

Multiple Choice Questions

1-d	2-a	3-c	4-e	5-b	6-a	7-b	8-b	9-c	10-c
11-d	12-c	13-d	14-a	15-c	16-e	17-c	17-a	19-d	20-e
21-c	22-d	23-d	24-b	25-e	26-c	27-a	28-b	29-b	30-a
31-b	32-c	blank	34-d	35-c	36-d	37-d	38-c	39-d	40-e
41-d	42-c	43-d	44-d	45-b	46-c	47-a	48-a	49-a	50-b
51-a	52-d	53-d	54-b	55-c	56-a	57-b	58-c	59-e	60-c

Written Response Questions.

1a. The plot had to use the log scale on the ordinate (y-axis) and time on the linear abscissa (x-axis). The plot if done well should show two log phases: a fast one between hours 4 through 6 and then a slow down between hours 6 through 8. After 8 a stationary phase.

b. If you used hours 4 to 6, then  $\mu = 1.09 \text{ hr}^{-1}$  and Generation time = 0.636 hr or 38.1 min.

Other calculations were given full credit. There is NO significant difference between the isolates.

c. While these isolates are growing on asparagine at the same rate and yield, nutrient agar has all 20 amino acids plus many other growth substances and Pf-2L obviously is using those at a faster rate than asparagine alone. Many other ideas popped up....all were valuable because they could be tested in another experiment:: next year?

Grade Distribution

Final Exam: Average = 112.5 +/- 31.1 High : 176 Low : 33

Total Points: Average 330 +/- 79 High 516; Low 168