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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2017/2018**

COURSE NAME : SOFTWARE PROJECT MANAGEMENT  
COURSE CODE : BIE 30503  
PROGRAMME CODE : BIP  
EXAMINATION DATE : DECEMBER 2017/ JANUARY 2018  
DURATION : 3 HOURS  
INSTRUCTION : A) ANSWER ALL QUESTIONS  
B) PLEASE WRITE YOUR ANSWERS  
IN THIS QUESTION BOOKLET

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THIS QUESTION PAPER CONSISTS OF **SIXTEEN (16)** PAGES

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**SECTION A**

**Instruction: Circle the BEST answer for the following questions.**

**Q1** You are managing the development of a highly controversial project. Today you called a team meeting and explained the project objectives to the team and several members stood up and left citing philosophical objections to the project. You chased them down the hall trying to convince them to work on the project and explaining that you would use the best quality management plan available for this work. One of the team members stopped abruptly and demanded to know what the purpose of such a plan would be. You explained that the objective of any quality management plan is to

- A. create some regulations to govern the project.
- B. ensure that process adjustments are made in a timely fashion.
- C. improve quality in every aspect of project performance.
- D. ensure that the scope management plan is followed.

(1.5 marks)

**Q2** As part of your project plan you must develop an effective method of communication for your multinational team of stakeholders. You have several choices of media available. The appropriate action to take in the development of the communication plans would be to:

- A. use the standard media that has been in effect for your previous projects.
- B. use multiple forms of media to ensure that everyone receives the information.
- C. discuss the available options with the stakeholders and obtain their input.
- D. obtain additional funding from the project sponsor and develop a project specific communications infrastructure.

(1.5 marks)

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**Q3** In dealing with the client/customer, the project manager should always

- A. do whatever it takes to satisfy the customer and win additional business.
- B. develop a friendly, honest, and open relationship.
- C. try to maximize profits by encouraging scope creep.
- D. be honest to the extent that the project organization is protected from litigation.

(1.5 marks)

- Q4** Activity A has duration of 3 days and begins on the morning of Monday the 4th. The successor activity, B, has a finish-to-start relationship with A. The finish-to-start relationship has 3 days of lag, and activity B has duration of 4 days. Sunday is a no workday. What can be determined from these data?
- A. Calendar time between the start of A to the finish of B is 7 days.
  - B. Calendar time between the start of A to the finish of B is 11 days.
  - C. Calendar time between the start of A to the finish of B is 12 days.
  - D. Calendar time between the start of A to the finish of B is 14 days.
- (1.5 marks)

- Q5** You are considering whether to buy or make a software product. If you buy, the cost is RM 80,000 and the cost of procurement and integrating in your company is RM 1000. If you want to build yourself, the product will require 7 software engineers working 3 months. Salary of each software engineer is RM 4,000 per month. The overhead costs apportioned to the project will be RM 2,000. Which option will you choose?
- A. Buy
  - B. Build
  - C. Neither build nor buy
  - D. Need more information about the suppliers before making a decision
- (1.5 marks)

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- Q6** During your assignment as project manager you add a new member to your project team. This new team member was recently hired from a competitor and offers to share a substantial amount of proprietary information from his previous company. This information could put you and your team in a very strong position for future business. You are aware of a non-compete clause in the new hire's condition of employment. You should
- A. accept the information and agree to keep it confidential between you and the new hire.
  - B. review the information and only accept only what may have a direct impact on the project's financial status.
  - C. ignore the offer to share and move forward with the project.
  - D. review the condition of employment with the new hire and advise her to reconsider the offer.
- (1.5 marks)

Q7 Please refer to **Figure Q7** (all units are in days).

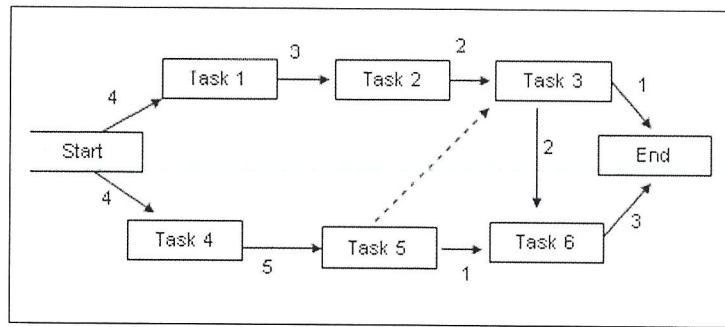


Figure Q7

What is the project float if management wants to do this project within 10 days?

- A. 0 days.
  - B. - 4 days.
  - C. 2 days.
  - D. Cannot be determined because information in the question is inconsistent.
- (1.5 marks)

Q8 The main difference between Arrow Diagramming Method (ADM) and Precedence Diagramming Method (PDM) of the Critical Path Method (CPM) of scheduling is the

- A. ADM is a more accurate method.
- B. ADM is a deterministic method whereas the PDM is a probabilistic method.
- C. PDM is a deterministic method whereas the ADM is a probabilistic method.
- D. placement of the activity on the logic diagram line.

