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education

Department:
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REPUBLIC OF SOUTH AFRICA

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NATIONAL CERTIFICATE

BUILDING ADMINISTRATION N5

(4090045)

23 March (X-Paper)
09:00 – 12:00

This question paper consists of 7 pages.

**DEPARTMENT OF EDUCATION
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
BUILDING ADMINISTRATION N5
TIME: 3 HOURS
MARKS: 100**

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
 2. Read ALL the questions carefully.
 3. Number the answers correctly according to the numbering system used in this question paper.
 4. The length of the answers should depend on the marks allocated.
 5. Answer in full sentence where applicable, incomplete, cryptic phrases will be penalised.
 6. Use your own words.
 7. Write neatly and legibly.
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QUESTION 1

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.1 – 1.10) in the ANSWER BOOK.

- 1.1 Variation orders could be savings or extras.
- 1.2 Variation orders are site instructions.
- 1.3 Additions are variation orders.
- 1.4 Extension of time is calculated by day works.
- 1.5 Day works are day to day happenings on site.

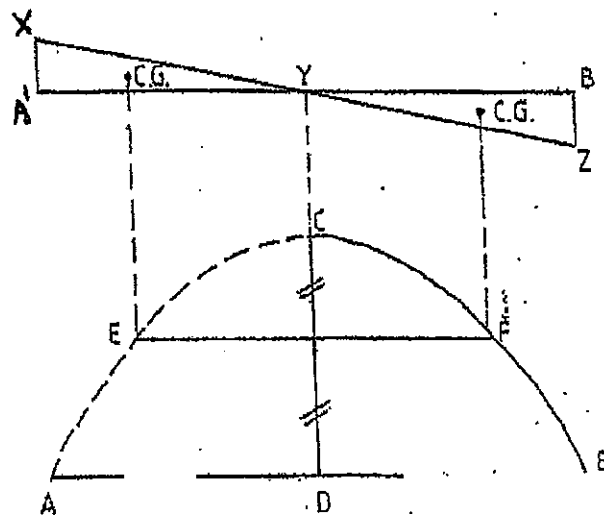
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- 1.6 Day works are all works above the natural ground level.
- 1.7 The contingency sum provides money for extras.
- 1.8 One speaks of day work as if it is the measured labour and material per day.
- 1.9 Variation orders are issued by the clerks of works.
- 1.10 Omissions are savings.

[10]

QUESTION 2

Study DIAGRAMS 1 and 2 and answer the following questions.

**DIAGRAM 1: MASS-HAUL DIAGRAM**

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Assuming a free-haul distance of 100 m (EF)

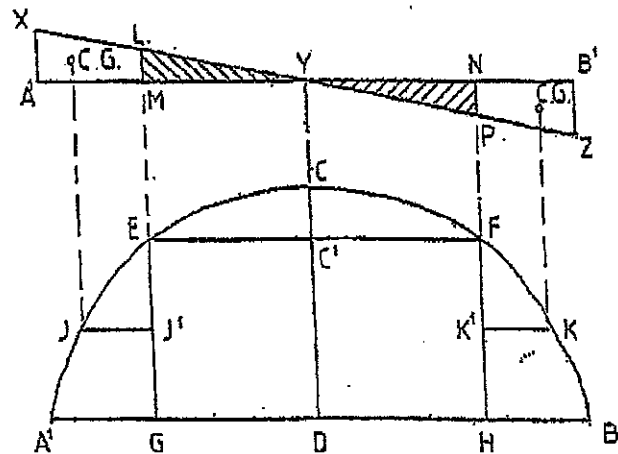


DIAGRAM 2: MASS-HAUL DIAGRAM

- 2.1 In DIAGRAM 1, name the line AB. (1)
- 2.2 In DIAGRAM 1, the rising curve, shown by a broken line, indicates (a) ..., the falling curve indicates (b) ... (1)
- 2.3 In both diagrams, what is the name of the point at Y? (1)
- 2.4 As the curve of the mass-haul diagram (M.H.D) rises above the line AB, the haul is from (a) ..., when the curve lies below the balance line, the haul is from (b) ... (DIAGRAM 1). (2)
- 2.5 The total cut volume is represented by the ordinate ... diagram. (½)
- 2.6 In moving earth from cut to fill, assume that the first load will be from the cut at (a) ... to the fill at (b) ... and the last load from the cut at (c) ... to the fill at (d) ... diagram. (1)
- 2.7 In DIAGRAM 2, EF indicates on the longitudinal section that the cut volume (a) ... equal the fill volume (b) The amount of volume is (c) ... and it obviously falls within the free-haul distance. (1½)
- 2.8 In DIAGRAM 2, state what CG stands for. (1)
- 2.9 Mass-haul diagram plotted directly below the longitudinal section of the survey ... (1)

[10]

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QUESTION 3

A few paragraphs on the qualifications, personal characteristics and duties of the general foreman, are given below. Complete the following sentences by filling in the missing word(s). Write only the word(s) next to the question number (3.1 – 3.10) in the ANSWER BOOK.

