

GENERAL CERTIFICATE OF EDUCATION BOARD
Technical and Vocational Education Examination

JUNE 2022

ADVANCED LEVEL

Specialty Name and Acronym	CIVIL ENGINEERING-BUILDING CONSTRUCTION: CE-BC (F4-BA)
Centre No.	
Centre Name	
Candidate No.	
Candidate Name	

Mobile phones are NOT allowed in the examination room

7206: BUILDING CONSTRUCTION DRAWING 1: MULTIPLE CHOICE QUESTION PAPER

01 HOUR 30 MINUTES

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. Check that this question booklet is headed **Advanced Level – 7206 BUILDING CONSTRUCTION DRAWING 1**
4. Fill in the information required in the spaces above.
5. Fill in the information required in the spaces provided on the answer sheet using your HB pencil: **Candidate Name, Exam Session, Subject Code, Centre Number and Candidate Identification Number**. Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this Examination

6. Answer ALL the 50 questions in this examination. All questions carry equal marks.
7. Non programmable calculators are allowed.
8. Each question has FOUR suggested answers: **A, B, C** and **D**. Decide which answer is appropriate. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.

For example, if **C** is your correct answer, mark **C** as shown below:

[A] [B] [C] [D]

9. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
10. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to this question later.
11. Do all rough work in this booklet using the blank spaces in the question booklet.
12. At the end of the examination, the invigilator shall collect the answer sheet first and then the question booklet. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.

1. An equipment used for the measurement of angles during drawing is a

- A Compass
- B Protractor
- C Divider
- D Setsquare

2. The designation of a sheet of size 420x594 is

- A A0
- B A1
- C A2
- D A3

3. In cavalier projection the projection lines are at an angle of _____ to the projection plane

- A 60°
- B 30°
- C 45°
- D 90°

4. Types of lines used to represent hidden objects are

- A Break lines
- B Phantom lines
- C Extension lines
- D Thin dash lines

5. The type of document required to know what kind of structure is suitable for a part of town is a

- A Building permit
- B Town planning certificate
- C Architectural file
- D Structural file

6. On electrical plans the symbol below represents



- A A two way switch
- B A one way switch
- C A two way switch double gang
- D A one way switch double gang

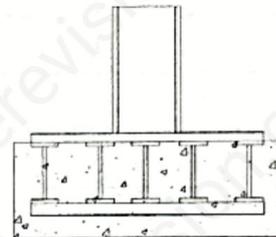
7. A section cutting line is represented by

- A
- B
- C
- D

8. If the floor-to-floor height of a building is 3.2 m and Having 19 goings, what will be the rise

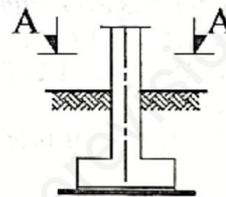
- A 15
- B 16
- C 19
- D 20

9. The drawing below represents a



- A A pad foundation
- B A strip foundation
- C A grillage foundation
- D An isolated footing

10. In the figure below the right line weighting on foundation plan is represented by



- A
- B
- C
- D

11. The depth of an arch is the distance between

- A Ground level and springing line
- B intrados and springing line
- C Crown and ground level
- D Intrados and extrados

12. On electrical plans a fluorescent lamp is represented by

- A 
- B 
- C 
- D 

13. A solid block concreted at the base of doors is

- A Lintel
- B Footing
- C Threshold
- D Architrave

14. A type technique of jointing metallic elements is

- A Tenon joint
- B Tongue and groove
- C Bolts and rivets
- D Socket and spigot

15. In air conditioning arrangements

- A The diffusers are placed outside and fans inside
- B Fans are outside and diffusers inside
- C Fans and diffusers are all outside
- D Fans and diffusers are all inside

16. In industrial design, the main systems to be studied by the electrical engineer are

- A Life, neutral and earth cabling
- B Power supply, data, tv and alarm, security
- C Sockets, switches and lamps
- D Piping, cabling and fittings

17. The footing where the pillar stands at a distance from the geometrical center is

- A Concentric footing
- B Eccentric footing
- C Combined footing
- D Displaced footing

