1. Searl Clinic uses patient-visits as its measure of activity. The clinic has provided the following report:

<table>
<thead>
<tr>
<th>Searl Clinic</th>
<th>Comparison of Planning Budget to Actual Results</th>
<th>For the Month Ended December 31</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Planning Budget</td>
<td>Actual Results</td>
</tr>
<tr>
<td>Patient-visits</td>
<td>2,000</td>
<td>2,400</td>
</tr>
<tr>
<td>Revenue ($58.10q)</td>
<td>$116,200</td>
<td>$142,080</td>
</tr>
<tr>
<td>Expenses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel expenses ($30,400 + $17.40q)</td>
<td>65,200</td>
<td>74,250</td>
</tr>
<tr>
<td>Medical supplies ($1,300 + $9.60q)</td>
<td>20,500</td>
<td>24,670</td>
</tr>
<tr>
<td>Occupancy expenses ($9,000 + $1.90q)</td>
<td>12,800</td>
<td>14,020</td>
</tr>
<tr>
<td>Administrative expenses ($6,200 + $0.30q)</td>
<td>6,800</td>
<td>6,860</td>
</tr>
<tr>
<td>Total expense</td>
<td>105,300</td>
<td>119,800</td>
</tr>
<tr>
<td>Net operating income</td>
<td>$10,900</td>
<td>$22,280</td>
</tr>
</tbody>
</table>

Required:

Prepare the clinic's flexible budget performance report for December. Label each variance as favorable (F) or unfavorable (U). Determine the Activity and Spending variances.
Soquel Kennel uses tenant-days as its measure of activity; an animal housed in the kennel for one day is counted as one tenant-day. During April, the kennel budgeted for 2,000 tenant-days, but its actual level of activity was 1,990 tenant-days. The kennel has provided the following data concerning the formulas used in its budgeting and its actual results for April:

Data used in budgeting:

<table>
<thead>
<tr>
<th></th>
<th>Fixed element per month</th>
<th>Variable element per tenant-day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td></td>
<td>$36.40</td>
</tr>
<tr>
<td>Wages and salaries</td>
<td>$2,800</td>
<td>$6.60</td>
</tr>
<tr>
<td>Expendables</td>
<td>300</td>
<td>12.40</td>
</tr>
<tr>
<td>Facility expenses</td>
<td>9,000</td>
<td>3.20</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>7,600</td>
<td>0.10</td>
</tr>
<tr>
<td>Total expenses</td>
<td>$19,700</td>
<td>$22.30</td>
</tr>
</tbody>
</table>

Actual results for April:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$70,846</td>
<td>$19,700</td>
</tr>
<tr>
<td>Wages and salaries</td>
<td>$16,564</td>
<td></td>
</tr>
<tr>
<td>Expendables</td>
<td>$25,866</td>
<td></td>
</tr>
<tr>
<td>Facility expenses</td>
<td>$14,688</td>
<td></td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>$7,879</td>
<td></td>
</tr>
</tbody>
</table>

2. The activity variance for wages and salaries in April would be closest to:
   A. $66 F
   B. $564 U
   C. $564 F
   D. $66 U

3. The activity variance for administrative expenses in April would be closest to:
   A. $1 F
   B. $79 F
   C. $79 U
   D. $1 U

4. The activity variance for net operating income in April would be closest to:
   A. $141 U
   B. $2,651 U
   C. $2,651 F
   D. $141 F
Pets Smart uses tenant-days as its measure of activity; an animal housed in the kennel for one day is counted as one tenant-day. During November, the kennel budgeted for 3,000 tenant-days, but its actual level of activity was 3,010 tenant-days. The kennel has provided the following data concerning the formulas used in its budgeting and its actual results for November:

Data used in budgeting:

<table>
<thead>
<tr>
<th></th>
<th>Fixed element per month</th>
<th>Variable element per tenant-day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue..............</td>
<td>-</td>
<td>$30.30</td>
</tr>
<tr>
<td>Wages and salaries</td>
<td>$ 2,400</td>
<td>$ 6.70</td>
</tr>
<tr>
<td>Expendables..........</td>
<td>500</td>
<td>11.40</td>
</tr>
<tr>
<td>Facility expenses</td>
<td>8,900</td>
<td>2.60</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>7,100</td>
<td>0.40</td>
</tr>
<tr>
<td>Total expenses......</td>
<td>$18,900</td>
<td>$21.10</td>
</tr>
</tbody>
</table>

