PROGRAM : NATIONAL DIPLOMA BUILDING

SUBJECT : CONSTRUCTION MANAGEMENT 3

CODE : CONM 331

DATE : SUMMER EXAMINATION 2015
       16 NOVEMBER 2015

DURATION : (SESSION 1) 08:30 - 11:30

WEIGHT : 40 : 60

TOTAL MARKS : 100

ASSESSOR : DR JN AGUMBA

MODERATOR : PROF. S LARYEA

NUMBER OF PAGES : 1 COVER PAGE
                  2 PAGES OF QUESTIONS AND 1 ANNEXURE

INSTRUCTIONS : ANSWER ALL THE QUESTIONS IN SEQUENCE.

REQUIREMENTS : ONE ANSWER SHEET
                ONE SCIENTIFIC CALCULATOR
INSTRUCTIONS TO STUDENTS

PLEASE ANSWER ALL THE QUESTIONS IN SEQUENCE.

QUESTION 1

1.1 PREPARE a thoroughly analyzed network diagram for the completion of the following project activities using the activity on the node method and establish the critical path. The contractor is not working over weekends and public holidays. The starting date of the project is on the 05/01/2015 (14)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Preceding activity</th>
<th>Duration</th>
<th>Cost in Rands</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-</td>
<td>7</td>
<td>15 000</td>
</tr>
<tr>
<td>B</td>
<td>-</td>
<td>6</td>
<td>6000</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>8</td>
<td>5000</td>
</tr>
<tr>
<td>D</td>
<td>A,B,C</td>
<td>9</td>
<td>8000</td>
</tr>
<tr>
<td>E</td>
<td>B,C</td>
<td>5</td>
<td>7500</td>
</tr>
<tr>
<td>F</td>
<td>D</td>
<td>10</td>
<td>65 000</td>
</tr>
<tr>
<td>G</td>
<td>F</td>
<td>8</td>
<td>7500</td>
</tr>
<tr>
<td>H</td>
<td>D,F</td>
<td>9</td>
<td>8500</td>
</tr>
<tr>
<td>I</td>
<td>G</td>
<td>3</td>
<td>4500</td>
</tr>
<tr>
<td>J</td>
<td>E</td>
<td>5</td>
<td>5000</td>
</tr>
<tr>
<td>K</td>
<td>I</td>
<td>8</td>
<td>10 000</td>
</tr>
</tbody>
</table>

1.2 PREPARE cumulative cash inflow at the end of each month for the project above using latest starting time and illustrate the findings of the cash inflow using a graph (6) [20]

QUESTION 2

2.1 DISCUSS the reasons why extension of time will be awarded to the contractor without adjusting the contract value and when extension of time will be awarded and the contract value adjusted (8)

2.2 DISCUSS the importance of the Joint Building Contract Committee (JBCC) contract document to the construction industry stakeholders in South Africa (8) [16]

QUESTION 3

3.1 DISCUSS the methods used for approximate estimates that a professional construction manager should know when involved in a tender procurement process [12]
QUESTION 4

4.1 DEFINE the term variation order as used in construction project contract  (2)

4.2 DISCUSS the procedure that you will follow in processing a variation order in a construction project contract (8)

QUESTION 5

In Pretoria, five people were injured on the 3rd June 2015 when the scaffold they were working on collapsed at a construction site on Steve Biko Street. "The men fell between 10 to 15 metres from the scaffold" the ER24 spokesperson Chitra Bodasing said in a statement. Bodasing further indicated that paramedics and other services arrived on the scene and found the patients scattered on the ground. "They were assessed. Three patients sustained critical injuries and two sustained moderate injuries". They were treated on the scene and transported to nearby hospitals. (http://www.iol.co.za/news/south-africa/gauteng/5-injured-in-pretoria-scaffolding-accident-1.1867617#.VgElEtKqqko)

5.1 From this press information DISCUSS the causes that could have led to the scaffold collapse in this construction site (4) and discuss the methods that can be used to mitigate future collapse of working on scaffold (4)  (8)

5.2 DISCUSS the causes of accidents in the construction sites in South Africa  (8)

QUESTION 6

In Lephalale, construction was halted again at Eskom’s Medupi power plant as remaining construction workers joined the dismissed group belonging to the National Union of Metalworkers of South Africa (Numsa). Numsa said its members joined the dismissed 1 500 in a gesture of solidarity to compel employers to reverse the dismissal motion.

6.1 DISCUSS the reason why workers supported those who were dismissed (2)

6.2 DISCUSS the reasons why workers can be unfairly dismissed (6)

6.3 DISCUSS the process that the employer should follow to resolve this problem (4)  [12]

QUESTION 7

7.1 DEFINE the term quality (2)

7.2 DISCUSS the quality management concepts that will form part of the quality management system (12)  [14]

Total = 100
PUBLIC HOLIDAYS
1 January 2015 - New Year's Day
21 March 2015 - Human Rights Day *
3 April 2015 - Good Friday *
6 April 2015 - Family Day
27 April 2015 - Freedom Day
1 May 2015 - Workers Day
16 June 2015 - Youth Day
9 August 2015 - National Women’s Day
10 August 2015 Public Holiday
24 September 2015 - Heritage Day
16 December 2015 - Day of Reconciliation
25 December 2015 - Christmas Day
26 December 2015 - Day Of Goodwill

SCHOOL TERMS 2015
Eastern Cape

1. 21 Jan - 1 March
2. 13 April - 26 June
3. 20 July - 2 Oct
4. 12 Oct - 9 Dec

2016