

- 1) Who is the most competent person that should design the Geotechnical solution?
 - a) A Civil Engineer
 - b) A Geotechnical Engineer**
 - c) An NHBRC Inspector
 - d) None of the above

- 2) Why is the engineer's inspection and site monitoring necessary in the construction of a house?
 - a) To ensure compliance with the design
 - b) Undertakes responsibility to provide necessary documentation and overseeing construction
 - c) To instruct the builder on technical issues
 - d) All of the above**

- 3) What is the purpose of a geotechnical site investigation in the home building sector?
 - a) To create more work for engineering geologists & geotechnical engineers
 - b) To document the parameters upon which the design of the foundation is to be based**
 - c) Help council of geoscience and NHBRC collect information
 - d) Increase the cost of the house

- 4) According to the NHBRC, a wall crack of more than 25 mm is classified as?
 - a) Very severe**
 - b) Severe
 - c) Moderate
 - d) Mild

- 5) Class H4 – H6 it's for timber hazard bio classification?
 - a) Hazard Very High**
 - b) Medium hazard
 - c) Low hazard
 - d) Not applicable to soil class

- 6) Who is the competent person that should inspect the civil works during the implementation of the solution?
 - a) Geotechnical engineer
 - b) Civil engineer**
 - c) NHBRC inspector
 - d) None of the above

We have given you the first 6 answers above for free. To obtain the rest, please fill in our online application form and we shall get back to you with the code to download the paid version which has all the answers to the questions highlighted in green.

You will also be required to deposit R600 into our Fixonate, FNB Cheque Account No: 62815746378, Branch Code 250655, using your cellphone number as the deposit reference. Call us on 010 443 5919 or 072 547 5231 (Mavs) or 062 703 2927 (Stoffel) for more info

- 7) "ENGINEERING FILL" are materials..... ?
- a) In shallow fills which provide adequate bearing capacity for slabs
 - b) In fills which have been compacted within a defined moisture range, in layers and compacted to a defined density requirement which provides adequate bearing capacity for foundations & slabs.
 - c) Consisting of soil mixed with cement or lime
 - d) Sourced immediately from quarry
- 8) Fill shall be placed in uncompacted layers not exceeding mm in respect of compaction by mechanical means
- a) 150 mm
 - b) 200 mm
 - c) 300 mm
 - d) 400 mm
- 9) The upper surface/finished floor level shall not be less than above ground level?
- a) 150 mm
 - b) 200 mm
 - c) 400 mm
 - d) 100 mm
- 10) Compaction by mechanical means shall be in layers not exceeding
- a) 400 mm
 - b) 150 mm
 - c) 250 mm
 - d) 350 mm
- 11) Backfill and bedding shall be placed in layers..... (mechanical compaction)
- a) Of 200mm thickness
 - b) Of 150mm thickness
 - c) Not exceeding 100mm
 - d) Of 500mm thickness
- 12) What is the maximum distance between a backfill & a concrete slab?
- a) 600mm
 - b) 700mm
 - c) 1000mm
 - d) 1300mm
- 13) The upper surface of the floor slab shall be a minimum of mm above finish floor level?
- a) 250mm
 - b) 350mm
 - c) 150mm
 - d) 100mm

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- 14) is when a housing unit has a floor level of less than 150mm above finished surface level
- a) Raft slab
 - b) Upper surface
 - c) Slab on the ground
 - d) Semi basement
- 15) The maximum height of fill beneath floor slab and slab on the ground foundation measured at the lowest point shall not exceed... mm unless certified by a competent person
- a) 200 mm
 - b) 400 mm
 - c) 300 mm
 - d) 500 mm
- 16) Fill material shall not contain more than ... of rock or hard fragments
- a) 5%
 - b) 10%
 - c) 15%
 - d) 50%
- 17) Backfill material shall exclude stones and rock fragments of maximum dimensions larger than
- a) 1000mm
 - b) 100mm
 - c) 200mm
 - d) 150mm
- 18) What is the maximum height of a masonry foundation wall where the fill is retained behind a 220mm nominal wall thickness?
- a) 0,4 M
 - b) 0,7 M
 - c) 0,9 M
 - d) 1,8 M
- 19) What is the maximum height of a foundation wall that is not acting as a retaining wall?
- a) 1,0 M
 - b) 1,5 M
 - c) 2,0 M
 - d) 2,5 M
- 20) What is the minimum difference in ground levels (h) for 110 -110 cavity retaining wall?
- a) 600mm
 - b) 700mm
 - c) 1000mm
 - d) 1200mm

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- 21) What types of soil are good for construction?
- a) Loam & rock soil
 - b) Peat
 - c) Clay
 - d) Sand and gravel
- 22) What type of soils are good for construction?
- a) Loam & rock soil
 - b) Peat
 - c) Clay
 - d) Sand and gravel
- 23) In terms of the NHBRC soil class classification, what is a "P" soil type classification?
- a) Rock
 - b) Clays
 - c) Sand
 - d) Contaminated soils, fills & marshes
- 24) Which one of the following soils expands considerably when water is added?
- a) Clay soil site classification "H".
 - b) Rocks site classification "R"
 - c) Dolomitic areas site classification "P"
 - d) None of the above
- 25) What does the dolomite condition mean?
- a) A white mineral often tinted by impurities, found in sedimentary rocks and veins. It is used in the manufacture of cement and as a building stone (marble)
 - b) An acidic type of soil
 - c) A rock formed from volcanic conditions
 - d) Sink hole
- 26) A dolomite feature that manifests as a hole in the ground is referred to as?
- a) A sink hole
 - b) A mine
 - c) A shaft
 - d) All of the above
- 27) What type of foundation is needed in a dolomite classified area?
- a) A strip foundation
 - b) A raft, mat or slab on the ground foundation
 - c) A dolomite foundation
 - d) A pad foundation

