1 The output of the feedback control system must be a function of

reference input only
23%

reference output only
0%

output and feedback signal
16%

input and feedback signal ✓

none of the above
7%

2 Select the correct statement

characteristic equation simplifies the evaluation of a system's response
2%

characteristic equation are fundamental to the analysis and design of control systems
10%

characteristic equation can be obtained using zeros of the system
0%

1 and 2 ✓

all of the above
13%

3 Select the correct statement, if a factor of the denominator can be cancelled by the same factor in the numerator

system should have equal number of poles and zeros
4%

all of the roots of the characteristic equation should be same as the zeros
4%

the root of this factor no longer causes the transfer function to become zero
5

1 and 2
19%

2 and 3
19%

4 Select the correct statement

system is stable if its transient response decays
14%

system is stable, if all the zeros are in the right hand s-plane,
3%

when system marginally stable, at least one pole is on the imaginary axis
11%

1 and 3
6

all of the above
5%

5 If the response is a decaying sinusoid:

all the poles are on the left hand s-plane

both poles and zeros are on the left hand s-plane 8%

complex conjugate pole pair on the left hand s-plane ✓ 27%

complex conjugate pole pair on the right hand s-plane 8%

imaginary pole pair on the imaginary axis 8%