BINDURA UNIVERSITY OF SCIENCE EDUCATION

BSc IN COMPUTER SCIENCE/INFORMATION TECHNOLOGY HONORS DEGREE

CS404: SOFTWARE PROJECT MANAGEMENT

2 HOURS 30 MINUTES

INSTRUCTIONS TO CANDIDATES

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

Total marks are **100.**

Question 1

a. Define software project management. **[2]**

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

c. List the particulars that a scope baseline consists of. **[3]**

d. Your company's quality assurance department has performed a quality audit on your project. They have found that your team has implemented something inefficiently, and that could lead to defects. What are the necessary procedures that should next take place on your project? **[4]**

e. You are managing a project with an EV of $15,000, PV of $12,000, and AC of $11,000. How best would you describe this project? **[4]**

f. Briefly describe how contracts can be both a risk management tool and a source of risk and uncertainty for both the selling and buying organisations during the procurement process. **[8]**

[Total marks 25]

Question 2

a. Analyse the Discounted Cash Flow (DCF) technique for appraising large investment decisions. **[10]**

b. A car manufacturer has decided to make a significant investment into expanding its presence in Africa by setting up a large assembly facility in Zimbabwe. It has estimated its initial set up costs to be in the region of Zimbabwean Dollars $ 6,398.

Forecast net income from the project is detailed below:
Year 1 Zimbabwean Dollars $1,400
Year 2 Zimbabwean Dollars $1,450
Year 3 Zimbabwean Dollars $1,550
Year 4 Zimbabwean Dollars $1,625
Year 5 Zimbabwean Dollars $1,480

i. Calculate the projected payback time for the project to the nearest month. **[3]**

ii. Calculate the Net Present Value of the project using a discount factor of 5% and comment on the attractiveness of the project.

Discount factors at 5% are;

Yr 1 = 0.952, Yr 2 = 0.907, Yr 3 = 0.864, Yr 4 = 0.823, Yr 5 = 0.784 **[12]**

[Total marks 25]

Question 3

Discuss the tools and techniques that project managers can use to ensure knowledge and lessons learned from previous projects are not lost, and can be shared for the benefit of future projects.

[Total marks 25]

Question 4

a. Compare and contrast the project evaluation and review technique (PERT) with the critical path method (CPM). **[15]**

b. Using the information in the table below, assuming that the project team will work a standard working week (5 working days in 1 week) and that all tasks will start as soon as possible:

Task	Description	Duration (Working Days)	Predecessor/s
A	Requirements Analysis	5	
B	Systems Design	15	A
C	Programming	25	B
D	Telecoms	15	B
E	Hardware Installation	30	B
F	Integration	10	C, D
G	System Testing	10	E, F
H	Training/ Support	5	G
I	Handover and Go-Live	5	H

i. Determine the critical path of the project. **[3]**

ii. Calculate the planned duration of the project in weeks. **[3]**

iii. Identify any non-critical tasks and the float (free slack) on each. **[4]**

[Total marks 25]

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