Please attach separate excel and Project files for those questions along with answers. Please be thorough.

1. **USING EXCEL** Perform a financial analysis for a project. Assume the projected costs and benefits for this project are spread over four years as follows: Estimated costs are $200,000 in year 1 and $30,000 each year in years 2, 3, and 4. Estimated benefits are $0 in year 1 and $100,000 each year in years 2, 3, and 4. Use a 9 percent discount rate and round the discount factors to two decimal places. Create a spreadsheet to calculate and clearly display the NPV, ROI, and year in which payback occurs. In a sentence, would you recommend investing in this project, based on your financial analysis?

2. Create a sample WBS in **MS Project** with level 2 categories of initiating, planning, executing, monitoring, controlling, and closing. Under “executing,” include the level 3 categories of analysis, design, prototyping, testing, implementation, and support. Under “support,” include the level 4 categories of training, documentation, user support, and enhancements. Indent the categories appropriately. Use the outline numbering feature to display the outline numbers. Do not enter durations or dependencies.

3. List some of the reports you can generate with Project 2007 to assist in project time management.

4. Consider the following small project, where duration estimates are in days and the network proceeds from node 1 to node 9. Imagine the AOA network (you don’t have to submit the drawing)

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Initial Node** | **Final Node** | **Estimated Duration** |
| A | 1 | 2 | 2 |
| B | 2 | 3 | 2 |
| C | 2 | 4 | 3 |
| D | 2 | 5 | 4 |
| E | 3 | 6 | 2 |
| F | 4 | 6 | 3 |
| G | 5 | 7 | 6 |
| H | 6 | 8 | 2 |
| I | 6 | 7 | 5 |
| J | 7 | 8 | 1 |
| K | 8 | 9 | 2 |

a. Identify all of the paths in the network diagram and note how long each one is.

b. What is the critical path?

c. What is the shortest time to completion?

5. Given the following information for a one-year project, answer the following questions.

PV = $23,000

EV = $20,000

AC = $25,000

BAC = $120,000

1. What is the cost variance, schedule variance, cost performance index, and schedule performance index for the project?
2. Is the project ahead of schedule or behind? Is it under or over budget?
3. Use the CPI to calculate the estimate at completion. Is the project performing better or worse than was planned?
4. Use the SPI to estimate how long it will take to finish the project.