) Fetch and Store

30) Which of the following is **not** a typical use of the Random Access Memory (RAM) of a personal computer?
    1) Keeping data for processing.
    2) Holding instructions for operations.
    3) Providing storage for operating system.
    4) Retaining information for output.
    5) Keeping the BIOS program for boot-up.

31) Consider the following terms related to computer systems:
   A. Malware
   B. Hardware
   C. Software
   D. Liveware

Which of the above are basic components of a computer system?

1) A and B only
2) A and C only
3) A and D only
4) B and C only
5) B,C and D only

32) Consider the following statements on Dynamic Random Access Memory (DRAM) and Static Random Access Memory (SRAM)
   A. Registers are made of DRAM
   B. DRAM is faster than SRAM
   C. DRAM is more dense than SRAM
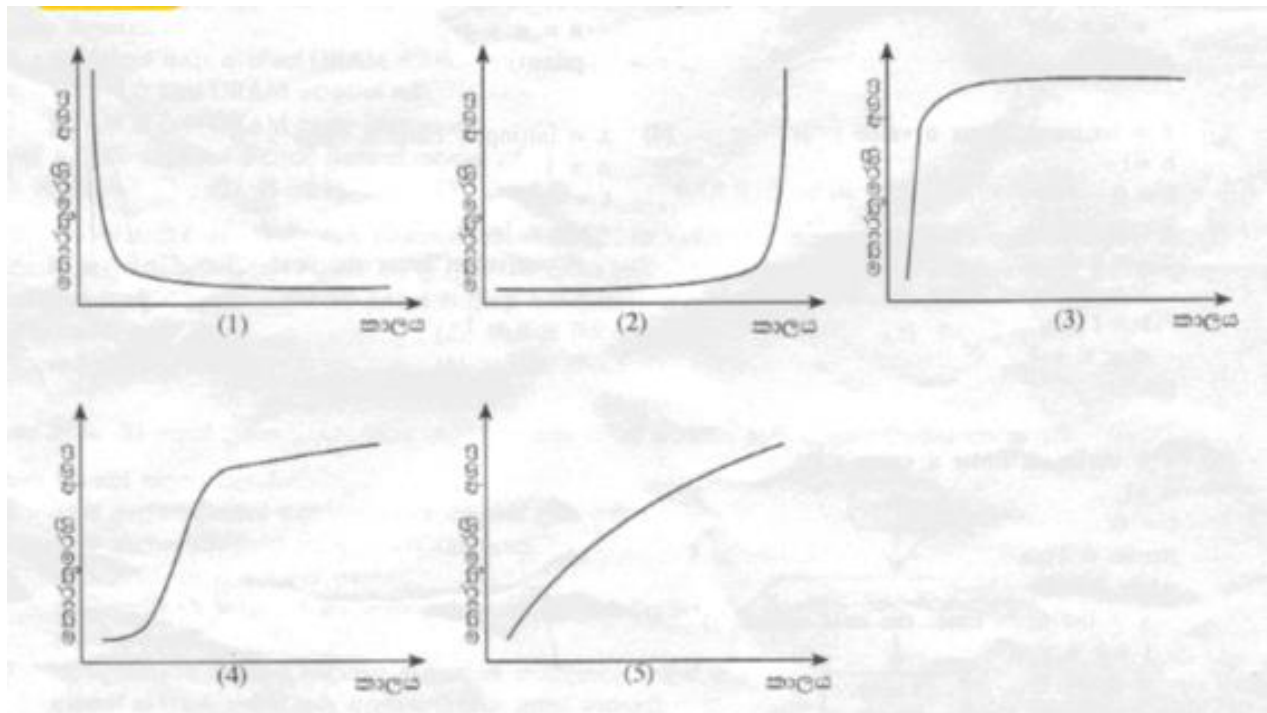
Which of the above statement(s) is/are correct?

1) A only
2) B only
3) C only
4) A and B only
5) B and C only

33) ABC Holdings is a manufacturing organization in Sri Lanka which has its head office in Japan. What is the most convenient method to conduct weekly progress review meetings between the local staff in Sri Lanka and the senior management term in Japan?
   1) Telephone calls
   2) Skype
   3) E-mail
   4) SMS
   5) YouTube

34) Which of the following graphs illustrates the Golden rule of information?

2016 A/L

35) Which of the following statements is true?
   1) The first generation of computers was built using transistors.
   2) Electronic Numerical Integrator And Computer (ENIAC) is a second generation computer.
   3) Ada Lovelace is the inventor of the Analytical Engine.
   4) Alan Turing is considered as the first computer programmer.
   5) The first calculating device is believed to be the Abacus.