Actual results for November:

<table>
<thead>
<tr>
<th></th>
<th>($89,293)</th>
<th>($23,307)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue..............</td>
<td>[89,293]</td>
<td>[23,307]</td>
</tr>
<tr>
<td>Wages and salaries</td>
<td>[89,293]</td>
<td>[23,307]</td>
</tr>
<tr>
<td>Expendables..........</td>
<td>[23,307]</td>
<td>[89,293]</td>
</tr>
<tr>
<td>Facility expenses</td>
<td>[35,054]</td>
<td>[17,116]</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>[8,544]</td>
<td>[8,544]</td>
</tr>
</tbody>
</table>

5. The revenue variance for November would be closest to:
A. $1,607 U
B. $1,910 U
C. $1,607 F
D. $1,910 F

6. The spending variance for expendables in November would be closest to:
A. $240 F
B. $354 F
C. $240 U
D. $354 U
7. The spending variance for facility expenses in November would be closest to:
   A. $416 U
   B. $416 F
   C. $390 F
   D. $390 U

8. The overall revenue and spending variance (i.e., the variance for net operating income in the revenue and spending variance column on the flexible budget performance report) for November would be closest to:
   A. $3,520 F
   B. $3,428 U
   C. $3,520 U
   D. $3,428 F

Silicon Valley Injection Molding is developing standards for its products. One product requires an input that is purchased for $55.00 per kilogram from the supplier. By paying cash, the company gets a discount of 8% off this purchase price. Shipping costs from the supplier's warehouse amount to $5.17 per kilogram. Receiving costs are $0.28 per kilogram. Each unit of output of the product requires 0.75 kilogram of this input. The allowance for waste and spoilage is 0.04 kilogram of this input for each unit of output. The allowance for rejects is 0.11 kilogram of this input for each unit of output.

9. The standard price per kilogram of this input should be:
   A. $55.00
   B. $56.05
   C. $53.95
   D. $64.85

10. The standard quantity in kilograms of this input per unit of output should be:
    A. 0.75
    B. 0.71
    C. 0.90
    D. 0.60
The Santa Cruz Nutritionals uses standard costing and has established the following standards for its single product:

Direct materials: 2 gallons at $3 per gallon
Direct labor: 0.5 hours at $8 per hour
Variable overhead: 0.5 hours at $2 per hour

During November, the company made 4,000 units and incurred the following costs:

Direct materials purchased: 8,100 gallons at $3.10 per gallon
Direct materials used: 7,600 gallons
Direct labor used: 2,200 hours at $8.25 per hour
Actual variable overhead: $4,175

The company applies variable overhead to products on the basis of standard direct labor-hours.

11. The materials price variance for November was:
   A. $2,310 U
   B. $2,310 F
   C. $810 U
   D. $810 F

12. The materials quantity variance for November was:
   A. $1,200 U
   B. $1,200 F
   C. $300 U
   D. $1,500 F

13. The labor rate variance for November was:
   A. $1,050 U
   B. $550 U
   C. $2,150 U
   D. $2,150 F
14. The labor efficiency variance for November was:
A. $1,050 U  
B. $550 U  
C. $1,600 F  
D. $1,600 U  

15. The total variable overhead variance (including both the rate and efficiency variances) for November was:
A. $175 U  
B. $225 F  
C. $225 U  
D. $400 U  

Snuggs Corporation makes a product with the following standard costs:

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Standard Quantity or Hours</th>
<th>Standard Price or Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials........</td>
<td>2.8 ounces</td>
<td>$6.00 per ounce</td>
</tr>
<tr>
<td>Direct labor............</td>
<td>0.3 hours</td>
<td>$24.00 per hour</td>
</tr>
<tr>
<td>Variable overhead.......</td>
<td>0.3 hours</td>
<td>$4.00 per hour</td>
</tr>
</tbody>
</table>

The company reported the following results concerning this product in October.

