# Myfuture CBC Revision

# building construction - Grade 10

Question Paper

1. Which valve type is best for a fast on/off shut off in household plumbing?

A. Globe valve

B. Ball valve

C. Needle valve

D. Butterfly valve

2. What does 'safe bearing capacity' of soil mean?

A. The maximum pressure that soil can carry without excessive settlement
B. The height of the topsoil layer

C. The total weight of soil at a site

D. How fast water drains through soil

3. Which of these materials is least suitable as a foundation material for a modern permanent building?

A. Good compacted crushed stone

B. Reinforced concrete

C. Soft decaying organic topsoil

D. Stone or masonry placed on firm ground

4. What does the term 'overdigging and filling' mean when preparing ground for a slab?

A. Leaving unstable soft soil in place and pouring the slab on top
B. Excavating deeper than the slab level and replacing poor soil with compacted suitable fill
C. Filling the slab with water before pouring concrete

D. Digging the shallowest possible foundation to save time

5. Which material is most commonly used for cold water supply pipes in Kenyan houses?

A. Concrete pipe

B. Copper pipe

C. PVC (uPVC) pipe

D. Galvanised steel pipe

6. When is the best time to inspect timber for defects before use?

A. After the structure is completed

B. Only when a problem occurs

C. Before installation on site

D. After painting the timber

7. What does 'finishing' concrete mean?

A. Removing reinforcement bars

B. Letting the concrete freeze

C. Smoothing and texturing the surface after placing and compacting
D. Mixing cement and sand only

8. What is a union used for in pipework?

A. To reduce pipe temperature

B. To allow two pipes to be disconnected without rotating them
C. To permanently weld two pipes together

D. To measure flow velocity

9. Why is a building's load path important in foundation design?

A. It determines where the paint should be applied

B. It replaces the need for soil tests

C. It shows how loads travel from roof and walls down to the foundations so foundations can be
D. It tells the colour of bricks to use

10. Why should water supply pipes be kept accessible rather than fully buried in walls where possible?

A. So leaks are easier to find and repair

B. To prevent water flow

C. So they can be hidden from tenants

D. To increase pipe wear

11. Which practice helps prevent corrosion of steel water pipes in Kenya?

A. Wrapping in untreated paper

B. Galvanizing the steel

C. Painting with plain water

D. Leaving it in soil without protection

12. Which test measures the strength of concrete cubes after curing?

A. pH test of water

B. Slump test on fresh concrete

C. Abrasion test on steel

D. Compressive strength test using a compression testing machine

13. Which soil type is known in Kenya for causing swelling and shrinking that can damage foundations?

A. Sandy soil

B. Black cotton soil (expansive clay)

C. Gravelly soil

D. Rocky soil

14. Which of the following is a common preservative treatment used to protect timber against termites and fungi, and is safe for many indoor uses?

A. Borate (borax) treatment

B. Soaking timber in seawater

C. Painting with lead paint

D. Pouring petrol over timber

15. What is meant by 'bearing stratum' under a foundation?

A. A temporary wooden formwork

B. The decorative finish on foundation walls

C. The topmost grass layer

D. The layer of soil or rock that safely supports the loads

16. Why is reinforcement mesh (steel mesh) used in a ground-bearing concrete slab?

A. To act as a waterproof membrane for the slab

B. To control cracking by holding shrinkage and temperature cracks together

C. To reduce the need for a hardcore layer

D. To make the slab lighter and more flexible

17. Which soil type generally has the highest bearing capacity for foundations?

A. Soft clay

B. Dense rock or compacted gravel

C. Silty peat

D. Loose organic soil

18. Which device prevents water from flowing backwards into the supply line, protecting the clean water from contamination?

A. Check valve (non-return valve)

B. Drain plug

C. Pressure gauge

D. Butterfly valve

19. What is the main purpose of a damp-proof membrane (DPM) under a ground floor slab?

A. To increase the structural strength of the slab

B. To act as a decorative finish beneath tiles

C. To prevent rising damp and moisture from the ground entering the floor

D. To make the ground floor fire resistant

20. Why is pipe insulation important for hot water pipes in a house?

A. To increase corrosion

B. To make the pipe heavier

C. To reduce heat loss and save energy

D. To change the water colour

21. Why are flexible braided hoses used to connect taps and appliances to water supply pipes?

A. They cool the water before it reaches the tap

B. They allow easy connection, absorb movement and fit in tight spaces
C. They turn cold water into hot water

D. They stop water from flowing

22. Which of the following is NOT a function of good foundation design?

A. Provide long-term stability and control settlement

B. Resist uplift and lateral forces

C. Transfer loads safely to ground

D. Prevent any maintenance of the building forever

23. Which Kenyan authority should builders consult about environmental impact before major site works?

A. Ministry of Agriculture only

B. National Environment Management Authority (NEMA)

C. Kenya Postal Service

D. County cinema permits office

24. Which material is best for carrying aggressive chemical waste from laboratories because of high chemical resistance?

A. Uncoated iron

B. Cast iron

C. Wooden pipes

D. HDPE (high-density polyethylene)

25. What does 'bearing capacity' of soil mean?

A. The ability of soil to support building loads per unit area

B. The colour strength of soil

C. The time it takes for soil to dry

D. The amount of rain a soil can hold

26. What is the role of a sand-cement screed on top of a ground floor slab?

A. To provide a smooth, level bedding for the final floor finish like tiles
B. To replace the need for a DPM

C. To absorb moisture from inside the building

D. To act as the primary structural layer carrying loads of the building

27. What is a simple sign that timber is not well seasoned and may cause problems if used for indoor joinery?

A. It is painted and polished already

B. It is very light and dry with no smell

C. It has a high moisture content, feels damp and may warp or shrink after installation
D. It is perfectly straight and stable

