Project Management Course -- Sample Questions

1. Describe 2 purposes of project audits.

2. Give 4 reasons why a project might be terminated early (before it is completed).

3. What is the primary role of the meeting chairperson in a team meeting?

4. If you are a senior manager who will be sponsoring and overseeing (but not managing) a project, why would you prefer top-down budgeting instead of bottom-up?

5. For all projects, a communication plan is key. Create a template that could be fill-in to address elements of a communication plan.

6. Consider an international project to be completed by two firms who entered into a partnership and signed an agreement with the Australian government to build a wind farm on the southern tip of Australia. One of the firms currently operates the wind farms in Texas which happen to be the largest in the world. The second firm, with headquarters in Belgium, manufacturers the large blades which span up to 60 feet and at least three blades are required per wind tower. Also, the firms have decided that project teams will consist of employees from their corporate headquarters. Identify at least four types of risks that could jeopardize the project and the actions you would take to handle these risks.
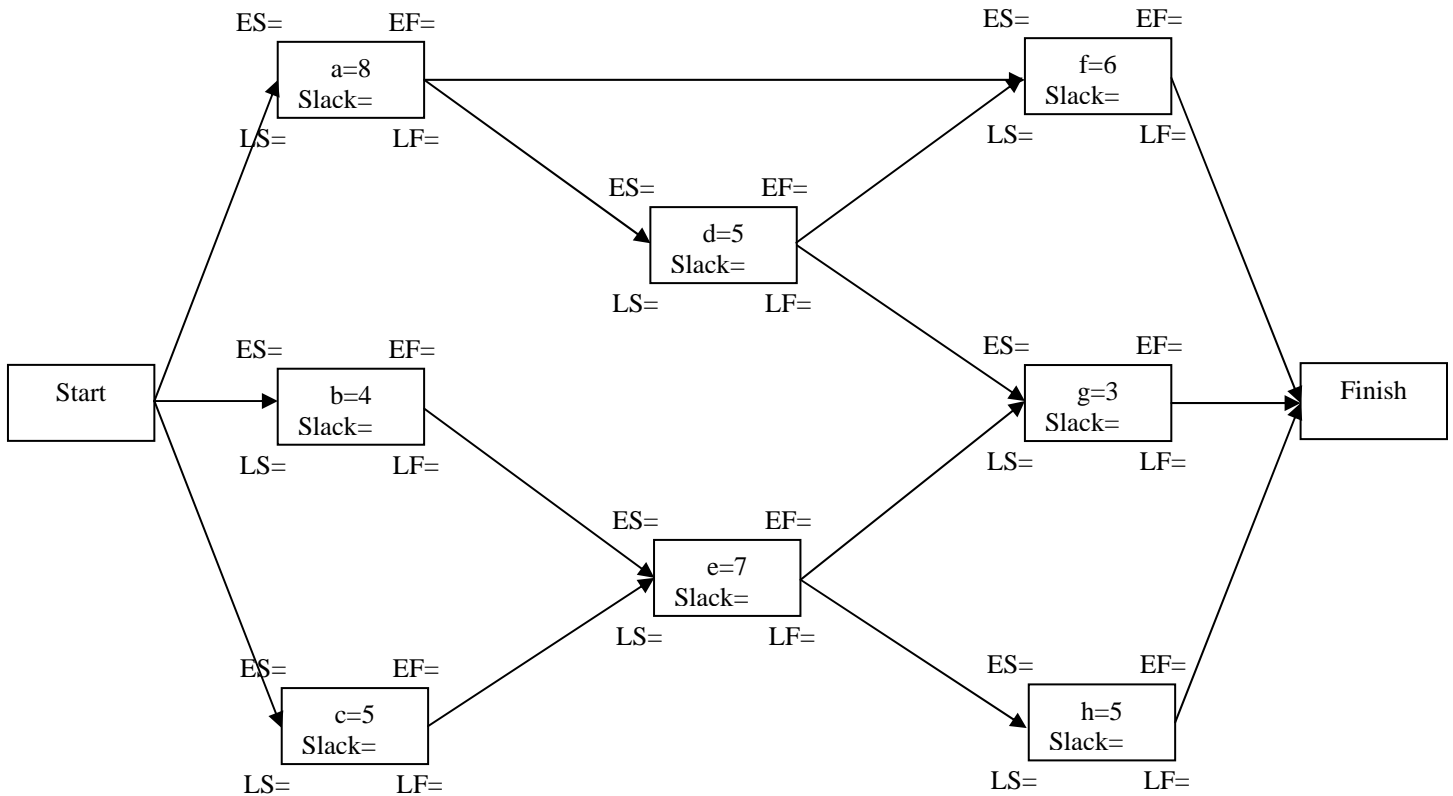
7. A company is considering two internal projects, of which it will undertake only one, and you must recommend which one of the projects should be undertaken. Project A would cost $85,000 up front, and Project B would cost $65,000 up front. The company's hurdle rate of return is 15% annually. Project A would provide a cost savings of $35,000 at the end of each year for 4 years, and Project B would save $45,000 at the end of each year for 2 years.
a. Disregarding the up-front cost, what is the total cost savings for Project A? for Project B?
b. What would be the payback period for Project A? for Project B?
c. What would be the Net Present Value for Project A? for Project B?