18. The right representation of a coping is represented by the figure

- A 
- B 
- C 
- D 

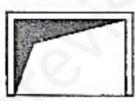
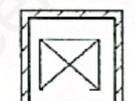
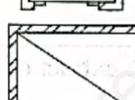
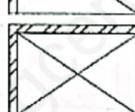
19. The nominal number of steps per flight is

- A 8
- B 10
- C 12
- D 14

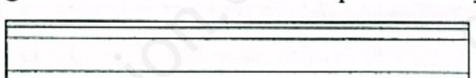
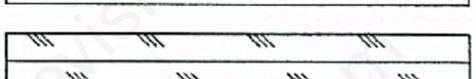
20. In roof plans in order to have equal pitches the horizontal angle between slopes should be

- A 90°
- B 60°
- C 45°
- D 135°

21. The representation of a wardrobe is

- A 
- B 
- C 
- D 

22. The hatching of timber in elevation is represented by

- A 
- B 
- C 
- D 

23. The door opening below represents a

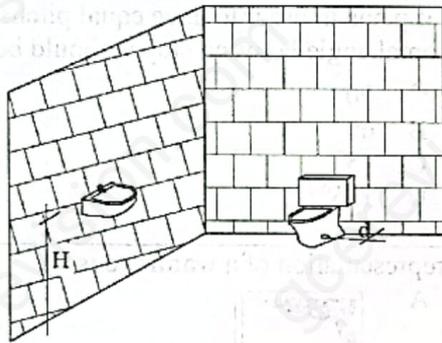


- A Sliding door
- B Pocket door
- C Folding door
- D Gate door

24. The statutory requirements stipulate that the provision of ramps in public buildings is;

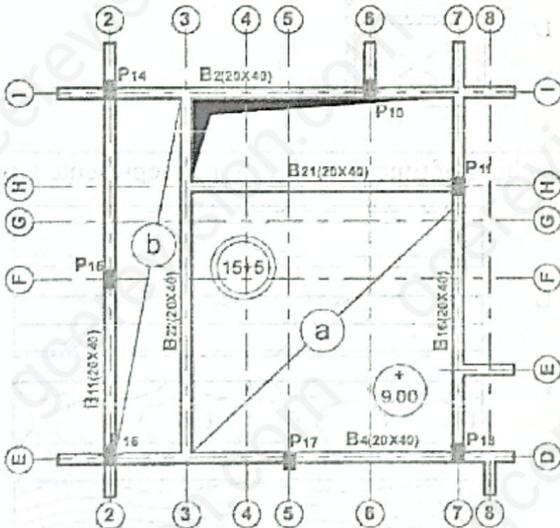
- A Optional
- B Obligatory
- C Depends on the available space
- D Depends on the clients

25. In the figure below what is the nominal height for the wash hand basin H



- A 60cm
- B 90cm
- C 75cm
- D 1m

26. The following sketch is an extract of

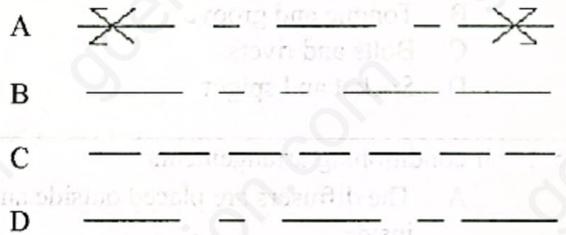


- A floor plan
- B engineering drawing
- C formwork plan
- D architectural drawing

27. On foundation plan:

- A 0.3 thick lines are used to represent footings while 0.5 thick lines are used for foundation walls and columns
- B 0.5 thick lines are used to represent footings and 0.3 thick lines are used for foundation walls and columns
- C 0.3 thick lines are to represent all elements except dimension lines
- D 0.3 thick lines are used to show edges of the foundation while 0.5 thick lines are used to show all foundation elements.

