BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

COMPUTER SCIENCE DEPARTMENT

BSc IN COMPUTER SCIENCE

BSc INFORMATION TECHNOLOGY HONORS DEGREE

CHS217/CS404: SOFTWARE PROJECT MANAGEMENT

2 HOURS 30 MINUTES

NOV 2024

INSTRUCTIONS TO CANDIDATES

This paper carries **five** questions. You are required to answer **all**.

Total marks are **100.**

Question 1

a. illustrate a project with help of example. **[3]**

b. Describe Project Charter and its relevance to project management. Construct a sample Project Charter to explain your description. **[6]**

c. Explain scope creep in software project management. **[3]**

d. Planning is the most important activity in the overall Software Project Management. Comment on this statement. **[8]**

Question 2

a. List **four** of the components that form the structure of an SPMP. **[4]**

b. The first major step in the overall project management planning process after project requirements definition is the development of the work breakdown structure (WBS). A WBS can be a valuable tool in defining the scope of a project. A WBS acts as a vehicle for breaking the work down into smaller elements and provides a central organising concept for the entire project. Explain how a WBS is used as a basis in **project time management, the allocation of resources and project cost management**. Use examples to support your answer. **[6]**

c. Critical Success Factors identify what is necessary to meet the desired deliverables of the customer. Create a list of generic Secondary Critical Success Factors for software projects. For each critical success factor **justify** why you included it in the list.

Question 3

The project management institute structures project management by knowledge areas and by processes.

a. Explain is a process in the context of project management? **[2]**

b. Explain how processes are grouped and how process groups interact throughout the project lifecycle. **[4]**

c. Illustrate the differences between project life cycle and software development life cycle. **[4]**

d. To address many of the problems particular to software projects non conventional methodologies such as agile development, rapid application development and extreme programming have been created. Compare and contrast one of these methodologies with a traditional project management process with references to the strengths and weaknesses of both processes. Use examples to support your answer **[10]**

Question 4

Consider the following project in Table 2.

Activity	Immediate Predecessor	Duration (Days)		
		Optimistic	Most likely	Pessimistic
A	-	2	3	4
B	A	4	6	8
C	A	3	3	3
D	A	5	7	9
E	B, C	2	4	6
F	C, D	6	7	8
G	D	3	4	8
H	D	2	3	4
I	E, F, G	1	3	5
J	F	3	5	7
K	F, G	4	6	8
L	H	6	8	13
M	I, J	2	5	8
N	K, L, M	4	6	8

a. Draw the network diagram of the project. As part of the diagram, calculate, when this project is delivered using the common notations (ES-Early Start, EF= Early Finish, LS= Late Start, LF= Late Finish, Duration and Float) and make sure to explicitly provide the earliest possible delivery date as an answer. **[18]**

b. Determine the critical path of the project and calculate the project completion time. **[2]**

Question 5

a. Define a contract and state why it is important? **[2]**

b. Define cost reimbursable contracts and explain any three types. [6]

c. Risk management can be an expensive and time- consuming process and is often looked on as merely an overhead in projects. Write a report to convince Executives funding a project of the need for a proper risk management strategy for that project. In your answer you should refer to four different types of risks that can occur on projects, analyze the impact of unmanaged risks on projects and explore the benefits risk management can provide to a project. Use examples to support your answer. [10]

***** END OF PAPER*****