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- 28) Dolomite area designation D1 requires the following precautionary measures
- a) General precautionary measures that are intended to prevent concentrated ingress of water into the ground
 - b) No precautionary measures are required to support development
 - c) Precautionary measures in addition to those pertaining to the prevention of concentrated ingress of water into the ground are required
 - d) Both B and C
- 29) What is the minimum soil cover over the outside of the drain pipes?
- a) 50mm
 - b) 100mm
 - c) 150mm
 - d) 300mm
- 30) Concrete anchor block shall be provided if the drain pipes
- a) Are encased in concrete
 - b) Are made of cast iron
 - c) Are of UPVC plastic
 - d) Have a gradient exceeding 1 in 10
- 31) What should the minimum soil cover be when precast or cast in situ concrete is placed over above the drain
- a) 50mm
 - b) 100mm
 - c) 150mm
 - d) 300mm
- 32) Where a water pipe is to be laid underground horizontally next to a sewer or other services, it should be at least away from the drain?
- a) 3 Meters
 - b) 5 Meters
 - c) 10 meters
 - d) 15 Meters
- 33) What is the minimum distance between drain pipes laid underground horizontally/parallel to pipe conveying water intended for general household use?
- a) No limit
 - b) 500mm
 - c) 600mm
 - d) 1500mm

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- 34) What should the minimum clearance be when a drinking water pipe crosses a sewer line?
- a) 300mm
 - b) 500mm
 - c) 600mm
 - d) 1000mm
- 35) Service trenches shall not be excavated parallel to buildings within how many meters?
- a) 1,0 Meters
 - b) 1,5 Meters
 - c) 2,0 Meters
 - d) 2,5 meters
- 36) Which foundation type is recommended for heaving soil, of site class designation between H2 and H3:(1) Raft foundation (11) Reinforced strip foundation (111) Soil Raft, (IV) Unreinforced strip foundation (V) Piled foundation.
- a) 11 and IV
 - b) I Only
 - c) 1,11 and V
 - d) All of the above
- 37) What is the minimum depth of a strip foundation trench?
- a) 100mm
 - b) 400mm
 - c) 600mm
 - d) 700mm
- 38) What is the minimum founding depth for slab on the ground foundation type?
- a) 500mm
 - b) 1500mm
 - c) 300mm
 - d) 400mm
- 39) Except founded on rock, the minimum founding depth for a strip footing below natural ground level shall not be less than
- a) 150mm
 - b) 400mm
 - c) 600mm
 - d) 300mm
- 40) What is the minimum founding depth for a strip footing foundation type?
- a) 150mm
 - b) 400mm
 - c) 300mm
 - d) 1500mm

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- 41) What is the minimum founding depth for slab on the ground foundation type?
- a) 500mm
 - b) 1500mm
 - c) 300mm
 - d) 400mm
- 42) Steps in foundations shall be provided within from corners?
- a) 2,0 Meters
 - b) 1,0 Meters
 - c) 1,5 Meters
 - d) 3,0 Meters
- 43) What is the minimum internal & external width of a strip foundation C, H, R and S soil classification sites on reinforced concrete roofs?
- a) 400mm & 500mm
 - b) 600mm & 750mm
 - c) 800mm & 1000mm
 - d) 1000mm & 1200mm
- 44) What is the minimum width of a non-continuous strip foundation to an internal masonry non load bearing wall or a timber framed wall supporting a roof with class A or class CI?
- a) 100mm
 - b) 400mm
 - c) 600mm
 - d) 700mm
- 45) What is the minimum width of a Non continuous strip foundation to a load bearing wall?
- a) 100mm
 - b) 400mm
 - c) 600mm
 - d) 700mm
- 46) The minimum width of a strip foundation for a single storey building with a tiled or sheeted roof in stable soil conditions for an external & internal wall shall be respectively?
- a) 200mm for the external wall & 400mm for the internal wall
 - b) 400mm for the external wall & 200mm for the internal wall
 - c) 500mm for the external wall & 400mm for the internal wall
 - d) 400mm for the external wall & 500mm for the internal wall
- 47) What is the minimum width of a non - continuous strip foundation to a load bearing wall?
- a) 100mm
 - b) 400mm
 - c) 600mm
 - d) 700mm

