

**PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC.**

COMPUTER SCIENCE (OPTIONAL) PAPER-I

TIME ALLOWED: 3 HOURS

MAXIMUM MARKS: 100

Note: Attempt FIVE questions, select at least TWO Questions from each section. Each Question carries equal marks.

SECTION-A

- Q.1:** Explain the basic Machine Organization of Computer System. Briefly explain the Von Neumann Computer Architecture.
- Q.2:** Give the overview of Software Engineering and Information Technology. Why the knowledge of Computer Science is essential in this modern age?
- Q.3:** Give the fundamentals of Programming Solving Techniques. Discuss about the problem analyzing and designing solution.
- Q.4:** How you deal with Data type, Functions, Arrays and file record in program algorithm.

SECTION-B

- Q.5:** What are analog and digital transmission? Give the difference between synchronous and asynchronous transmission.
- Q.6:** What is OSI Model? Give the function of each layer of OSI Model.
- Q.7:** Briefly explain about TCP/IP.
- Q.8:** Design and implement a simplified combinational logic circuit for the following truth table of tree inputs: A, B and C and the four outputs w, x, y and z.

A	B	C	w	x	y	z
0	0	0	1	0	0	0
0	0	1	0	1	0	1
0	1	0	1	1	1	1
0	1	1	0	0	1	1
1	0	0	1	1	1	1
1	0	1	0	1	0	0
1	1	0	1	0	0	1
1	1	1	0	1	0	0