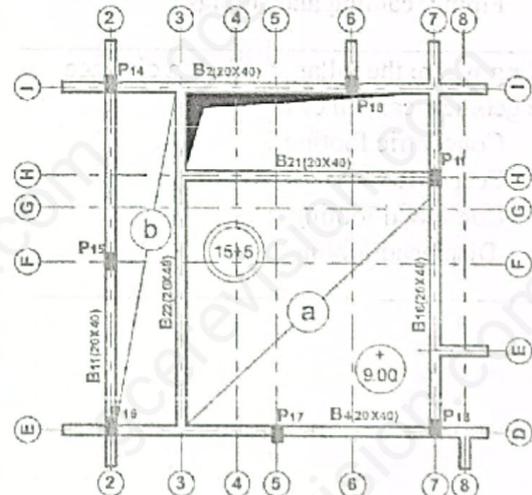
28. Which of the following lines indicate axis of structural elements?



29. In a building permit file, the block and situation plans are drawn to respective scales of:

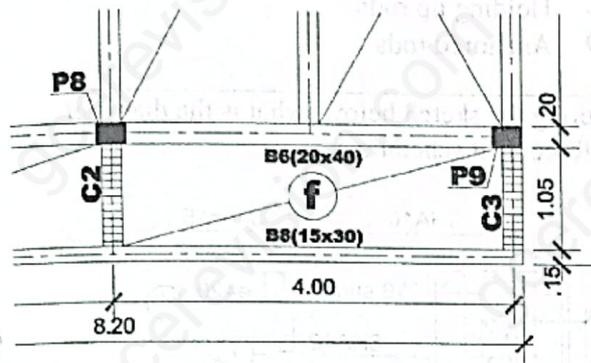
- A 1/250 and 1/1000
- B 1/300 and 1/500
- C 1/400 and 1/5000
- D 1/500 and 1/10000

30. On the diagram below, the letter **a** stands for:



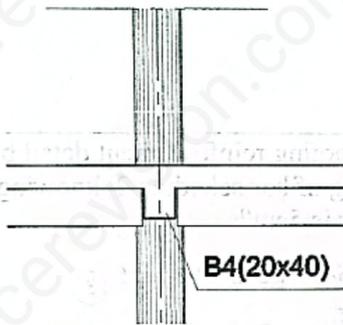
- A the nomenclature of the slab
- B the type of slab
- C the zone of the slab
- D the area of the slab

31. On the following extract of a formwork, the letters C2 and C3 represent



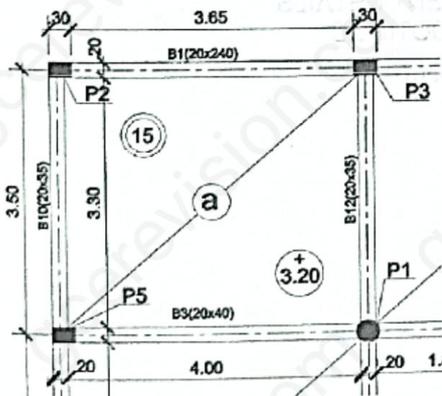
- A Gusseted or constant sectional consol
- B A gusset under a cantilever
- C A varied or gusseted consol
- D extended beams

32. The sketch below is a sectional detail of formwork plan, the hatched column has a:



- A rectangular section
- B triangular section
- C square section
- D circular section

33. On the sketch below, the dimension 15 stands for:



- A The altitude of the slab from datum level
- B The thickness of the slab
- C Thickness of the hollow blocks
- D The thickness of the topping

34. If the total rise from a floor level to another is 3.00m, what will be the total number of risers necessary for a stair to link the two levels if a rise is 15cm and a going is 30cm

- A 19
- B 20
- C 21
- D 15

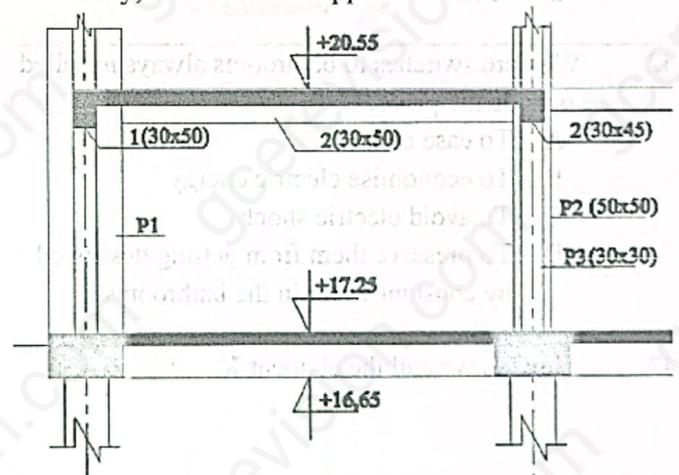
35. The stair well reserved in a building measures width = 2.10, length = 2.70 and total rise = 3.20. If the riser R = 20cm and going G=30cm, what type of stair is advisable?

