ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

CLASS TEST II Feb24
ECPC-210 Digital Communication

MM 20   Time 50 minutes

Q.1 Explain the QPSK modulation with the help of necessary equations and block diagrams.
Write meaning of each symbol used in the equations.   8

Q.2 Draw the signal space diagram and derive the equation for probability of (i) symbol error and
(ii) BER, by using union bound for the QPSK system.   6

Q.2 Consider a data sequence 1100011. (a) Draw the QPSK waveforms by assuming carrier
frequency $f_c = 1/T_b$. (b) Sketch the transmitted phase also.   6