Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2018/2019

COURSE NAME	:	SOFTWARE PROJECT MANAGEMENT
COURSE CODE	:	BIE 30503
PROGRAMME CODE	:	BIP
EXAMINATION DATE	:	DECEMBER 2018 / JANUARY 2019
DURATION	:	3 HOURS
INSTRUCTION	:	A) ANSWER **ALL** QUESTIONS. B) PLEASE WRITE YOUR ANSWERS IN THIS QUESTION BOOKLET.

THIS QUESTION PAPER CONSISTS OF **SEVENTEEN (17)** PAGES

Instruction: Circle the BEST answer for the following questions.

Q1 All the following statements relating to communication management are correct **EXCEPT** _____.

A. communication planning involves determining the information and communication needs of the stakeholders.
B. communicating is the most critical skill that a project manager should possess.
C. project managers spend as more than 85% of their time communicating.
D. to be effective, a Project Manager should control all communications.

(1.5 marks)

Q2 What is the factor which will help a project manager gain the maximum support of the assigned project personnel?

A. Expertise of the project manager.
B. Work challenge.
C. Ability of the project manager to penalize team members.
D. Ability of project manager to provide promotions to team members depending on their abilities.

(1.5 marks)

Q3 As the leader of a project team, the project manager may be required to assess the competencies of his or her team members. Occasionally, some weaknesses or areas for improvement will be identified. The project manager should _____.

A. communicate those weaknesses and establish a performance improvement program.
B. remove any team members who have demonstrated weaknesses in critical knowledge areas.
C. hire additional resources to compensate for weak areas.
D. wait for the team members to fail in an assignment to justify termination.

(1.5 marks)

Q4 Your project will most likely be completed in 10 weeks. Worst case scenario, the project will require 19 weeks, and if everything goes well the project will be completed in 7 weeks. What is the Program Evaluation and Review Technique (PERT) weight average to estimate the task?

A. 10 weeks
B. 11 weeks
C. 9 weeks
D. Cannot be determined with the information provided.

(1.5 marks)

Q5 Nurul Izzah is a project manager on a software project. About halfway through development, her team found that they had not estimated enough time for some of the technical work they needed to do. She requested that the new work be added to the scope statement and that the time to do the work be added to the schedule. The change control board approved her change. What's her next step?

A. Update the scope and schedule baselines to reflect the approved change.
B. Start doing the work.
C. Gather performance metrics on the team's work so far.
D. Perform Quality Assurance.

(1.5 marks)

Q6 Team Development is a very critical component of Human Resource Management. All the following are inputs to Team Development **EXCEPT** _____.

A. project plan
B. project staff
C. staffing pool description
D. performance report

(1.5 marks)

Q7 If a project needs to be terminated early, then you will have to do _____.

A. procurement planning
B. contract administration
C. contract closeout
D. source selection

(1.5 marks)

Q8

	Optimistic	Pessimistic	Most Likely
Task A	5	9	7
Task B	8	14	10
Task C	4	7	5

Figure Q8

If these three tasks in **Figure Q8** (i.e. Task A, Task B, Task C) are part of critical path of one project. Determine duration of the project by using PERT weight average.

A. 22.5
B. 10.33
C. 32
D. 5.17

(1.5 marks)

Q9 In your software development project, the Cost Performance Index (CPI) is 1.30 and Schedule Performance Index (SPI) is 0.85. What could be the potential reason?

A. A critical resource went on sick leave for a long period of time, and this had not been anticipated earlier.
B. The cost of materials required for development increased 10%.
C. You had not taken into account inflation rate.
D. There were 4 days of waiting time in receiving the server, and no work could be done during that time.

(1.5 marks)

Q10 The most common communication problem during negotiations is that _____.

A. one side may try to confuse the other side.
B. one side may be too busy thinking about what to say next to hear what is being said.
C. each side may misinterpret what the other side has said.
D. each side may give upon the other side.

(1.5 marks)

Q11 You are currently performing the Select Sellers process. You are considering two bids from companies on your qualified sellers list. Your project is on a tight budget, and you have been instructed by senior management to consider the cost over any other criteria. You used the company that submitted the lower bid on a previous project, and you were not happy with their work. The company that submitted the higher bid has a reputation for treating their clients well, flying project managers' first class and giving them accommodations in five-star hotels. What is the **BEST** way to handle this situation?

A. Select the company with the lowest bid.
B. Give the manager at the company with the higher bid information that will allow him to tailor his bid so that it better meets your needs.
C. Rewrite the Request for Proposal (RFP) so that the company with the lowest bid is excluded.
D. Select the company with the higher bid.

(1.5 marks)

Q12 You are managing a software project. You are partway through the project, and your team has just delivered a preliminary version of part of the software. You are holding a weekly status meeting, when one of the team members points out that an important stakeholder is running into a problem with one of the features of the current software. The team member feels that there is a risk that the stakeholder will ask for a change in that feature, even though that change would be out of scope of the current release - and if the stakeholder requests that change, there is a high probability that the change control board would approve the change. What is the **BEST** action to take next?

A. Mitigate the risk by asking a team member to get familiar with the feature of the software that might be changed.
B. Schedule a meeting with the stakeholder to discuss the risk.
C. Add the risk to the risk register and gather information about its probability and impact.
D. Add the risk to the issue log and revisit it when there is more information.

(1.5 marks)

Q13 You are managing a software engineering project. Your team is having trouble completing their object design tasks. One of your team members tells you that her friend at another company sent her a copy of their software package that will help your team meet its deadline. Without that software package, your project will probably be late. But you don't have enough money in the budget to purchase it. What is the **BEST** way to handle this situation?