(1.5 marks)

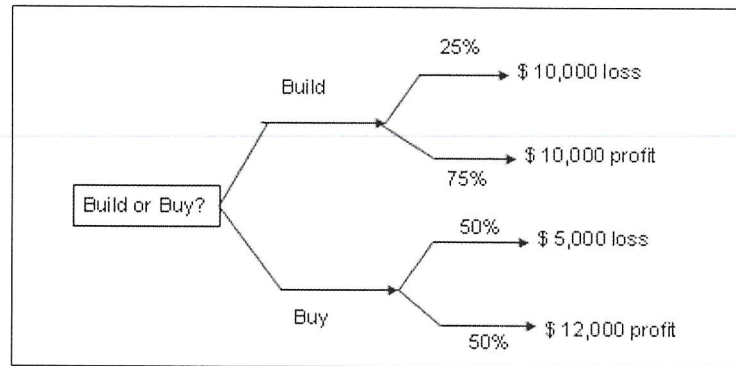


Q9 Your lead software engineer estimates that a work package will most likely require 50 weeks to complete. It could be completed in 40 weeks if all goes well, but it could take 180 weeks in the worst case. What is the PERT estimate for he expected duration of the work package?

- A. 65 weeks
- B. 70 weeks
- C. 75 weeks
- D. 80 weeks

(1.5 marks)

**Q10** Refer to **Figure Q10** which shows the analysis of profit/loss for the two alternatives (i.e. to build or buy).



**Figure Q10**

What should the project Manager recommend?

- A. Build.
- B. Buy.
- C. Either Build or Buy.
- D. Project Manager should recommend a Sensitivity Analysis before making a build/buy Decision.

(1.5 marks)

**Q11** 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)



**Q12** Procurement planning is the process of identifying which project needs can best be met by procuring products or services outside the project organization. When should this effort be accomplished?

- A. After contract negotiation.
- B. During the scope definition effort.
- C. During the cost definition effort.
- D. While creating the work breakdown structure.

(1.5 marks)

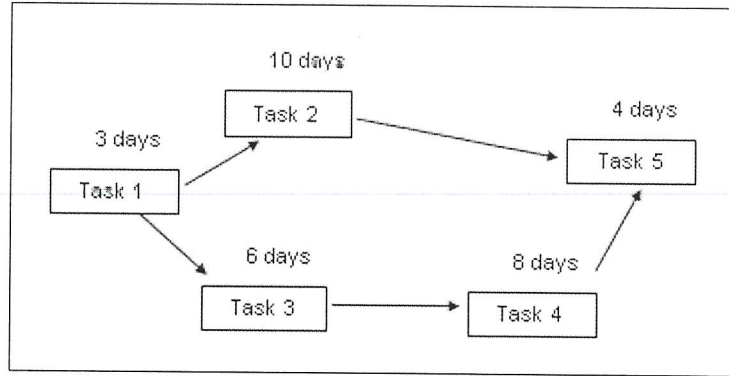
- Q13** What is the order of the Procurement Management processes?
- A. Plan Purchases and Acquisitions, Plan Contracting, Request Seller Responses, Select Sellers, Contract Administration, Contract Closure.
  - B. Plan Purchases and Acquisitions, Plan Contracting, Select Sellers, Request Seller Responses, Contract Administration, Contract Closure.
  - C. Plan Purchases and Acquisitions, Plan Contracting, Contract Administration, Request Seller Responses, Select Sellers, Contract Closure.
  - D. Plan Contracting, Plan Purchases and Acquisitions, Request Seller Responses, Select Sellers, Contract Administration, Contract Closure.
- (1.5 marks)

- Q14** You are the project manager on a software project that is planning out various approaches to technical work. There is a 20% chance that a component you are going to license will be difficult to integrate and cost RM 3000 in rework and delays. There is also a 40% chance that the component will save RM 10,000 in time and effort that would have been used to build the component from scratch. What is the Expected Monetary Value (EMV) for these two possibilities?
- A. RM 13,000
  - B. RM 7,000
  - C. RM 3,400
  - D. -RM 600
- (1.5 marks)

- Q15** Resource planning involves determining what \_\_\_\_\_ resources and what \_\_\_\_\_ of each should be used and when they would be needed to perform project activities.
- A. physical, quantities
  - B. quantities, physical
  - C. dynamic, parametric modeling technique
  - D. parametric modeling, dynamic
- (1.5 marks)

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**Q16** Refer to **Figure Q16**.



**Figure Q16**

Task 1 → Task 3 → Task 4 → Task 5 is the critical path. What is the Late Finish Day for Task 2?