- A Half turn stair
- B Quarter turn stair
- C Spiral stair
- D Balanced stair

36. Why do we use cumulative dimensions on foundation plans?

- A For clarity
- B To avoid omissions
- C To ease or facilitate marking of the various elements during setting out of the foundation
- D To facilitate positioning of the building during setting out.

37. Considering the partial section through a formwork plan below, what is the height of this story, from lower to upper floor?



- A 3.30
- B 3.00
- C 20,55
- D 17,25

38. What is the height of the section of an IPE200?

- A 200cm
- B 20mm
- C 200mm
- D 2cm

39. If the ground level of a project site is +14.25 and the ground floor is 60cm above the ground level, what is the height difference between the ground floor and the foundation bed if it is anchored at +12.65?

- A 2.20
- B 1.60
- C 13.25
- D 13.65

40. Why do we limit the height of structures designed to be ventilated with the aid of artificial energy?

- A For better illumination
- B Because of limited sun light
- C To enable proper flow of air
- D To limit the volume of the piece and economise the use of energy

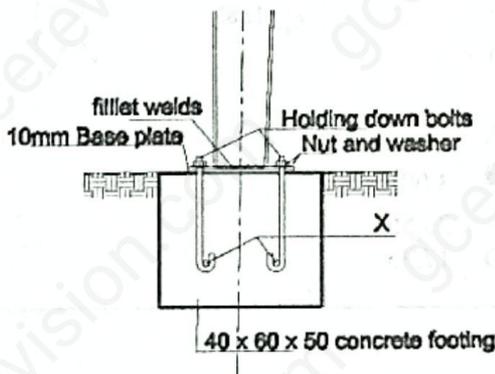
41. Amongst all sanitary installations in a bathroom, which consumes more water?

- A Wash hand basin
- B A bidet
- C A water closet
- D A shower

42. Why are switches to bathrooms always installed outside the piece?

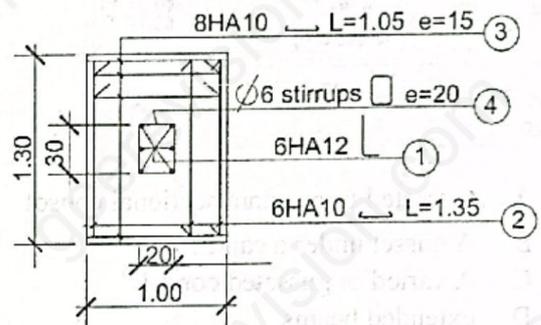
- A To ease control
- B To economise electric energy
- C To avoid electric shock
- D To preserve them from getting destroyed by constant water in the bathrooms

43. How do we call the element X



- A Fixing rods
- B Reinforcements
- C Holding up rods
- D Anchored rods

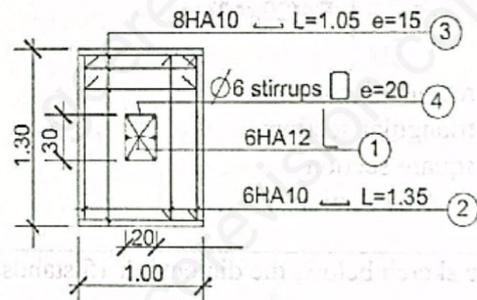
44. Considering the sketch below, what is the diameter of reinforcement schedule 4