Depending on the size of the project, the general foreman should be a fully qualified (3.1) ... or should have a technical diploma/degree in construction management or something similar.

He/She must be able to work under extreme pressure and must be able to identify and solve (3.2) ... He/She should be flexible, practical and helpful.

It is his/her duty to make sure that construction is carried out according to the contract (3.3) ..., that the architect's site instructions are incorporated and that (3.4) ... for any changes are issued and authorised.

He/She must maintain a neat site office and has to keep the drawing register and progress (3.5) ... up to date.

He/She is responsible for all (3.6) ... precautions, this means he/she has to check, for example, if hard hats are worn. He/She must ensure that all activities run according to the master (3.7) ..., that all labour is utilised and that the required equipment and material are always available. Various trade teams and sub-contractors have to be (3.8) ... to ensure smooth interaction.

Although he/she must (3.9) ... work to various trade foremen, the storekeeper, sub-contractors and others, the ultimate (3.10) ... for the smooth running of the project lies with him/her.

[10]

QUESTION 4

Fully explain how the following are incorporated into a building contract:

- 4.1 Nominated subcontractors
- 4.2 Selected subcontractors

(5)

(5)

[10]

QUESTION 5

Describe the role played by the following people or professionals on a construction site:

- 5.1 Agent
- 5.2 Architect
- 5.3 Engineer
- 5.4 Office manager
- 5.5 Building control officer

(2)

(2)

(2)

(2)

(2)

[10]

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QUESTION 6

In the principal building agreement (basic contract) a number of clauses regulate the handing over of completed work. Define the following key terms used in these clauses:

- 6.1 Final completion list
- 6.2 Certificate of final completion
- 6.3 Final account
- 6.4 Final payment certificate
- 6.5 Patent defect liability period
- 6.6 Latent defect liability
- 6.7 Liability insurance
- 6.8 Release of the retention or release of the construction guarantee
- 6.9 Penalty for non-completion
- 6.10 Extension of construction period

[10]**QUESTION 7**

- 7.1 Name FIVE different earthwork categories in which mechanical plant may be grouped.

Name ONE type of mechanical plant in EACH of the categories.

(5)

- 7.2 State the following in modern road construction:

7.2.1 THREE advantages of mechanisation

(3)

7.2.2 TWO advantages of labour intensive methods

(2)**[10]****QUESTION 8**

Copy the table below in the ANSWER BOOK.

Building material should be SABS approved.

Complete the table by filling in more properties (good and bad) for the relevant material.

	MATERIAL	GOOD PROPERTIES	BAD PROPERTIES
1	Concrete		
2	Cement		
3	Timber		
4	Stock brick		
5	Stone		

[10]

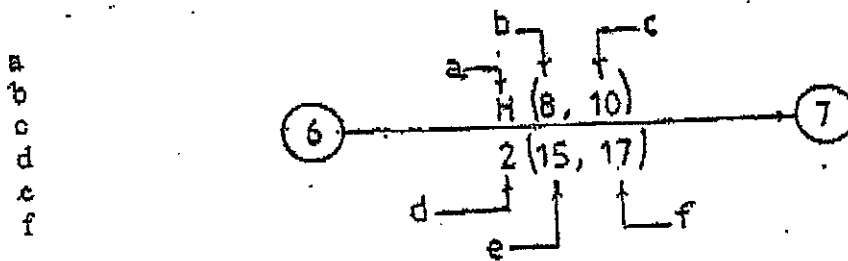
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QUESTION 9

9.1 Write down the meaning of the acronyms and abbreviations below used in project scheduling:

- 9.1.1 PERT
- 9.1.2 GERT
- 9.1.3 PDM
- 9.1.4 ADM
- 9.1.5 WBS

9.2 Label the style for the activities shown in the diagram below.



[11]

QUESTION 10

Compile a complete agenda for the contractor's site meeting where you will be the chairperson.

[9]

TOTAL: 100