Actual output........................................ 1,100 units  
Raw materials used in production............ 2,790 ounces  
Actual direct labor-hours ................... 350 hours  
Purchases of raw materials................... 3,100 ounces  
Actual price of raw materials purchased..... $6.20 per ounce  
Actual direct labor rate........................ $25.50 per hour  
Actual variable overhead rate............... $4.10 per hour  

The company applies variable overhead on the basis of direct labor-hours. The direct materials purchases variance is computed when the materials are purchased.
16. The materials quantity variance for October is:
A. $1,798 U
B. $1,798 F
C. $1,740 F
D. $1,740 U

17. The materials price variance for October is:
A. $620 F
B. $616 F
C. $616 U
D. $620 U

18. The labor efficiency variance for October is:
A. $510 U
B. $480 F
C. $480 U
D. $510 F

19. The labor rate variance for October is:
A. $495 U
B. $495 F
C. $525 U
D. $525 F

20. The variable overhead efficiency variance for October is:
A. $82 U
B. $80 U
C. $82 F
D. $80 F

21. The variable overhead rate variance for October is:
A. $33 F
B. $35 U
C. $35 F
D. $33 U
The Rodgers Company makes 27,000 units of a certain component each year for use in one of its products. The cost per unit for the component at this level of activity is as follows:

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Cost per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$4.20</td>
</tr>
<tr>
<td>Direct labor</td>
<td>$12.00</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>$5.80</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>$6.50</td>
</tr>
</tbody>
</table>

Rodgers has received an offer from an outside supplier who is willing to provide 27,000 units of this component each year at a price of $25 per component. Assume that direct labor is a variable cost. None of the fixed manufacturing overhead would be avoidable if this component were purchased from the outside supplier.

22. Assume that there is no other use for the capacity now being used to produce the component and the total fixed manufacturing overhead of the company would be unaffected by this decision. If Rodgers Company purchases the components rather than making them internally, what would be the impact on the company's annual net operating income?

A. $94,500 increase  
B. $81,000 decrease  
C. $237,600 decrease  
D. $124,000 increase

23. Assume that if the component is purchased from the outside supplier, $35,100 of annual fixed manufacturing overhead would be avoided and the facilities now being used to make the component would be rented to another company for $64,800 per year. If Rodgers chooses to buy the component from the outside supplier under these circumstances, then the impact on annual net operating income due to accepting the offer would be:

A. $18,900 decrease  
B. $18,900 increase  
C. $21,400 decrease  
D. $21,400 increase
Knaack Corporation is presently making part R20 that is used in one of its products. A total of 18,000 units of this part are produced and used every year. The company's Accounting Department reports the following costs of producing the part at this level of activity:

<table>
<thead>
<tr>
<th>Per Unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$8.00</td>
</tr>
<tr>
<td>Direct labor</td>
<td>$2.50</td>
</tr>
<tr>
<td>Variable overhead</td>
<td>$7.10</td>
</tr>
<tr>
<td>Supervisor’s salary</td>
<td>$7.30</td>
</tr>
<tr>
<td>Depreciation of special equipment</td>
<td>$8.20</td>
</tr>
<tr>
<td>Allocated general overhead</td>
<td>$3.60</td>
</tr>
</tbody>
</table>

An outside supplier has offered to produce and sell the part to the company for $27.70 each. If this offer is accepted, the supervisor's salary and all of the variable costs, including direct labor, can be avoided. The special equipment used to make the part was purchased many years ago and has no salvage value or other use. The allocated general overhead represents fixed costs of the entire company, none of which would be avoided if the part were purchased instead of produced internally.

24. If management decides to buy part R20 from the outside supplier rather than to continue making the part, what would be the annual impact on the company's overall net operating income?

A. Net operating income would increase by $162,000 per year.
B. Net operating income would increase by $50,400 per year.
C. Net operating income would decline by $50,400 per year.
D. Net operating income would decline by $162,000 per year.

25. In addition to the facts given above, assume that the space used to produce part R20 could be used to make more of one of the company's other products, generating an additional segment margin of $27,000 per year for that product. What would be the impact on the company's overall net operating income of buying part R20 from the outside supplier and using the freed space to make more of the other product?

A. Net operating income would increase by $27,000 per year.
B. Net operating income would decline by $135,000 per year.
C. Net operating income would decline by $23,400 per year.
D. Net operating income would decline by $189,000 per year.