A. Tell the team member not to use the software, and accept that the project will be late.
B. Use the software so that your project comes in on time.
C. Purchase the software so that you have a licensed copy.
D. Tell the team member that you need to maintain plausible deniability, so she should just do what's necessary and not tell you about it.

(1.5 marks)

Q14 In your last project status meeting, you had 15 team members. The meeting was very disorderly - there were too many sidebar conversations and arguments. As a result, you achieved nothing substantial from the meeting. In order to better regulate the meeting next time, you should _____.

A. decrease the number of people in one meeting.
B. publish a meeting agenda.
C. ensure that you control the channels of communication.
D. give incentives to team members for conforming to desired norms of the meeting.

(1.5 marks)

Q15 You are managing a project with a total budget of RM 450,000. According to the schedule, your team should have completed 45% of the work by now. But at the latest status meeting, the team only reported that 40% of the work has actually been completed. The team has spent RM 165,000 so far on the project. How would you **BEST** describe this project?

A. The project is ahead of schedule and within its budget.
B. The project is behind schedule and within its budget.
C. The project is ahead of schedule and over its budget.
D. The project is behind schedule and over its budget.

(1.5 marks)

Q16 Questions **Q16(a)-Q16(c)** are based on **Table 1**.

Table 1: Costing

Items	Cost (RM)
Cost to build prototype	RM 200,000.00
Probability of customer accepting final product	
• With prototype	70%
• Without prototype	40%
Cost of rework of final product	
• With protype	RM 40,000.00
• Without prototype	RM 400,000.00

(a) Construct a quantitative risk analysis by using a decision tree and Expected Monetary Value (EMV) technique.

(5 marks)

Answer:

(b) Conclude the answer in **Q16(a)**.

(3 marks)

Answer:

(c) Suggest to the top management on cost of prototype development using the answer in **Q16(b)**.

(3 marks)

Answer:

Q17 Questions **Q17(a) – Q17(h)** are based on **Table 2**. The table shows all the task of planning an e-Transportation project.

Table 2: Task of an e-Transportation project

Task	Description	Duration	Predecessor	Workers	Budget per Task
Start	-	0	-	-	-
cK	High level analysis	6 days	Start	4	3000
bL	Selection of hardware platform	4 day	Start	2	4000
pM	Installation and commissioning of hardware	2 days	Start	1	4000
aN	Detailed analysis of core modules	7 days	cK,bL,pM	4	2000
uP	Detailed analysis of supporting modules	4 days	pM	2	1000
tQ	Programming of core modules	7 days	aN	1	3000
rR	Programming of supporting modules	7 days	aN	1	3000
nS	Quality assurance of core modules	10 days	uP	6	2000
End	-	0	tQ,rR,nS	-	-

(a) Create a Precedence Diagramming Method (PDM) network diagram for e-Transportation project.

(6.5 marks)

Answer:

(b) Based on the answer in **Q17(a),** list all the path and identify the critical path. Give **ONE (1)** reason.

(5 marks)

Answer:

(c) Using **Figure Q17** and answer in **Q17(a)**, assume the start date of the project is 15th April 2017 and all day are working days. Determine the early start date, late start date, early finish date, late finish date, and slack/float day for each task.

(20 marks)

Answer:

Task	Early Start Date	Late Start Date	Early Finish Date	Late Finish Date	Slack/ Float
cK					
bL					
pM					
aN					
uP					
tQ					
rR					
nS					

(d) Draw a resource loading histogram.

(5 marks)

Answer:

(e) Based on answer in **Q17(d)**, draw a resource levelling histogram.
(5 marks)

Answer:

(f) Based on answer in **Q17(d)** and **Q17(e)**, which histogram is better. Justify your answer.

(5 marks)

Answer:

(g) **Table 3** shows a report at day 10 in e-Transportation project.

Table 3: Field Report at end of Day 10

Task	Actual % Complete	Incurred Cost (RM)
Start	-	-
cK	100	6000
bL	100	3000
pM	40	5000
aN	50	2000
uP	30	500
tQ	0	0
rR	0	0
nS	0	0
End	-	-

Complete the following table.

(9 marks)

Answer:

Task	Actual Cost of Work Performed (ACWP)	Budgeted Cost of Worked Performed (BCWP)	Budgeted Cost for Worked Schedule (BCWS)
cK			
bL			
pM			
aN			
uP			

(h) Based on the answer **Q17(g)**, calculate:

(i) Cost Variance (CV) for whole activity.

(2 marks)

Answer:

(ii) Schedule Variance (SV) for whole activity.

(2 marks)

Answer:

(iii) Cost Performance Index (CPI) for whole activity.

(2 marks)

Answer:

(iv) Schedule Performance Index (SPI) for whole activity.

(2 marks)

Answer:

(v) Based on the answer in **Q17(h)(iii) – Q17(h)(iv)**, state the conclusions in term of time and cost in 10 days.

(2 marks)

Answer:

(vi) Based on the answer in **Q17(h)(v)**, explain **ONE (1)** appropriate action should be taken.

(1 marks)

Answer:

-END OF QUESTIONS-

FINAL EXAMINATION

SEMESTER/SESSION : SEM I/2018/2019 PROGRAM: BIP
COURSE NAME : SOFTWARE PROJECT MANAGEMENT COURSE CODE: BIE 30503

January

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

March

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

April

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

July

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

August

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

November

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Figure Q17