36) Which of the following is a component of a Central Processing Unit (CPU)?
   1) ROM
   2) RAM
   3) ALU
   4) L3 Cache memory
   5) Power supply unit

37) The content stored in ……………….. is read by using the optical technology. Which of the following answers is the most appropriate to fill the blank in the above statement.
   1) Flash memory
   2) Floppy disk
   3) Magnetic tape
   4) Compact disc
   5) Hard disk

38) In modern computers, multiple levels of cache memory is used to optimize the performance. Among them, the …………… cache which is on/in ……………………….. is the fastest and most expensive cache memory. Which of the following terms are correct to fill the blanks respectively in the above statement?
   1) Level 1 (L1), main memory
   2) Level 3 (L3), motherboard
   3) Level 1 (L1), microprocessor
   4) Level 2 (L2), microprocessor
   5) Level 3 (L3), microprocessor

39) Consider the following statements:

A – Plagiarism is a common threat to information systems.

B – Plagiarism means claiming someone else's creation as one's own.

C – Piracy is a synonym for Plagiarism

Which of the above statements is/are correct?

1) A only
2) B only
3) C only
4) A and B only
5) B and C only

40). Consider the following statements about Dynamic Random Access Memory (DRAM):

A – Periodic refreshing is required for DRAM.

B – Registers in the processor are made of DRAMs.

C – Memory density of DRAM is higher than that of static RAM.

Which of the above statements is/are correct?

1) A only
2) B only
3) A and B only
4) A and C only
5) B and C only

41). "Employees of modern organizations performs their duties from home." Which of the followings best describes the above statement?
1) Social networking
2) Telecommuting
3) Instant messaging
4) Office automation
5) Blogging

42). Which of the following statements is correct with respect to a scanner?
1) A scanner is a software which scans a printed document and converts them into digital images.
2) A scanner is an output device of a computer.
3) The optical character reader (OCR) software is an essential component of a scanner.
4) A scanner is an input device of a computer.
5) Scanners are used to store moving pictures in digital form.

2017 A/L

43). Who proposed the stored program concept first?
1) Lady Ada Augusta
2) Charles Babbage
3) Howard Aiken
4) Blaise Pascal
5) Von Neumann

44).Which of the following components is generally seen outside the Central Processing Unit (CPU) of a computer?
1) RAM
2) Control Unit
3) ALU
4) General Purpose registers
5) L1 cache memory

45).Which of the following secondary storage devices is generally considered to provide the fastest access to data?
   1) Compact Disc
   2) Digital Versatile Disc
   3) Internal hard disk
   4) Magnetic tape
   5) Floppy disk

46).Which of the followings is usually used to boot-up personal computers?
   1) Firmware
   2) Malware
   3) Adware
   4) Ransomware
   5) Liveware

47)Which of the followings is a main use of Complementary Metal – Oxide Semiconductor (CMOS) memory of a personal computer?
   1) Keeping inputs for processing
   2) Holding instructions for operations
   3) Providing space for loading operating system
   4) Retaining information for output
   5) Keeping Basic Input Output System settings for the booting procedure

48).A…………………… on motherboard is used to expand the functionality of a computer. Which of the followings is the most appropriate to fill in the blank in the above statement?
   1) Bus
   2) Clock
   3) RAM
   4) Slot
   5) ROM

49).Which of the following statements is correct?
1) Application Software load applications into the main memory.
2) The programs stored in ROM are known as system software.
3) System Software support data communication between peripheral devices.
4) Utility software is generally stored in ROM.
5) Utility software are incorporated in washing machines.

50).Consider the following data input devices.

A -On Screen keyboard (virtual keyboard)

B - Bar code reader

C - Magnetic card reader

Which of the above devices can be used to input data more efficiently?

1) A only
2) B only
3) C only
4) A and B only
5) B and C only

2018 A/L

51) Which of the following describes the term 'telecommuting'?
1) ability of an employee to perform duties conveniently from different geographical locations using modem technology
2) having online meetings with people at different geographic locations
3) using ICT for community services
4) using web-based applications to retrieve information
5) performing financial transactions online

52) Consider the following statements.

A - Word size is the number of bits processed by the CPU of a computer in a single action (instance).

B - Data bus width and register width are directly related to word size of a computer.

C - Word size of modem general purpose computers is either 32 or 64 bits.

Which of the above statements is/are correct?