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- 48) What is the minimum slab thickness of a strip foundation?
- a) 150mm
 - b) 200mm
 - c) 300mm
 - d) 400mm
- 49) What is the minimum width of a continuous strip foundation for a load bearing wall?
- a) 200mm
 - b) 400mm
 - c) 600mm
 - d) 800mm
- 50) What is the maximum gradient for sloped trenches in strip foundations?
- a) 1:10
 - b) 1:20
 - c) 1:40
 - d) 1;80
- 51) Masonry walls shall be laid at the of strip footings/ strip foundation?
- a) Outer side
 - b) Centre
 - c) Inner side
 - d) Anywhere on top
- 52) Masonry wall shall not overhang concrete slab of raft foundations by more than
- a) 10mm
 - b) 15mm
 - c) 20mm
 - d) 30mm
- 53) Masonry units may be laid on edge as a means by which the lower course of foundation masonry may be brought up to level
- a) True
 - b) False
 - c) None of the above
 - d) All of the above
- 54) What is the minimum strength of concrete on an unreinforced foundation for a single storey home?
- a) 10 Mpa
 - b) 15 Mpa
 - c) 20 Mpa
 - d) 25 Mpa

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- 55) The strength of the concrete should not be less than..... on the lower level of reinforced double storey building?
- a) 5 Mpa
 - b) 15 Mpa
 - c) 20 Mpa
 - d) 25 Mpa
- 56) What is the expected grade/strength of infill concrete in a cavity wall?
- a) 5 MPa
 - b) 10 Mpa
 - c) 15 Mpa
 - d) 25 Mpa
- 57) The minimum strength of concrete for reinforced concrete members & precast items such as flagstones should be?
- a) 15 Mpa
 - b) 25 Mpa
 - c) 30 Mpa
 - d) 35 Mpa
- 58) Concrete shall be a minimum strength of MPa on unreinforced or reinforced slabs?
- a) 5 Mpa
 - b) 10 Mpa
 - c) 15 Mpa
 - d) 30 Mpa
- 59) The compressive strength gained by concrete after 28 days with respect to any grade?
- a) 80%
 - b) 99%
 - c) 100%
 - d) None of the above
- 60) In rules set out for the single storey buildings: The average compressive strength of the hollow and solid masonry units is not less than ... MPa and MPa?
- a) 2,0 and 5,0
 - b) 3,0 and 7,0
 - c) 6,0 and 7,0
 - d) 7,0 and 10,0

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- 61) In rules set out for the lower storey in double storey buildings: The average compressive strength of the hollow and solid masonry units is not less than Mpa and Mpa?
- a) 2,0 and 5,0
 - b) 3,0 and 7,0
 - c) 6,0 and 7,0
 - d) 7,0 and 10,0
- 62) Basic uncomplicated foundations should be constructed with concrete that has a compressive strength of at least Mpa at 28 days in the ratio?
- a) 5MPa, 1:2:2 Cement: Sand: Stone
 - b) 10MPa, 1:4:5 Cement: Sand: Stone
 - c) 15 MPa, 1:1:1 Cement: Sand: Stone
 - d) 25 MPa, 2:1:2 Cement: Sand: Stone
- 63) What is the average compressive strength for the solid masonry units for a double storey construction?
- a) 11Mpa
 - b) 15Mpa
 - c) 16Mpa
 - d) 10Mpa
- 64) What will help increase the strength of concrete?
- a) Decrease the water/concrete ratio
 - b) Decrease the amount of void in concrete by upgrading the concrete
 - c) Cure the concrete well
 - d) All of the above
- 65) What options below is used to protect the concrete from moisture loss?
- a) Leave surface open for heat to release moisture in cement mixture, thus ensuring strength
 - b) Ponding of surface with water or covering with sand or mat, or covering concrete with water proofing or plastic sheeting
 - c) Option 1 & 2
 - d) Neither of the listed options are correct
- 66) What is the concrete mix proportion for use with a 13mm (class 32.5) stone for 10 Mpa?
- a) 1 Bag cement (50kg), 2 wheelbarrow sand, 2 wheelbarrows stone, 80 L water
 - b) 1 Bag cement (50kg), 1,5 wheelbarrow sand, 1,5 wheel barrows of stone, 30 L water
 - c) 2 Bags cement (100 kg), 4.5 wheel barrow sand, 3 wheelbarrow stone, 66L water
 - d) 2 bag cement, 2 wheelbarrows of sand, 2 wheelbarrows of stone, 55L water

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- 67) Bags of cement should be stacked to a height not exceeding bags?
- a) 8
 - b) 10
 - c) 12
 - d) 20
- 68) A bag of common cement has a mass of 50kg & a volume of approximately ... when packed under air pressure at the factory?
- a) 33 litres
 - b) 66 litres
 - c) 99 litres
 - d) None of the above
- 69) Concrete curing methods include?
- a) Plastic sheeting
 - b) Water curing
 - c) None of the above
 - d) All of the above
- 70) How can concrete be protected from losing moisture?
- a) Damp sand, cover it with plastic and spray the surface with water
 - b) Damp sand, cover it with a cloth and spray the surface with water
 - c) All of the above
 - d) None of the above
- 71) Why is concrete compacted?
- a) To eliminate bubble and void as well as to sustain a level surface
 - b) To make it harder
 - c) To soften it for mixing
 - d) All of the above
- 72) What quality of water is used for concrete mixing?
- a) Drinking (potable) water
 - b) Gray water
 - c) Blackish water
 - d) River water
- 73) Reinforcing should be clean of before casting concrete?
- a) Rust layers and oil paint
 - b) Water & Dirt
 - c) Moisture & Dirt
 - d) All of the above

