

**PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)**

**MSc(SS) DEGREE EXAMINATION MAY 2023  
(Second Semester)**

Branch – **SOFTWARE SYSTEMS**  
(Five Years Integrated)

**COMPUTER ORGANISATION**

Time: Three Hours

Maximum: 50 Marks

**SECTION-A (5 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Floating point representation is used to store.
 

(i) Boolean values	(ii) Whole numbers
(iii) Real Integers	(iv) Integers
2. The 'heart' of the processor which performs many different operations \_\_\_\_
 

(i) Arithmetic and Logic Unit	(ii) Motherboard
(iii) Control Unit	(iv) Memory
3. The process that can periodically check the status of an I/O devices, is known as
 

(i) cold swapping	(ii) I/O Instructions
(iii) Polling	(iv) periodic operation
4. Devices that accepts data from outside the computer and transfer into the CPU are called
 

(i) Input devices	(ii) Digital devices
(iii) Analog devices	(iv) Peripherals
5. The communication between the components in a microcomputer takes place via the address and \_\_\_\_
 

(i) I/O bus	(ii) Data bus
(iii) Address bus	(iv) Control lines

**SECTION - B (15 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Determine the representation of signed format.  
OR
- b Discuss instruction codes.
- 7 a Design of single stage ALU.  
OR
- b Explain stack organization.
- 8 a Classify the memory hierarchy.  
OR
- b Justify RAM and ROM address spaces.
- 9 a Differentiate I/O bus versus Memory bus.  
OR
- b Show the input and output processor.
- 10 a Organize Interconnection structures.  
OR
- b Illustrate cross bar switch.

Cont...

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a Enumerate Data types.

OR

b Elucidate Input – Output interrupts.

12 a Formulate arithmetic micro operations.

OR

b Predict multiprocessor organization.

13 a Develop Cache memory.

OR

b Construct an associative memory.

14 a Example of I/O interface.

OR

b Design a concept of DMA.

15 a Illustrate about a characteristics of multiprocessors.

OR

b Invent parallel processing.

Z-Z-Z

END