1) A only
2) B only
3) C only
4) B and C only
5) All A, B and C

53) Which of the following correctly lists the given computer storage components in the descending order of access speed?

1) cache memory> main memory> magnetic disk> register
2) magnetic disk> main memory> cache memory> register
3) magnetic disk> main memory> register> cache memory
4) register> cache memory> main memory> magnetic disk
5) register> main memory> magnetic disk> cache memory

54) Consider the following computer memory types.

A - CMOS memory

B - Cache memory

C - Flash memory

D - Hard disk

E - RAM

F – Registers

Which of the above are volatile memory types?

1) A, C and D only
2) A, D and E only
3) A, E and F only
4) B, E and F only
5) C, E and F only

55) Consider the space voyage for landing a human being on the surface of the moon for the first time in 1969. The entire event was broadcast on the radio in Sri Lanka by several commentators based in Sri Lanka and the USA.

Which of the following events relates to the highest value of information?

1) counting down for the launching of the rocket that carried the space shuttle
2) the moment the space shuttle escaped from the gravitational field of the earth
3) the moment the space shuttle entered the moon's gravitational field
4) the moment the astronaut Neil Armstrong placed his first step on the surface of the moon
5) the moment the astronauts landed on the sea in their return voyage to earth

56). Consider the following statements.

A - Providing the personal information of customers stored in a computer by a vehicle servicing center to an insurance agent is, an issue related to the privacy of customers.

B - Providing a copy of a single user licensed software to another party is a piracy issue related to the copyright owner of the software.

C - Unauthorized access to another person's computer is both illegal and unethical.

57) Which of the above statements is/are valid?
1) A only
2) B only
3) A and B only
4) B and C only
5) All A,B and C

58) Consider the following statements.

A - BIOS is an example for application software.

B - A utility software is an example for firmware.

C - Spyware is an example for malware.

Which of the above is/are correct?

1) A only
2) B only
3) C only
4) B and C only
5) All A, B and C

2019 A/L

59) Which of the following made a significant contribution to the growth of Information and Communication Technology (ICT) usage?

A – Exponential progress of the semiconductor technology paving the way for low cost hardware
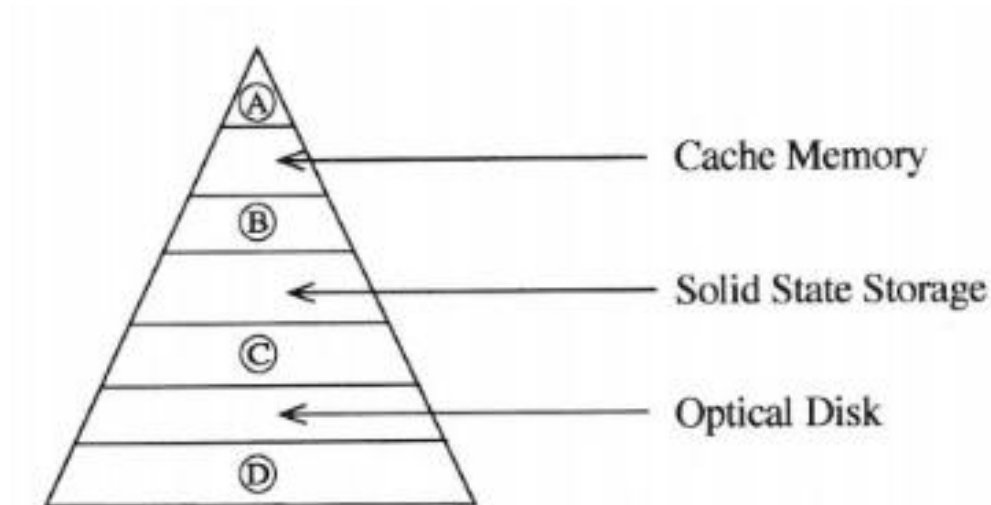
B – Introduction of user-friendly software and interfaces to computers

C – Merge of computer and communication technologies to produce smart and mobile devices