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- 74) All reinforcements at the time of placing shall be free from?
- Hardened mortar
 - Binding waters
 - Soft concrete
 - Rust, scale, oil
- 75) Cover to reinforcement shall not be less than mm?
- 25 mm
 - 50 mm
 - 75 mm
 - 100 mm
- 76) Reinforcement splicing shall be at least
- 300 mm
 - 500 mm
 - 600 mm
 - 1000 mm
- 77) The concrete shall be of such workability that it can readily be?
- The concrete shall be of such workability that it can be readily compacted into the corners of the framework and around reinforcement without segregation of the materials or excessive bleeding of free water at the surface.
 - Of the framework outside reinforcement without segregation of the materials
 - Of the framework inside unreinforcement without segregation of the materials
 - Of the framework inside unreinforcement with segregation of materials
- 78) What does a slump test indicate about concrete properties on site?
- Workability
 - Strength
 - Creep properties
 - Tensile
- 79) Honey combing in concrete occurs because of the following
- Congested reinforcement
 - Poor vibration
 - Poor placement
 - All of the above
- 80) In hollow bricks used for cavity wall foundations, what should the grading of mortar be?
- 3.0 Mpa & 10.0 Mpa
 - 3.0 Mpa & 7.0 Mpa
 - 1.0 Mpa & 10.0 Mpa
 - None of the above

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- 81) What is the NHBRC required thickness of brick force?
- a) 2.5 mm
 - b) 3.2 mm
 - c) 2.8 mm
 - d) 5.0 mm
- 82) What happens to the space in between hollow bricks when that type of brick is used?
- a) Can be filled with mortar
 - b) Can be filled with concrete
 - c) Can be filled with iron bars for reinforcement
 - d) Any of the above
- 83) Cement bricks and clay bricks can be mixed in masonry construction?
- a) True
 - b) False
 - c) If wetted
 - d) None of the above
- 84) We can use cement bricks to lift the surface bed rebar/mesh as long as the bricks are cut in half?
- a) True
 - b) False
 - c) Makes no difference
 - d) False, the bricks have to be full length
- 85) Which of the following bricks should be wetted before placed
- a) Concrete bricks
 - b) Sand lime bricks
 - c) Clay bricks
 - d) None of the above
- 86) Which of the following bricks should be wetted before placed?
- a) Concrete bricks
 - b) Sand lime bricks
 - c) Clay bricks
 - d) None of the above
- 87) What happens to the activities of hollow blocks where the masonry is required to spread concentrated loads?
- a) The openings can be filled with concrete
 - b) The openings can be filled with grout
 - c) The openings can be filled with mortar
 - d) All of the above

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- 88) Mortar shall be used within of mixing?
- a) 1 Hour
 - b) 2 Hour
 - c) 3 Hour
 - d) 4 Hour
- 89) Mortar in which initial set has occurred (i.e., thumbprint hard) shall be?
- a) Used for infill concrete
 - b) Used under supervision of component person
 - c) Not be used
 - d) Used within two hours of mixing
- 90) Plaster mixed materials , which is not applied to wall within two hours of mixing shall be?
- a) Remixed with cement
 - b) Remixed with water
 - c) Discarded
 - d) All of the above
- 91) Cement plaster not applied within 2 hours on walls shall be?
- a) Used after more water is added
 - b) Discarded
 - c) Used after more water and cement is added
 - d) None of the above
- 92) Which one of the following are common defects in plaster
- a) Grinning
 - b) Debonding
 - c) Lack of hardness caused by applying plaster too much sun and wind
 - d) All of the above
- 93) What is the minimum width/thickness of internal plaster?
- a) 10mm
 - b) 25mm
 - c) 35mm
 - d) 45mm
- 94) What is the maximum width/thickness for external plaster?
- a) 15mm
 - b) 25mm
 - c) 35mm
 - d) 45mm

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- 95) Plaster can be applied to masonry and concrete not exceeding for masonry units and in concrete surfaces?
- a) 22mm & 16mm
 - b) 10mm & 15mm
 - c) 15mm & 20mm
 - d) 25mm & 35mm
- 96) When properly laid , it will provide a highly effective impermeable barrier against the ingree of wind driven rain and dust. It should therefore provide on all tile and slated roofs, irrespective of the slope and if ceilings are not installed. What is this construction material called?
- a) DPC (Damp Proof Course)
 - b) DPM (Damp Proof Material)
 - c) Under tile membrane
 - d) Fiber cement
- 97) What is the purpose of floor underlays in timber structures?
- a) To serve as bracing for floor joists
 - b) To serve as noise dampener
 - c) To provide a vapour barrier to prevent moisture from coming in
 - d) All of the above
- 98) The under floor membrane shall have a thickness of not less than mm?
- a) 0,25mm
 - b) 0,50mm
 - c) 0,35mm
 - d) 10,0mm
- 99) The lapping of under floor membranes shall not be less than?
- a) 100mm
 - b) 300mm
 - c) 150mm
 - d) 450mm
- 100) What is the lapping lengths of underfloor membranes at joints?
- a) Not less than 1000mm
 - b) Not less than 200mm
 - c) More than 150mm
 - d) There is no minimum lapping length