8. A company has been awarded a project to produce 12 units of a complex new part for a customer. The company's typical learning rate for this type of work is 80%. Production of the first unit has taken 195 labor hours. The labor cost rate is $26 per labor hour, and the company's policy is to charge the customer 2.5 times the total labor cost for an order.

a.) How many labor hours should it take to produce the 6th unit?
b.) How much should the customer be charged for the entire order of 12 units (show total cost and per unit cost)?
c.) If the customer wants an additional 4 parts, how much should the customer be charged for the additional 4 parts (show total and per unit costs)?
d.) How many parts would the company need to produce for a total sales revenue of $123,000?

9. Given the project network below, compute the Earliest Start time, Earliest Finish time, Latest Finish time, Latest Start time, and Slack time for each activity. a.) Show these times on the network. b.) What is the critical path and expected project duration?

ES=　　　　　EF=

| a=8 |
| Slack= |

LS=　　　　　LF=

ES=　　　　　EF=

| f=6 |
| Slack= |

LS=　　　　　LF=

ES=　　　　　EF=

| d=5 |
| Slack= |

LS=　　　　　LF=

Start

ES=　　　　　EF=

| b=4 |
| Slack= |

LS=　　　　　LF=

ES=　　　　　EF=

| g=3 |
| Slack= |

LS=　　　　　LF=

Finish

ES=　　　　　EF=

| e=7 |
| Slack= |

LS=　　　　　LF=

ES=　　　　　EF=

| c=5 |
| Slack= |

LS=　　　　　LF=

ES=　　　　　EF=

| h=5 |
| Slack= |

LS=　　　　　LF=

10. Given the project network and the optimistic, most likely, and pessimistic activity duration estimates below (in days):

a.) Compute the expected duration for each activity.
b.) What is the critical path and its duration?
c.) Compute the standard deviation of the critical path.
d.) What is the probability that the project will finish in between 29 and 33 days?
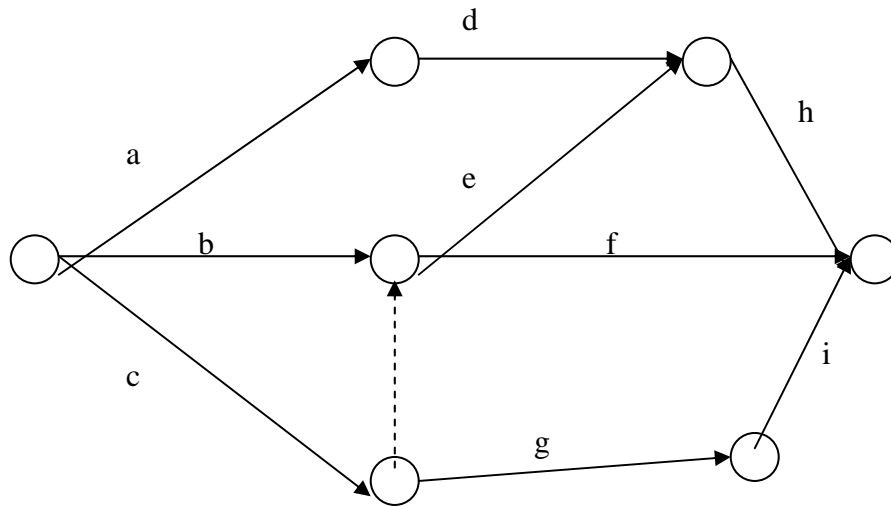
Activity	Optimistic	Most Likely	Pessimistic
a	4	6	8
b	4	5	10
c	7	8	10
d	12	12	13
e	10	14	16
f	3	7	7
g	9	11	12
h	6	8	11
i	7	9	13