1) A only
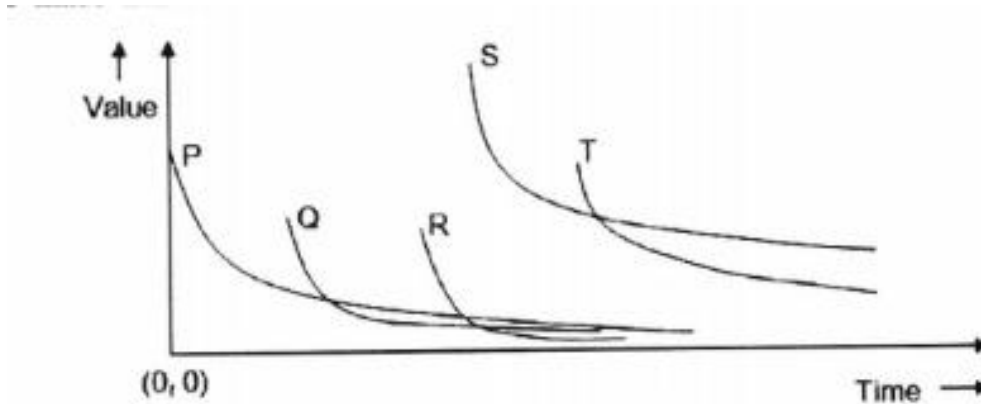2) B only
3) A and C only
4) B and C only
5) All A, B and C

60) In the memory hierarchy diagram given, which of the following represents A, B, C and D respectively?

(1) Magnetic Tape, Magnetic (Hard) Disk, Random Access Memory (RAM), Processor Registers
(2) Processor Registers, Magnetic (Hard) Disk, Random Access Memory (RAM), Magnetic Tape
(3) Processor Registers, Random Access Memory (RAM), Magnetic (Hard) Disk, Magnetic Tape
(4) Processor Registers, Random Access Memory (RAM), Magnetic Tape, Magnetic (Hard) Disk
(5) Random Access Memory (RAM), Processor Registers, Magnetic (Hard) Disk, Magnetic Tape

61) The diagram shows the variation of value of information with time for five events of a single mission in the chronological order. Information about the entire mission especially about the occurrences of each event is made available on-line real time.

Consider the following statements related to the above mission.

A – Only the events P, Q and R comply with the golden Rule of Information.

B – Events S has the highest demand and needs to be facilitated with the highest technical resources.

C – The value of an event can be determined reasonably using the demand for the information about the particular event.

Which of the above statements related to this mission is/are computing:

1) A only
2) C only
3) A and B only
4) B and C only
5) All A, B and C

2020 A/L
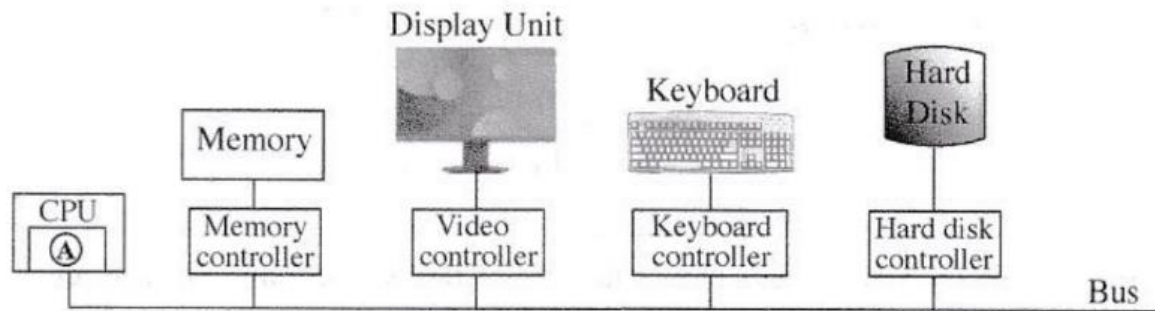
62) A computer processor will operate fastest when the data that it wants is in the
1) Cache memory
2) Hard disk
3) Magnetic tape
4) Main memory
5) Optical disk

63) Which of the following hardware components will lose data when the power to a computer switched off?
A – Registers
B - Cache memory
C – Main memory

1) A only
2) A and B only
3) A and C only
4) B and C only
5) All A, B and C

64) Computer has evolved from the early main frames to the relatively small smart devices with high computing power used today. Which of the following inventions contributed to reduce the physical size of computers?
1) Bus
2) Integrated circuits
3) Registers
4) Solid state memory
5) Vacuum tube

65) Consider the following diagram showing some hardware component connections on a computer system:

The hardware part within the CPU indicated by (A) in the above diagram has a set of registers that has the memory translation maps of the currently running process. When given an input virtual address of the current process it outputs the relevant physical address (if any).

The (A) in the above diagram denotes the

    1) Arithmetic and Logic Unit (ALU)
    2) Control Unit
    3) L1 cache memory
    4) Memory Management Unit
    5) Page table