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- 101) What is the minimum depth of floor board underlays placed to avoid moisture intake from the surface ground?
- a) 450mm
 - b) 550mm
 - c) 650mm
 - d) 850mm
- 102) What is the minimum required width of a wooden floor?
- a) 150mm
 - b) 350mm
 - c) 600mm
 - d) 900mm
- 103) What is the minimum required length of a wooden floor?
- a) 800mm
 - b) 1000mm
 - c) 1200mm
 - d) 1400mm
- 104) On suspended timber floors, what is the minimum clearance between a gird and a joist?
- a) 800mm
 - b) 1000mm
 - c) 1200mm
 - d) 1400mm
- 105) What is the minimum height above ground level for timber floor joists?
- a) 150mm
 - b) 250mm
 - c) 350mm
 - d) 400mm
- 106) In the cavity wall construction, the cavity shall not be less than?
- a) 50mm
 - b) 110mm
 - c) 150mm
 - d) 200mm
- 107) In the cavity wall construction, the cavity shall not exceed?
- a) 50mm
 - b) 110mm
 - c) 150mm
 - d) 200mm

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- 108) In the cavity wall, what is the strength of concrete infill in the first course?
- a) 5 MPa
 - b) 10 MPa
 - c) 15 MPa
 - d) 25 MPa
- 109) In cavity wall construction, weep holes shall at least be required to be spaced horizontally with a maximum spacing of?
- a) 0,5 Meters
 - b) 1,0 Meters
 - c) 1,5 Meters
 - d) 2,0 Meters
- 110) What is the vertical spacing requirement of the tie in the cavity wall construction?
- a) 250mm
 - b) 450mm
 - c) 600mm
 - d) 950mm
- 111) What is the horizontal spacing requirement of the tie in cavity wall construction?
- a) 250mm
 - b) 450mm
 - c) 600mm
 - d) 950mm
- 112) External walls of buildings located in areas of prolonged heavy rain, wind driven rain and or where condensation is high shall be of _____ construction?
- a) Single leaf
 - b) Double leaf
 - c) Cavity wall
 - d) Non - Plastered 90mm wall thick
- 113) Tothing of masonry shall
- a) be permitted only at corners
 - b) Be permitted at window openings
 - c) Not be permitted
 - d) Be filled with mortar
- 114) Vertical chases in solid units shall not exceed of the thickness of the wall or leaf
- a) 1/4 of the thickness of the wall
 - b) 1/3 of the thickness of the wall
 - c) 1/2 of the thickness of the wall
 - d) None of the above

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- 115) Vertical chases in solid units shall not exceed dig into the thickness of the wall?
- a) 1/6
 - b) 1/5
 - c) 1/4
 - d) 1/3
- 116) Horizontal chases in solid units shall not exceed of the thickness of the wall or leaf in a 100mm block?
- a) 6mm
 - b) 10mm
 - c) 16mm
 - d) 33mm
- 117) The minimum bearing of concrete floors on load bearing walls are?
- a) 90mm
 - b) 75mm
 - c) 50mm
 - d) 20mm
- 118) The minimum end bearing for concrete lintel/ masonry staircases shall be
- a) Not less than 90mm
 - b) Not less than 220mm
 - c) Not less than 35mm
 - d) None of the above
- 119) What is the minimum slab thickness for a non - load bearing wall?
- a) 150mm
 - b) 200mm
 - c) 250mm
 - d) 400mm
- 120) To consistently control & monitor the levelness of masonry construction you will make use of?
- a) Dumpy level
 - b) Builder's square
 - c) Spirit level
 - d) Profile & gauge lines
- 121) Masonry walling shall not overhang concrete foundations slabs by more than..... ?
- a) 50mm
 - b) 45mm
 - c) 25mm
 - d) 20mm

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- 122) Masonry walls shall not be laid when the temperature is
- a) Less than 0 degrees celsius
 - b) Less than 5 degrees celsius
 - c) More than 15 degrees celsius
 - d) More than 25 degrees celsius
- 123) What is the name given to a horizontal mortar joint in a masonry wall?
- a) A perpend joint
 - b) A vertical chase
 - c) A control joint
 - d) A bedding joint
- 124) What is the name given to a vertical mortar joint in a masonry wall?
- a) A perpend joint
 - b) A vertical chase
 - c) A control joint
 - d) A bedding joint
- 125) What is the nominal minimum width of mortar, perpend & bedding joints?
- a) 5mm
 - b) 50mm
 - c) 150mm
 - d) 200mm
- 126) What is the nominal maximum width of mortar, perpend & bedding joints?
- a) 20mm
 - b) 50mm
 - c) 100mm
 - d) 200mm
- 127) All perpend and bed joints shall have a nominal thickness of mm?
- a) 15mm
 - b) 10mm
 - c) 25mm
 - d) 6mm
- 128) What is the minimum thickness of the first bed joint above a supporting element (Foundation, slab or lintel)?
- a) 5mm
 - b) 10mm
 - c) 15mm
 - d) 35mm