11. Given the information below, crash the project one day at a time as far as possible at the least additional cost. Complete the tables below.
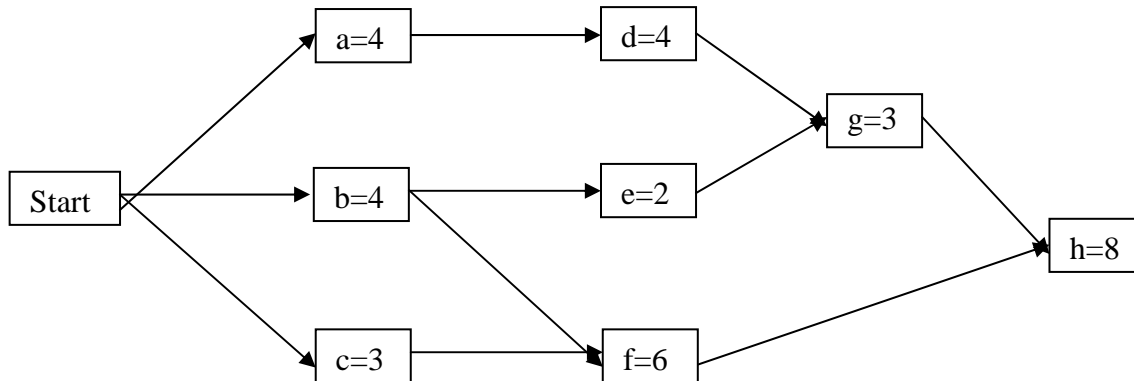
Activity	Normal Duration	Crashed Duration	Normal Cost	Crashed Cost	Crashing Cost per day
a	4	2	40	62	
b	4	2	90	120	
c	3	1	30	50	
d	4	3	20	25	
e	2	2	35	35	
f	6	5	50	62	
g	3	2	33	51	
h	8	7	60	88	

Project Duration	Crash Activity	Additional Cost	New Critical Path(s)

12. A project activity was expected to cost $4,900 and take 17 days to complete. At the current time, 70% of the activity has been completed, but according to the plan the activity should have been 60% complete. So far, $3,600 has been expended on the activity. Compute the following values.

a. BAC

b. BCWS

c. BCWP

d. ACWP

e. Cost variance

f. Schedule Variance

g. CPI

h. SPI

i. ETC

j. EAC

Sample PMP Questions

1. Based on resource availability, you can only start one project of a possible four projects.
   A. Project A will take 3 years with an NPV of $30,000
   B. Project B will take 2 years with an NPV of $70,000
   C. Project C will take 6 years with an NPV of $60,000
   D. Project D will take 1 year with an NPV of $60,000

2. Communication planning is the critical link within the team and between the team and stakeholders. Which statement about the communication plan is most true?
   A. The communication plan is designed, approved and generally followed as is throughout the project.
   B. The communication plan is designed to convey a positive impression of both the project and team.
   C. The communication plan should be updates as needs change during the project.
   D. All of the answers are correct.

3. You are a project manager in a large IT company. You notice that one project team member is developing a software routine not intended to be used on the current project. What are you most probably lacking?
   A. planning and implementation
   B. concept and implementation
   C. work authorization system
   D. implementation and closeout

4. You are mentoring a junior project manager on his overall responsibilities to stakeholders. He asks about educating stakeholders. What is a true statement about educating stakeholders?
   A. He should leave education of the stakeholders to the project sponsor and/or business area management.
   B. He should educate stakeholders primarily on issues that affect the active project.
   C. Educating stakeholders is not a recognized responsibility of project managers.
   D. He should educate stakeholders about project management processes.

