

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BCA DEGREE EXAMINATION DECEMBER 2022
(First Semester)

BRANCH – COMPUTER APPLICATIONS

COMPUTER ORGANIZATION AND ARCHITECTURE

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 ____ is a special purpose register designated to hold the result of an operation performed by the ALU.
(i) PC (ii) IR
(iii) MDR (iv) ACC
- 2 In case of nested subroutines the return addresses are stored in _____.
(i) System heap (ii) Special memory buffers
(iii) Processor stack (iv) Registers
- 3 What is the interface circuit?
(i) Helps in installing of the software driver for the device
(ii) Houses the buffer that helps in data transfer
(iii) Helps in the decoding of the address on the address BUs
(iv) None of the mentioned
- 4 The techniques which move the program blocks to or from the physical memory is called as _____.
(i) Paging (ii) Virtual memory organization
(iii) Overlays (iv) Framing
- 5 What is a GPU?
(i) Grouped Processing Unit (ii) Graphics Processing Unit
(iii) Graphical Performance Utility (iv) Graphical Portable Unit

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a Narrate about single bus structure.
OR
b Explain about multiprocessors and microprocessors.
- 7 a Summarize about subroutines.
OR
b Explain about memory locations and addressing.
- 8 a Explain about the registers in keyboard and display interfaces.
OR
b Describe about basic processing unit.
- 9 a Outline the basic concepts of memory.
OR
b Describe about ROM.
- 10 a Describe the applications of multicore processors.
OR
b Explain when to use GPU as a coprocessor.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Discuss on bus structure of a computer.
OR
b Elucidate about integer division with an example.
- 12 a Elucidate about program controlled I/O and interrupt initiated I/O .
OR
b Discuss on any three additional instructions.
- 13 a Summarise about interrupt hardware with diagram.
OR
b Discuss on interface circuits.
- 14 a Enumerate about cache memory.
OR
b Discuss about speed, size and cost of a memory.
- 15 a Discuss about symmetric multiprocessor system.
OR
b Illustrate X86-Duo architecture with diagram.

Z-Z-Z

END