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- 129) The maximum thickness of the first bed joint must not be more than
- 35mm
 - 30mm
 - 60mm
 - None of the above
- 130) In burnt clay masonry units, control joints shall generally be provided at minimum intervals of?
- 4m wide
 - 6m wide
 - 9m wide
 - 12m wide
- 131) The permissible deviation (PD) for perpend joint thickness in housing units is?
- 5 + 20 mm
 - 10 + 15 mm
 - 5 + 15 mm
 - 5 + 10 mm
- 132) The permissible deviation (PD) for first bed joint thickness (above foundation) in housing units is
- 5 + 25 mm
 - 10 + 35 mm
 - 5 + 20 mm
 - 5 + 10mm
- 133) Generally props are provided at centers and are left in place for a period of at least days?
- 1,2 m for 7 days
 - 2,0 m for 5 days
 - 1,5 m for 7 days
 - 1,0 m for 3 days
- 134) Lintels over garage openings shall be adequately supported for a period of not less than
- 4 days
 - 7 days
 - 2 days
 - None of the above
- 135) What is a minimum lintel bearing for spans greater than or equal to 2,5m?
- 50mm
 - 350mm
 - 220mm
 - 600mm

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- 136) Lintels supporting roof trusses with a span less than or equal to 1500mm shall have a minimum bearing of
- a) 150mm
 - b) 350mm
 - c) 100mm
 - d) 75mm
- 137) Lintels supporting roof trusses with a span between 1,5 m & 2,5 m shall have a minimum bearing of?
- a) 150mm
 - b) 250mm
 - c) 350mm
 - d) 75mm
- 138) After how many days can props/ lintels be removed on side walls, columns & vertical faces of beams?
- a) Between 2 to 4 days or as per engineer's discretion
 - b) 7 days
 - c) 14 days
 - d) 21 days
- 139) After what period can props be removed for lintels with a bearing span between 1,5 m to 2,5 m?
- a) Between 2 to 4 days or as per engineer's discretion
 - b) 7 days
 - c) 14 days
 - d) 21 days
- 140) After what period can props be removed for beam soffits and arches with a span equal or greater than 4,5m?
- a) Between 2 to 4 days or as per engineers discretion
 - b) 7 days
 - c) 14 days
 - d) 21 days
- 141) After what period can props be removed for beams spanning over 6m?
- a) 3 days
 - b) 7 days
 - c) 14 days
 - d) 21 days

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- 142) For lintels supporting roof trusses with a span less than or equal to 1,5m, the lintels shall be set in mortar and have a minimum bearing of mm?
- a) 100mm
 - b) 150mm
 - c) 450mm
 - d) 350mm
- 143) Minimum height of underside lintel level for windows, doors etc above finished floor level is
- a) 2 100mm
 - b) 2 600mm
 - c) 2 400mm
 - d) 2 000mm
- 144) What is the minimum height of a window from roof to the upper top of the window?
- a) 450mm
 - b) 600mm
 - c) 800mm
 - d) 1100mm
- 145) The external sills at windows should be
- a) Level
 - b) Slopped towards
 - c) Slopped inwards
 - d) curved
- 146) Lugs for door/window frames shall extend approximately into the masonry wall?
- a) 100mm
 - b) 250mm
 - c) 300mm
 - d) 450mm
- 147) Steel door frames and built in window frame surrounds shall have a minimum thickness of not less than mm?
- a) 1,0 mm
 - b) 2,5 mm
 - c) 3,5 mm
 - d) 4,5 mm
- 148) What is the nominal height of a masonry above window openings where roof trusses are supported?
- a) 1000 mm high
 - b) 300 mm high
 - c) Not less than 400mm
 - d) Any height is acceptable

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- 149) An area extending to mm beyond the perimeter of the housing unit shall be cleared of refuse & vegetation including bushes, shrubs & trees
- a) 1500 mm
 - b) 750 mm
 - c) 1000 mm
 - d) 1200 mm
- 150) What is the minimum area for the whole floor area of a habitable dwelling?
- a) 15 m²
 - b) 30 m²
 - c) 45 m²
 - d) 60 m²
- 151) What is the minimum area for the whole floor area of a habitable dwelling?
- a) 1,8 M
 - b) 2,1 M
 - c) 2,4 M
 - d) 6,0 M
- 152) What is the minimum floor area for a habitable room other than a kitchen, scullery or laundry?
- a) 1,8 M
 - b) 2,1 M
 - c) 2,4 M
 - d) 6,0 M
- 153) What is the minimum clear height of a bedroom?
- a) 1,2 M
 - b) 1,8 M
 - c) 2,0 M
 - d) 2,4 M
- 154) What is the maximum rise of a stair case?
- a) 100 mm
 - b) 150 mm
 - c) 200 mm
 - d) 300 mm
- 155) The minimum width of the stair treads shall be mm and with minimum of mm risers to a maximum of risers?
- a) 250, 170 , 200 mm
 - b) 150, 120 , 150 mm
 - c) 300, 400, 450 mm
 - d) None of the above