5. What does a finished project plan usually include?
   A. scope statement, cost estimates, organizational policies, WBS, project charter, the project management approach, and schedule
   B. scope statement, cost estimates, organizational policies, WBS, project charter and schedule
   C. scope statement, cost estimates, WBS, project charter, the project management approach, performance measurement baselines and the project schedule
   D. scope statement, cost estimates, historical information, WBS, project charter, and schedule

6. The Cost Performance Index is a measure of:
   A. Earned Value times actual cost, divided by time period
   B. Actual Cost divided by Earned Value
   C. Actual Cost divided by the Performance Ratio
   D. Earned Value divided by Actual Cost

7. A young company just secured a contract with the manufacturers down the street to modernize an aging manufacturing facility. The vendor drafted the contract, and with little modification, the contract is signed by both parties. The vendor completes the contract work and submits the final invoice which is rejected because the manufacturer says that not all of the work is completed. If the contracted scope of work was ambiguous, which party is generally favored in the dispute?
    A. The manufacturer. Arbitrators and the courts generally rule against the author of the contract – in this case, the vendor.
    B. Arbitrators and the courts generally compel the parties to settle the dispute on their own.
    C. The vendor. Arbitrators and the courts generally favor the author of the contract.
    D. Both parties – vendor and buyer – share joint responsibility.

8. Which motivational theorist(s) stated that people cannot ascend to the next level of needs until the levels below have been fulfilled?
    A. Maslow
    B. Herzberg
    C. McGregor and Herzberg
    D. McGregor

9. Based on the chart provided, which task has a CPI of 1.22?

Activity	AC	PV	EV
#1	225	300	325
#2	225	325	275
#3	950	1200	900
#4	500	550	600

    A. Activity 1
    B. Activity 2
    C. Activity 3
    D. Activity 4

10. What is the status of the project plan during administrative closure?
    A. It is referenced, but not used.
    B. It is used in performance measurement.
    C. It is not used.
    D. It is used if the project plan requires analysis after project completion.

11. You were considering a fixed price plus incentive contract for a large portion of your project. After questioning by the senior vice president, you change to a cost plus fixed fee contract. The senior vice president questions your new decision and asks about the risk in a cost plus fixed fee arrangement.
    A. The vendor has most of the risk.
    B. The risk is shared equally due to the fee.
    C. Your project holds most of the risk.
    D. The risk depends on the degree of definition provided. If the requirements are well defined, the risk is low for both parties.

12. Your supply chain support person has just called you to sya that the invoices for your Web project have not been received yet for the vendor. Why is this a problem for you?
    A. Vendor contract closeout cannot be completed
    B. Earned value analysis will show a variance
    C. The actual cost numbers for earned value analysis will be wrong
    D. Vendor contract bids cannot be completed.

13. Performance reporting includes all EXCEP which of the following?
    A. Change requests
    B. Gantt charts
    C. Progress reports
    D. Work breakdown structure

14. As of the third month on the Beacon Project, the cumulative planned budget is $95,000. The accounting system reflects charges to date of $105,000. How are you doing to report the Beacon Project on the monthly executive status reports?
    A. You are unable to make an assessment with the information supplied.
    B. Project completion will be within the original budget.
    C. The budget is slightly ahead of schedule.
    D. Trouble is brewing due to a small cost overrun.

15. The project triple constraint provides a framework to manage project process interactions. What can project managers use it to manage?
    A. core processes
    B. project constraints
    C. performance tradeoffs among project processes
    D. facilitating processes

16. What is the importance of the team reviewing the WBS during the risk identification process?
    A. The WBS includes all the work, and only the work required to complete the project, so it helps the team identify potential sources of risks.
    B. It is a deliverable-oriented grouping of project elements that organizes and defines the total work scope of the project.
    C. Work package reflect primes to identify the associated risk for each work package.
    D. The WBS includes all the work, and only the work required to complete the project, so all risks will be captured.

