Suppose that in a particular quarter there are students taking each of the following
combinations of courses:

st. 1) • Math, English, Biology
st. 2) • Math, French, Computer Science
st. 3) • Biology, Computer Science, History
st. 4) • Biology, Psychology

What is the minimum number of examination periods required for the exams in the seven
courses specified so that students taking any of the given combinations of courses have
no conflicts? Find a schedule that uses this minimum number of periods.
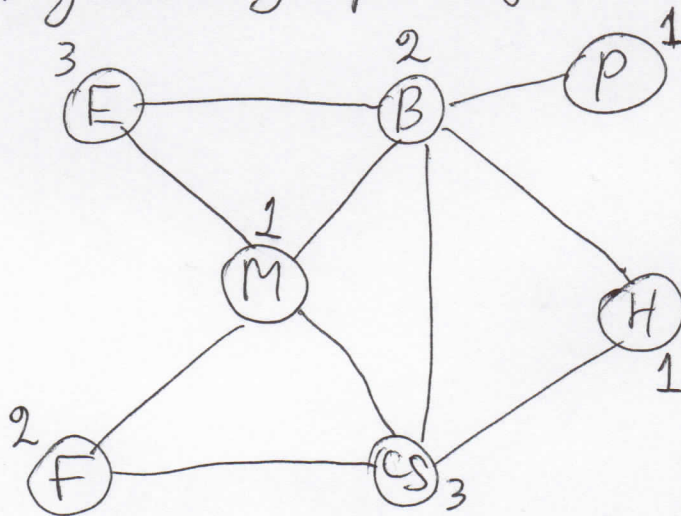
— Define the graph following way.
nodes → classes
arc i-j → if a student takes
both classes i and j
(e.g., there is an arc Ⓜ—Ⓔ
because student 1 takes both
Math and English)
colors → exam periods

— Drawing the graph defined above and
coloring it:

(numbers represent colors)

— 3 exam periods are needed:

period	exams
1	M P H
2	B F
3	E CS