28. What is a soakaway used for on a building site?

A. To allow clean stormwater to drain into the ground and reduce surface water
B. To dispose of solid waste

C. To provide drinking water for workers

D. To store construction equipment

29. In plumbing, pipe sizes are commonly referred to by which term?

A. Pipe weight index

B. Actual outer color

C. Length in meters only

D. Nominal bore (NB)

30. Which aggregate size is generally used for concrete in beams and slabs?

A. Clay lumps 50–70 mm

B. Coarse aggregate about 10–20 mm

C. Fine powder 0.1 mm only

D. Large boulders over 200 mm

31. Which grading method is commonly used to select timber for visible structural work like beams and rafters?

A. Grading only by colour without looking at defects

B. Tossing pieces and picking randomly

C. Grading by weight alone

D. Visual grading by inspecting for defects and knot size

32. Why is termite treatment important before constructing a ground floor with timber elements in Kenya?

A. To make the soil more fertile for planting trees nearby

B. To make the finished floor look brighter

C. To protect timber elements and prevent termite damage that can cause structural

D. Termite treatment is not necessary in Kenya

33. What is a shallow foundation?

A. A foundation placed at a depth not more than its width and close to ground surface

B. A foundation sunk to bedrock regardless of width

C. A foundation made only from bricks above ground

D. A temporary wooden base used during construction

34. What is 'bleeding' in fresh concrete?

A. A method of curing with wet burlap

B. Cracking caused by heavy loads

C. Staining from steel reinforcement

D. Separation of water rising to the surface after placement

35. What is the usual method for joining copper water pipes in household plumbing?

A. Soldering (soft soldering or brazing) with appropriate lead-free materials

B. Solvent cement used for PVC

C. Magnetic coupling

D. Plastic snap-fit only

36. Why should concrete be placed continuously within permitted time when forming a single element?

A. To change the aggregate size in each layer

B. To allow each layer to dry fully before next is poured

C. To make curing unnecessary

D. To avoid cold joints which are weak planes between pours

37. What is hydration in the context of concrete?

A. Chemical reaction between cement and water that causes hardening

B. The process of adding reinforcement

C. Mixing sand and soil only

D. Evaporation of water from the surface

38. Which tool is best for cutting small curved shapes or intricate patterns in timber by hand?

A. Spirit level

B. Coping saw

C. Sledgehammer

D. Stone mallet

39. Which soil test is commonly used on site to assess soil for foundations in simpler projects?

A. Trial pit inspection and simple field tests

B. Asking neighbours about the soil colour

C. Cooking the soil to see its smell

D. Measuring the number of ants on the site

40. Which document or plan should be available on site to guide correct foundation location and dimensions during setting out?

A. A generic foundation sketch from the internet

B. Neighbour's house plans

C. Contractor's personal notes only

D. The approved building plan and drawings

41. Why are control (contraction) joints provided in large ground floor slabs?

A. To allow water to enter the slab

B. To avoid using reinforcement mesh

C. To direct cracking to predetermined lines so cracks are neat and controlled
D. To permanently weaken the slab at random points

42. What is the purpose of the slump test on fresh concrete?

A. To measure the cement content directly

B. To check the colour of concrete

C. To measure the workability (consistency) of the concrete mix
D. To test the compressive strength after 28 days

43. Why must aggregates be clean and free from dirt and organic matter?

A. Contaminants reduce bond with cement and weaken concrete
B. Organic matter increases cement content

C. Dirt makes concrete set faster

D. Soil improves strength

44. Which type of plastic pipe is commonly used for flexible cold-water underground mains and irrigation in Kenya?

A. Brass

B. Glass

C. Concrete

D. HDPE (high-density polyethylene)

45. Which concrete mix is commonly used for ordinary ground floor slabs in many small building works?

A. 1 part cement : 2 parts sand : 4 parts aggregate (1:2:4)

B. Pure cement with no aggregate

C. Only sand and water with no cement

D. 5 parts cement : 1 part sand : 1 part aggregate

46. What is the primary purpose of edge (perimeter) beams in a suspended ground floor?

A. To act as a decorative feature only

B. To be used as the final floor finish

C. To replace the need for internal columns

D. To support the outer ends of floor beams and provide an edge to the slab

47. What are the basic ingredients of concrete?

A. Steel, timber and nails

B. Soil, water and grass

C. Bricks, lime and mortar

D. Cement, sand, coarse aggregate and water

48. What is the purpose of a plumbing trap (e.g., P-trap) under a sink?

A. To increase water pressure

B. To heat waste water before disposal

C. To hold water and prevent sewer gases from entering the building
D. To filter drinking water

49. Which material is commonly used to protect foundations from moisture rising into walls?

A. Damp-proof course (DPC)

B. Painted timber

C. Organic mulch

D. Loose sand layer

50. What is the best practice for storing topsoil removed from a building site?

A. Mix it with broken bricks and bury under the foundation

B. Spread it thinly across the site immediately

C. Stockpile it away from the building area for later landscaping use
D. Dump it into nearby drainage channels