Table 18.12 | Learning-Curve Coefficients

Unit No.	75% Unit Time	75% Total Time	80% Unit Time	80% Total Time	85% Unit Time	85% Total Time	90% Unit Time	90% Total Time
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	.750	1.750	.800	1.800	.850	1.850	.900	1.900
3	.634	2.384	.702	2.502	.773	2.623	.846	2.746
4	.562	2.946	.640	3.142	.723	3.345	.810	3.556
5	.513	3.459	.596	3.738	.686	4.031	.783	4.339
6	.475	3.934	.562	4.229	.657	4.688	.762	5.101
7	.446	4.380	.534	4.834	.634	5.322	.744	5.845
8	.422	4.802	.512	5.346	.614	5.936	.729	6.574
9	.402	5.204	.493	5.839	.597	6.533	.716	7.290
10	.385	5.589	.477	6.315	.583	7.116	.705	7.994
11	.370	5.958	.462	6.777	.570	7.686	.695	8.689
12	.357	6.315	.449	7.227	.558	8.244	.685	9.374
13	.345	6.660	.438	7.665	.548	8.792	.677	10.05
14	.334	6.994	.428	8.092	.539	9.331	.670	10.72
15	.325	7.319	.418	8.511	.530	9.861	.663	11.38
16	.316	7.635	.410	8.920	.522	10.38	.656	12.04
17	.309	7.944	.402	9.322	.515	10.90	.650	12.69
18	.301	8.245	.394	9.716	.508	11.41	.644	13.33
19	.295	8.540	.387	10.10	.501	11.91	.639	13.97
20	.288	8.828	.381	10.49	.495	12.40	.634	14.61
21	.283	9.111	.375	10.86	.490	12.89	.630	15.24
22	.277	9.388	.370	11.23	.484	13.38	.625	15.86
23	.272	9.660	.364	11.59	.479	13.86	.621	16.48
24	.267	9.928	.359	11.95	.475	14.33	.617	17.10
25	.263	10.19	.355	12.31	.470	14.80	.613	17.71
30	.244	11.45	.335	14.02	.450	17.09	.596	20.73
35	.229	12.62	.318	15.64	.434	19.29	.583	23.67
40	.216	13.72	.305	17.19	.421	21.43	.571	26.54
45	.206	14.77	.294	18.68	.410	23.50	.561	29.37
50	.197	15.78	.284	20.12	.400	25.51	.552	32.14
60	.183	17.67	.268	22.89	.383	29.41	.537	37.57
70	.172	19.43	.255	25.47	.369	33.17	.524	42.87
80	.162	21.09	.244	27.96	.358	36.80	.514	48.05
90	.155	22.67	.235	30.35	.348	40.32	.505	53.14
100	.148	24.18	.227	32.65	.340	43.75	.497	58.14
120	.137	27.02	.214	37.05	.326	50.39	.483	67.93
140	.129	29.67	.204	41.22	.314	56.78	.472	77.46
160	.122	32.17	.195	45.20	.304	62.95	.462	86.80
180	.116	34.54	.188	49.03	.296	68.95	.454	95.96
200	.111	36.80	.182	52.72	.289	74.79	.447	105.0
250	.101	42.08	.169	61.47	.274	88.83	.432	126.9
300	.094	46.94	.159	69.66	.263	102.2	.420	148.2
350	.088	51.48	.152	77.43	.253	115.1	.411	169.0
400	.083	55.75	.145	84.85	.245	127.6	.402	189.3
450	.079	59.80	.140	91.97	.239	139.7	.395	209.2
500	.076	63.68	.135	98.85	.233	151.5	.389	228.8
600	.070	70.97	.128	112.0	.223	174.2	.378	267.1
700	.066	77.77	.121	124.4	.215	196.1	.369	304.5
800	.062	84.18	.116	136.3	.209	217.3	.362	341.0
900	.059	90.26	.112	147.7	.203	237.9	.356	376.9
1,000	.057	96.07	.108	158.7	.198	257.9	.350	412.2
1,200	.053	107.0	.102	179.7	.190	296.6	.340	481.2
1,400	.050	117.2	.097	199.6	.183	333.9	.333	548.4
1,600	.047	126.8	.093	218.6	.177	369.9	.326	614.2
1,800	.045	135.9	.090	236.8	.173	404.9	.320	678.8
2,000	.043	144.7	.087	254.4	.168	438.9	.315	742.3
2,500	.039	165.0	.081	296.1	.160	520.8	.304	897.0
3,000	.036	183.7	.076	335.2	.153	598.9	.296	1,047.0

