THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 **BRICKWORK AND MASONRY (SUPPLEMENTARY)**

Time: 3 Hours **Year: 2020**

Instructions

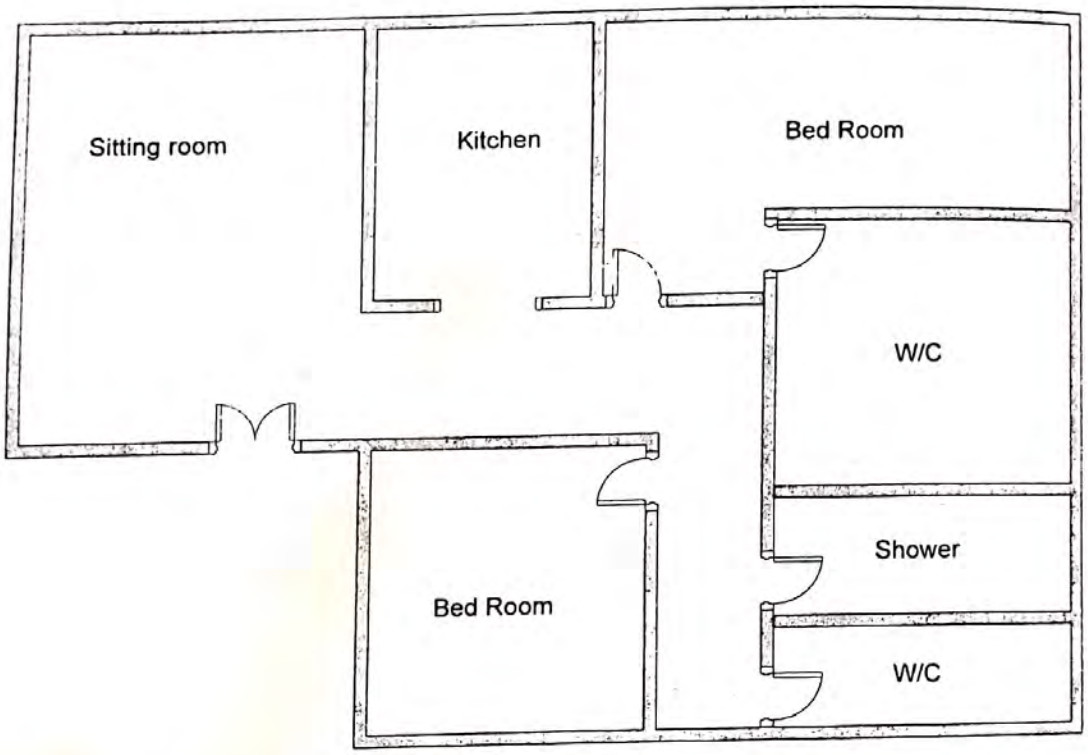
1. This paper consists of **six (6)** questions.
2. Answer question **one (1)** and any other **four (4)** questions.
3. Question **one (1)** carries **thirty two (32)** marks and the rest carry **seventeen (17)** marks each.
4. Communication devices, programmable calculators and any unauthorised materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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1. (a) Briefly explain the "drainage of a residential building".
   (b) Explain eight principles of a good drainage.
   (c) Figure 1 is a plan of a residential house. Suggest the position of Inspection chambers, septic tank and soak away pit using method of:
      (i) Combined system
      (ii) Separate system



2. (a) How can you help your workers to understand the meaning of the following term as used in building construction before commence of the work?
      (i) Mortars
      (ii) Aggregates
      (iii) Concrete
   (b) Suggest the five functional requirements of a good mortar to behave.
   (c) Describe the three common types of mortar with their proper reasonable ratio.

3. (a) Explain the following terms as used in brickwork and masonry:
      (i) Pointing
      (ii) Jointing
   (b) With the aid of sketches, briefly explain the following points as used in mortar joint.
      (i) Recessed pointing
      (ii) Keyed pointing
   (c) Illustrate the five important procedures to be followed during preparation of clay bricks:

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4. (a) Briefly explain the importance of providing openings in walls.
   (b) With the aid of a well labeled sketch, describe the following items as used in the construction of openings in the wall:
      (i) Head
      (ii) Jambs
      (iii) Reveals
      (iv) Threshold
      (v) Span
   (c) (i) What do you understand by the term "bridging an opening"?
      (ii) With the aid of sketches, describe a brick lintel, reinforced concrete lintel and a segmental arch structures used for bridging an opening.

5. (a) What is the purpose of floor as used in ground level of a building?
   (b) Propose the kind of floor finish which can be applied in the following structures:
      (i) Warehouse
      (ii) Hospital
   (c) With the aid of a labeled sketch, explain timber raised floor.
   (d) Describe the following materials used for construction of solid ground floor:
      (i) Blinding
      (ii) DPM
      (iii) Cement screed

6. (a) (i) Explain the term 'stone work'.
      (ii) Describe eight tools which are used for stone work.
   (b) Distinguish the following stone work:
      (i) Un coursed random rubble and coursed random rubble walls.
      (ii) Square rubble and regular coursed ruble walls.
   (c) (i) What is dressing?
      (ii) State three types of rocks applied for stone work.

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