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- 156) What is the minimum headspace above a stair case measured vertically from the pitch line to the ceiling?
- a) 1,5 meters measure vertically from the pitch line
 - b) 2,1 meters measure vertically from the pitch line
 - c) 2,5 meters measure vertically from the pitch line
 - d) 3,0 meters measure vertically from the pitch line
- 157) What is the minimum height of balustrade and parapet walls to a flat roof top with no restriction of access?
- a) 1 500 mm
 - b) 500 mm
 - c) 150 mm
 - d) 1 000 mm
- 158) What is the importance of a DPC?
- a) To prevent mist & fog into the house?
 - b) To allow moisture penetration
 - c) To prevent rising dam through walls
 - d) All of the above
- 159) A strip of approved DPC sheeting 150mm wide should be placed length wise under the ridge tiles, over lapping the top course of tiling on each side by 25mm. Lapped ends must be supported underneath and the overlap should not be less than ?
- a) 75mm
 - b) 80mm
 - c) 85mm
 - d) 150mm
- 160) All horizontal damp proof courses shall protrude ... from the external face of the wall?
- a) 5mm
 - b) 10mm
 - c) 20mm
 - d) 40mm
- 161) When is a damp proof course used on a cavity wall that is prone to rainfall?
- a) In higher moisture content conditions
 - b) In low moisture content
 - c) During the rain season
 - d) All the time

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- 162) When is damp proof course not required to be provided above all window & door openings in cavity walls?
- a) The house is built in dry part of the country (e.g. Musina, Upington etc.)
 - b) If the roof overhangs by more than 750mm
 - c) If the distance between the top of the window frame & the wall plate is less than 700mm
 - d) B & C
- 163) What type of wall ties are used on a damp area?
- a) Butterfly wall & fish tail wall ties
 - b) Remedial wall ties
 - c) Block wall ties
 - d) Stainless steel wall ties
- 164) What is the minimum wire diameter of butterfly type wall ties
- a) 1,20 mm
 - b) 2,80 mm
 - c) 3,15 mm
 - d) 2,20 mm
- 165) Wall ties used 30km from the coastline shall be?
- a) Galvanized wire
 - b) Stainless steel of grade 816
 - c) Either of the above
 - d) None of the above
- 166) Which method can be used to join walls at an intersection?
- a) Galvanized steel & wires
 - b) Wall ties & mortar
 - c) Steel wires
 - d) All of the above
- 167) What does Y10 stand for?
- a) 10mm diameter steel bar and is of mild steel.
 - b) 10mm diameter steel bar and is of high tensile
 - c) 10mm diameter steel bar and is of low yield steel
 - d) 10mm diameter steel bar and is of average yield steel
- 168) Rebars are available in different shapes and sizes. What type of rebar is depicted in the below picture?
- a) Mild rebar
 - b) Hot rolled high yield stress
 - c) Finned rebar
 - d) M type rebar

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- 169) What is used to cover reinforced wires (rebar)/ wire mesh placed within concrete?
- Silicon
 - Rubber
 - Mortar
 - Nothing
- 170) If an electrical conduit pipe is fitted through the DPM, what's used to fill the openings?
- A PVC
 - A bituminous felt membrane
 - A polythene plastic
 - Self - adhesive tape
- 171) Where are drips inserted on concrete roofs?
- On top of the under layment at all rakes, and below or on top of the underlayment at the eaves
 - Underneath the underlayment at all rakes and above of the underlayment in eaves
 - Any of the above
 - None of the above
- 172) What is the correct size of brandering?
- 45 x 45 mm
 - 38 x 38 mm
 - 48 x 48 mm
 - 60 x 60 mm
- 173) What are the minimum dimensions of a wall plate supporting the tie beam & rafters?
- 38 x 114 x 76 mm
 - 40 x 120 x 80 mm
 - 60 x 100 x 100 mm
 - 60 x 120 x 80 mm
- 174) The minimum size of purlins supporting sheeting materials is?
- 76 x 50 mm
 - 70 x 70 mm
 - 80 x 80 mm
 - 50 x 50 mm
- 175) The trusses, rafters and purlin beams shall be supported on wall plates of minimum or similar flat bearing surfaces which are levelled and positioned so as to ensure that the ends of such members are vertically aligned
- 38mm x 38mm
 - 38mm x 114mm
 - 38mm x 76mm
 - 50mm x 76mm

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- 176) Wall plate shall have a minimum height of from floor slab?
- a) 2 600 mm
 - b) 2 100 mm
 - c) 2 400 mm
 - d) 2 700 mm
- 177) What is the name given to a filling of brick between the roof timber situated from wall plate to roof covering, that is used to prevent the entry of birds?
- a) A beam filling
 - b) Engineering filling materials
 - c) Sand filling
 - d) None of the above
- 178) Wall plate level shall have a minimum height of from floor slab?
- a) 2 600 mm
 - b) 2 100 mm
 - c) 2 400 mm
 - d) 2 700 mm
- 179) Purlins and rafter splices should not be put within ... from gable ends?
- a) 0,5 m
 - b) 1,0 m
 - c) 1,5 m
 - d) 2,0 m
- 180) what is the top part of the timber framed structure called?
- a) A ridge board
 - b) Rafter
 - c) Purlin
 - d) Joist
- 181) What is the name given to a horizontal member attached to an unplated material perpendicular to a rafter in order to support the roof sheeting?
- a) Purlin
 - b) A beam
 - c) A rafter
 - d) A joist
- 182) What is the name given to a vertical member attached to an unplated material perpendicular to a purlin in order to support the roof sheeting?
- a) Purlin
 - b) A beam
 - c) A rafter
 - d) Joist