REINFORCEMENT DETAILS FOR FOOTINGS

- A 20mm
- B HA4
- C 6hA12
- D 6mm

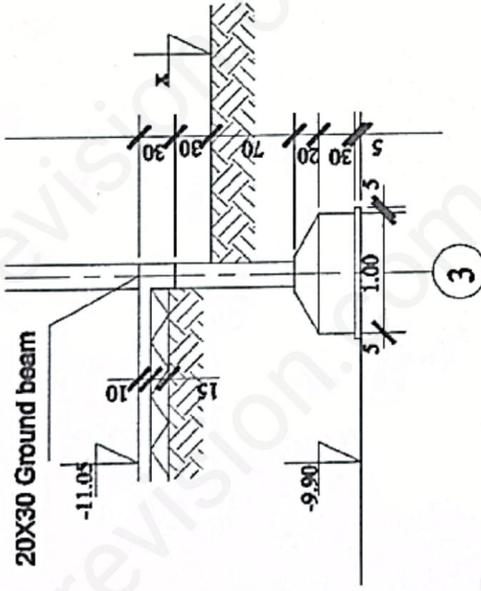
45. Considering the footing reinforcement detail below, what is the spacing of bar schedule 2, knowing that the concrete cover is 5cm?



REINFORCEMENT DETAILS FOR FOOTINGS

- A 16,55cm
- B 20cm
- C 15cm
- D 18cm

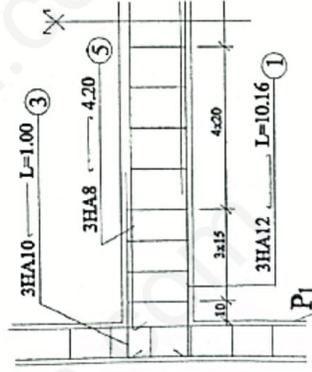
46. What is the elevation of the ground x on the detail below?



DETAIL X

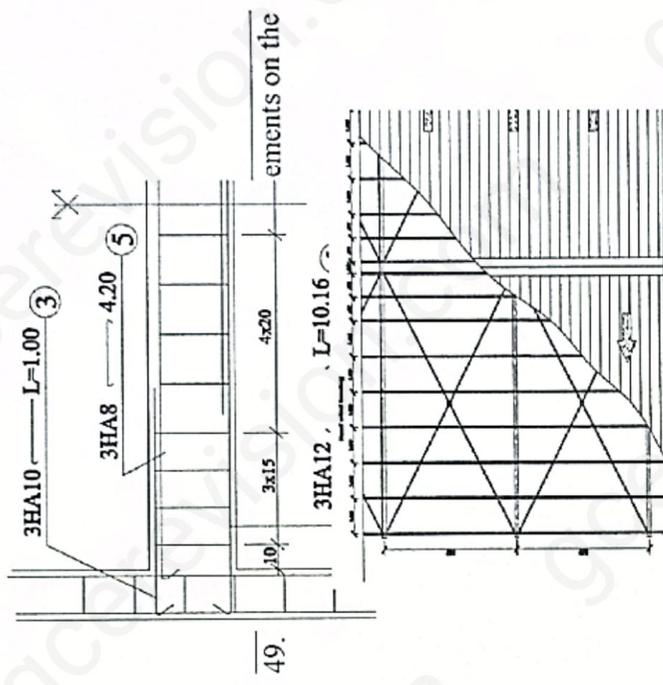
- A X = - 11.65
- B X = 0.00
- C X = 10.45
- D X = +11.05

47. How many stirrups are needed for the beam shown below?



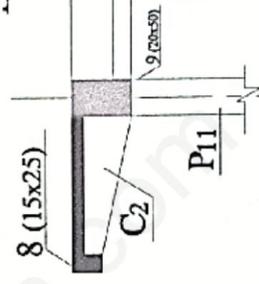
- A 8 stirrups
- B 16 stirrups
- C 17 stirrups
- D 135 stirrups

48. What is the total length of rod required for the reinforcement scheduled 3?



- A Aesthetics
- B Reinforcing the roof
- C To link all the trusses to the purlins
- D To brace up the roof structure against wind actions

50. The construction element C2 on the figure below is called



- A Gusset
- B Gusseted cantilever
- C Cantilever
- D Console

STOP

NOW GO BACK AND CHECK YOUR WORK