THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

DEPARTMENT OF ARCHITECTURE & CONSTRUCTION MANAGEMENT

FIRST SEMESTER EXAMINATION

THIRD YEAR BACHELOR IN CONSTRUCTION MANAGEMENT

CM 312 – CONSTRUCTION MANAGEMENT 3

Room: L2

Date: Friday 3rd May 2022

Duration: 3 hours

Time 8.20 to 11.30 am

Information to Candidate

1. You have 10 minutes to read the paper. Do not begin writing during this period.
2. Fill in the Attendance Slip with your name and student I.D. number now.
3. There are three (3) pages to this exam paper including drawing attachment.
4. There are four (4) questions and you are to answer all questions.
5. ALL ANSWERS MUST BE WRITTEN IN THE ANSWER BOOK (S) PROVIDED.
6. Each Question must be answered starting on a New Page.
7. Notes, Textbooks and Electronic devices are **NOT ALLOWED** in the Exam Room.

WRITE YOUR NAME AND ID NUMBER CLEARLY ON THE FRONT PAGE. DO IT NOW.

TOTAL MARKS = 100 MARKS

(5 marks)

Question #1

Explain why planning is done for performance requirement?

(25 marks)

Question #2

Identify and descried briefly the five variations to the Activity-On-Node (AON) from the Activity-On-Arrow (AOA) programing techniques.

(15 marks)

Question #3

List any five (5) items in a mobilization checklist and explain their importance to a construction project.

(55 marks)

Question #4

From the information in the Activity Table provided below (page 3)

a) Draw a network diagram (20 marks)
b) Identify how many parts are in the network and state what they are (10 marks)
c) Identify the critical part and its duration (5 marks)
d) Calculate the total float and free float for activity **"C"** & **"D"** (5 marks)
e) Draw a bar chart (15 marks)

Activity Table

Activity	Dependence	Duration	Total Float	Free Float
A	-	3		
B	A	3		
C	A	2		
D	A	4		
E	-	6		
F	B, C	4		
G	B, C	2		
H	C	3		
I	D	2		
J	D	3		
K	F	2		
L	G	5		
M	H,I	7		
N	E,J	5		
O	K, L	8		
P	M, N, O	6		

End of Exam

Activity Table

Activity	Dependence	Duration	Total Float	Free Float
A	-	3		
B	A	3		
C	A	2		
D	A	4		
E	-	6		
F	B, C	4		
G	B, C	2		
H	C	3		
I	D	2		
J	D	3		
K	F	2		
L	G	5		
M	H,I	7		
N	E,J	5		
O	K, L	8		
P	M, N, O	6		

End of Exam