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- 183) In timber frame structures what is a stud?
- a) Is the vertical elements in the wall frames
 - b) Is the bracing pieces installed in between studs
 - c) Is the timber element that is installed below the wall plate
 - d) None of the above
- 184) What is the minimum width of a flashing/ valley gutter?
- a) 75 mm
 - b) 150 mm
 - c) 300 mm
 - d) 600 mm
- 185) What is the maximum center distance of flashing gutters placed at alternate flutes?
- a) 75 mm
 - b) 150 mm
 - c) 300 mm
 - d) 600 mm
- 186) What is the minimum fall toward the external gutter or roof edge for a flat roof?
- a) 1 : 10
 - b) 1 : 30
 - c) 1 : 50
 - d) 1: 70
- 187) What's the minimum flashing for valley gutter?
- a) 100 mm
 - b) 300 mm
 - c) 200 mm
 - d) 410 mm
- 188) Flashing shall be fixed with an end lap of not less than..... mm?
- a) 150
 - b) 120
 - c) 90
 - d) 60
- 189) Down pipes, if provided, shall discharge into concrete lined drainage channels, which discharge the water at least 1,5M away from the building in dolomitic areas designated as being D2 & D3?
- a) True
 - b) Partially true
 - c) False
 - d) None of the above

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- 190) What is the minimum anchor embedment for a heavy roof type on a solid unit?
- a) 150 mm
 - b) 300 mm
 - c) 400 mm
 - d) 600 mm
- 191) What is the minimum anchor (Roof ties) embedment to masonry for heavy roofs?
- a) 20 mm
 - b) 90 mm
 - c) 50 mm
 - d) 100 mm
- 192) Roof trusses shall be tied down to the supporting walls and columns by means of?
- a) 4mm brick force
 - b) Galvanized steel straps or galvanized steel wires that is built into the wall
 - c) Roof wire drilled into the wall
 - d) Galvanized steel wires & drilled into the wall
- 193) Where must the drips provided on concrete roofs be, and at what depth?
- a) Inside roof trusses and at 15 mm depth
 - b) At roof overhangs and 12 mm depth
 - c) Option 1 & 2 are correct
 - d) None of the above
- 194) The specialist water proofing contractor shall provide a home builder with at least ... guarantee?
- a) 6 Months
 - b) 12 Months
 - c) 3 years
 - d) 5 years
- 195) What is the minimum angle/slope/pitch of concrete/clay roof tiles?
- a) 7 degrees
 - b) 27 degrees
 - c) 13 degrees
 - d) 17 degrees
- 196) Why is it necessary to use graded timber in roof truss construction?
- a) Because timber without an appropriate grade mark & certification is considered non structural?
 - b) Graded timber is expensive
 - c) Graded timber is used by experienced builders/contractors
 - d) All of the above

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- 197) Black cross (ungraded) timber may only be used in timber structure assembly as?
- a) Purlins for sheeted roofs
 - b) Battens for tiled roofs
 - c) Battens for ceilings
 - d) None of the above
- 198) What is the minimum depth of penetration for preservative treatment as required by SANS timber and of practice?
- a) Fully penetrated
 - b) 50 mm
 - c) 20 mm
 - d) 100 mm
- 199) Confirm where the timber hazard classification of H3 for timber may be applied?
- a) Internal applications only
 - b) Exterior above ground applications only
 - c) In ground contact applications
 - d) Fresh water and heavy wet soil applications
- 200) What is logging on timber frame structure?
- a) Logging is the process of cutting, skidding and processing trees to produce timber and pulp to supply the world's markets for construction & other products
 - b) It is the process of treating trees with insecticides to avoid termites from eating through the woods
 - c) It is the process of drying trees for charcoal making
 - d) All of the above
- 201) Which material can be used as sheathing in timber frame structures?
- a) OSB (Oriental Standard Board)
 - b) Hard Board (Engineered Timber)
 - c) Ply wood
 - d) All of the above
- 202) In single storey buildings of masonry construction: the span of roof trusses/ rafter between supporting walls does not exceed M?
- a) 15
 - b) 10
 - c) 9
 - d) 8

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- 203) The thickness of galvanized roof sheeting shall not be less than?
- a) 0,2 mm
 - b) 2,0 mm
 - c) 5,0 mm
 - d) 0,5 mm
- 204) Who shall install a water proofing system on top of a flat roof?
- a) A civil engineer
 - b) A competent person
 - c) An architecture
 - d) A geotechnical manager
- 205) Who is responsible for all the structural drawings of a home?
- a) A civil engineer
 - b) A competent person
 - c) An architecture
 - d) A geotechnical manager
- 206) Which of the following architectural design drawing paper size indicates the biggest paper size?
- a) A5
 - b) A4
 - c) A3
 - d) A0
- 207) Which one is the acceptable method of bracing a timber frame in terms of sabs 082?
- a) Solid timber brace
 - b) Metal angle
 - c) Flat metal brace
 - d) All of the above
- 208) An enrolment certificate cannot be cancelled at what stage?
- a) Before construction commence
 - b) During construction stage
 - c) After the occupation date
 - d) If strip foundations are used
- 209) Which institution is responsible for the technical assessment & approval of innovative systems & products where no national standards exist?
- a) South African National Standards (formerly SABS)
 - b) CSIR
 - c) Agreement South Africa
 - d) NRCS

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210) Any person in the business of home building can register with the

- a) SABS
- b) NHBRC
- c) CIDB
- d) SARS

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