Table A.1 — Areas under the Normal Curve

Z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
.0	.50000	.50399	.50798	.51197	.51595	.51994	.52392	.52790	.53188	.53586
.1	.53983	.54380	.54776	.55172	.55567	.55962	.56356	.56749	.57142	.57535
.2	.57926	.58317	.58706	.59095	.59483	.59871	.60257	.60642	.61026	.61409
.3	.61791	.62172	.62552	.62930	.63307	.63683	.64058	.64431	.64803	.65173
.4	.65542	.65910	.66276	.66640	.67003	.67364	.67724	.68082	.68439	.68793
.5	.69146	.69497	.69847	.70194	.70540	.70884	.71226	.71566	.71904	.72240
.6	.72575	.72907	.73237	.73536	.73891	.74215	.74537	.74857	.75175	.75490
.7	.75804	.76115	.76424	.76730	.77035	.77337	.77637	.77935	.78230	.78524
.8	.78814	.79103	.79389	.79673	.79955	.80234	.80511	.80785	.81057	.81327
.9	.81594	.81859	.82121	.82381	.82639	.82894	.83147	.83398	.83646	.83891
1.0	.84134	.84375	.84614	.84849	.85083	.85314	.85543	.85769	.85993	.86214
1.1	.86433	.86650	.86864	.87076	.87286	.87493	.87698	.87900	.88100	.88298
1.2	.88493	.88686	.88877	.89065	.89251	.89435	.89617	.89796	.89973	.90147
1.3	.90320	.90490	.90658	.90824	.90988	.91149	.91309	.91466	.91621	.91774
1.4	.91924	.92073	.92220	.92364	.92507	.92647	.92785	.92922	.93056	.93189
1.5	.93319	.93448	.93574	.93699	.93822	.93943	.94062	.94179	.94295	.94408
1.6	.94520	.94630	.94738	.94845	.94950	.95053	.95154	.95254	.95352	.95449
1.7	.95543	.95637	.95728	.95818	.95907	.95994	.96080	.96164	.96246	.96327
1.8	.96407	.96485	.96562	.96638	.96712	.96784	.96856	.96926	.96995	.97062
1.9	.97128	.97193	.97257	.97320	.97381	.97441	.97500	.97558	.97615	.97670
2.0	.97725	.97784	.97831	.97882	.97932	.97982	.98030	.98077	.98124	.98169
2.1	.98214	.98257	.98300	.98341	.98382	.98422	.98461	.98500	.98537	.98574
2.2	.98610	.98645	.98679	.98713	.98745	.98778	.98809	.98840	.98870	.98899
2.3	.98928	.98956	.98983	.99010	.99036	.99061	.99086	.99111	.99134	.99158
2.4	.99180	.99202	.99224	.99245	.99266	.99286	.99305	.99324	.99343	.99361
2.5	.99379	.99396	.99413	.99430	.99446	.99461	.99477	.99492	.99506	.99520
2.6	.99534	.99547	.99560	.99573	.99585	.99598	.99606	.99621	.99632	.99643
2.7	.99653	.99664	.99674	.99683	.99693	.99702	.99711	.99720	.99728	.99736
2.8	.99744	.99752	.99760	.99767	.99774	.99781	.99788	.99795	.99801	.99807
2.9	.99813	.99819	.99825	.99831	.99836	.99841	.99846	.99851	.99856	.99861
3.0	.99865	.99869	.99874	.99878	.99882	.99886	.99889	.99893	.99896	.99900
3.1	.99903	.99906	.99910	.99913	.99916	.99918	.99921	.99924	.99926	.99929
3.2	.99931	.99934	.99936	.99938	.99940	.99942	.99944	.99946	.99948	.99950
3.3	.99952	.99953	.99955	.99957	.99958	.99960	.99961	.99962	.99964	.99965
3.4	.99966	.99968	.99969	.99970	.99971	.99972	.99973	.99974	.99975	.99976
3.5	.99977	.99978	.99978	.99979	.99980	.99981	.99981	.99982	.99983	.99983
3.6	.99984	.99985	.99985	.99986	.99986	.99987	.99987	.99988	.99988	.99989
3.7	.99989	.99990	.99990	.99990	.99991	.99991	.99992	.99992	.99992	.99992
3.8	.99993	.99993	.99993	.99994	.99994	.99994	.99994	.99995	.99995	.99995
3.9	.99995	.99995	.99996	.99996	.99996	.99996	.99996	.99996	.99997	.99997