- A. 15
- B. 17
- C. 13
- D. 3

(1.5 marks)

**Q17** You have been hired by a large consulting firm to evaluate a software project for them. You have access to the Cost Performance Index (CPI) and Earned Value (EV) for the project, but not the Actual Cost (AC). The CPI is 0.92, and the EV is RM 172,500. How much money has actually been spent on the project?

- A. RM 158,700
- B. RM 172,500
- C. RM 187,500
- D. There is not enough information to calculate the actual cost.

(1.5 marks)

**Q18** 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)



**Q19** 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)

**Q20** Refer to **Figure Q20**, which shows the time estimates for different tasks:

Task	Preceding Activity	Estimate in Months
Start	-	0
1	Start	3
2	1	4
3	Start	2
5	3	5
4	Start	7
5	4	1
End	2	3
End	5	4

**Figure Q20**

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What is the impact on the project if task 1→2 takes 2 months more than what was earlier planned?

- A. The duration of the project will increase by 1 month.
- B. The risk in the project will increase.
- C. The duration of the project will increase by 2 months.
- D. The project float will increase by 2 months.

(1.5 marks)



**SECTION B**

**Q21** Answer Q21(a) – Q21(f) based on Table 1.

**Table 1:** Work Package (WP) of Planning an e-Commerce Project

Task	Description	Duration	Predecessor	No. of Staff
A	High level analysis	15 days	–	2
B	Selection of hardware platform	1 week	A	4
C	Installation the hardware	5 days	A	8
D	Detailed analysis of core modules	4 days	A	6
E	Detailed analysis of supporting modules	5 days	B, D	4
F	Programming of core modules	2 days	C, D	2
G	Programming of supporting modules	10 days	E, F	6
H	Quality assurance of core modules	9 days	B, E, F	8
I	Quality assurance of supporting modules	1 Week	C, G, H	2

(a) Create a network diagram using Arrow on Activity (AOA) method.

(10 marks)

**Answer:**

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- (b) Based on answer **Q21(a)**, identify the critical path. Justify your answer. (2 marks)

**Answer:**

- (c) Assume the start date of the project is 1<sup>st</sup> August 2017 and everyday is working days. Determine the early start date, late start date, early finish date, late finish date, slack/float for each task. Refer to **Figure Q21**.

**Answer:**

- i) Task A (5 marks)

- ii) Task E (5 marks)

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iii) Task G

(5 marks)

iv) Task H

(5 marks)

v) Task I

(5 marks)

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- (d) Illustrate a histogram of resource levelling for staff usage.

(5 marks)

**Answer:**

- (e) Based on the answer in **Q21(d)**, level the number of resource required through the project.

(5 marks)

**Answer:**

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(f) Justify the different answer in Q21(d) and Q21(e).

(3 marks)

**Answer:**

**Q22** Answer Q22(a) – Q22(d) based on Table 2 and Table 3.

**Table 2: List of Activities**

Activity	Predecessor	Duration (Month)	Cost per month (RM)
A	-	2	3000
B	A	3	4000
C	B	3	4000
D	B	2	2000
E	D	3	1000

**Table 3: Field Report at End of Month 7**

Field Report at end of month 7		
Activity	Actual % Complete	Incurred Cost (RM)
A	100	6000
B	100	14000
C	33	5000
D	50	2000
E	0	0

(a) Calculate Actual Cost of Work Performed (ACWP), Budget Cost of Worked Performed (BCWP) and Budgeted Cost for Worked Schedule (BCWS) for

(i) Activity A

(3 marks)



(ii) Activity C

(3 marks)

(iii) Activity D

(3 marks)

(b) Based on the answers in **Q22(a)**, state the conclusions in term of time and cost at month 7<sup>th</sup> for Activity D.

(2 marks)

**Answer:**

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- (c) Based on the answer in **Q22(c)**, explain an appropriate action should be taken.

(2 marks)

**Answer:**

**Q23** Answer **Q23(a)** – **Q23(b)** based on scenario in **Figure Q23**.

Aras 7 Consultant Sdn Bhd needs equipment for a FOLDA project that has a purchase price of RM 12,000.00. Assume it also had a daily operational cost of RM 400.00. Suppose you could lease the same piece of equipment for RM 800.00 per day, including the operational costs.

**Figure Q23**

- (a) Set up an equation in which the purchase cost equals the lease cost to determine when it makes sense financially to lease or buy the equipment.

(5 marks)

- (b) What happen if Aras7 Consultant SdnBhd need the equipment for “less than” and “more than” based on answer in **Q23(a)**.

(2 marks)

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**-END OF QUESTION-**

**FINAL EXAMINATION**

SEMESTER/SESSION : SFM I/2017/2018

PROGRAM: 3 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		

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				

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			

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		

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		

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	

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

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

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

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

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					

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 Q21

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