GENERAL CERTIFICATE OF EDUCATION BOARD

Technical and Vocational Education Examination

JUNE 2026 **ADVANCED LEVEL**

Specialty Name and Acronym	**PLUMBING AND HYDRAULIC INSTALLATION SYSTEMS – PHIS**
Centre No.	
Centre Name	
Candidate Identification No.	
Candidate Name	

Mobile phones are **NOT** allowed in the examination room

Duration: One and a Half Hours

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 **7455 Plumbing Network drawing 1 - Advanced Level**
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 OMR Answer Sheet or make any marks on it other than those asked for in these instructions.
6. **Answer ALL questions**
7. Each question has FOUR suggested answers: **A, B, C** and **D**. Decide on which answer is correct. Find the number of the question on the OMR 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]

8. 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.
9. 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.
10. Do all rough work in this booklet, using, where necessary, the blank spaces in the question booklet.
11. Texts, notes and pre-prepared materials of any kind are also **NOT** allowed in the examination room.
12. **At the end of the examination, the invigilator shall collect the OMR Answer Sheet first and then the question booklet after. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH ANY OF THESE.**

1. Technical and engineering drawings are
   A Oral expression.
   B Artistic expression.
   C Photographic expression.
   D Graphical expressions.

2. Free hand drawing/sketching is a drawing technique that
   A Uses conical perspective procedures.
   B Uses no drawing instruments.
   C Uses CAD drawing procedures.
   D Uses artistic drawing techniques.

3. The drawing instrument that is user's friendly because it is adaptable to the draughtsman ergonomic needs is the
   A Drawing board.
   B Drawing table.
   C Black board.
   D Drawing easel.

4. Production drawings executed with ink are best printed on
   A Kraft paper.
   B Cardboard paper.
   C Tracing paper.
   D Ordinary paper.

5. Drawing pencils recommended for rendering/shading are the
   A Extreme soft grade drawing pencils.
   B Hard grade drawing pencils.
   C Medium grade drawing pencils.
   D Soft grade drawing pencil.

6. Irregular curves are drawn using the
   A Drop compass.
   B Ordinary compass.
   C French curves.
   D Beam compass.

7. Name the accessory which permits to erase lines without disturbing neighboring lines.
   A Lettering template.
   B Erasing template.
   C Engineering template.
   D Scientific template.

8. Lines that intersect each other at 90° as illustrated in figure 1 are

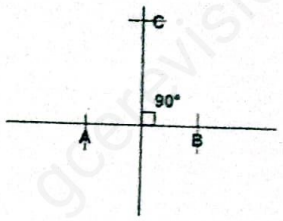

Figure 1

   A Bisecting lines.
   B Continuous lines.
   C Parallel lines.
   D Perpendicular lines.

9. What is the quality of lines used in geometric construction procedures?
   A Faint.
   B Very thick.
   C Averagely thick.
   D Thin and faint.

10. Full size objects are drawn to a scale of
   A 1/1.
   B 1/2.
   C 2/1.
   D 1/5

11. A floor distribution plan was drawn to a scale of 1/50. Find the surface area of a room space whose scaled dimensions are 2.5cmx4cm.
   A 8 m^2.
   B 15 m^2.
   C 5 m^2.
   D 20 m^2.

12. It identifies the drawing by stating the name of the architect and his design office.
   A Technical specifications.
   B Title block.
   C Drawing notes.
   D Schedules.

13. Supplementary angle are angles whose sum is
   A 90°.
   B 135°.
   C 180°.
   D 360°.

14. Name the angle created when two sides of a triangle intersect at a given point.
   A Bisector.
   B Summit.
   C Vertex.
   D Frustum.

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15. On what polygon is printed the **"STOP"** road safety sign?
A Hexagon.
B Octagon.
C Dodecagon.
D Heptagon.

16. Which quadrilateral has diagonals that are perpendicular to each other?
A Rectangle.
B Square.
C Rhombus.
D Parallelogram.

17. Which part cuts two points on the circumference without passing through the center?
A Chord.
B Tangent.
C Secant.
D Bisector.

18. Identify the geometric figure created when a right circular cone is cut slantingly as illustrated in figure 2.

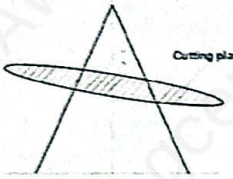

Figure 2
A Hyperbola.
B Ellipse.
C Circle.
D Parabola.

19. What part of the circle is represented in figure 3?

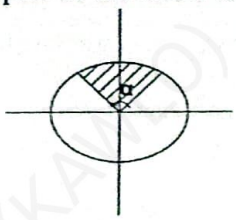

Figure 3
A Circumference.
B Chord.
C Tangent.
D Sector.

20. Inclined strokes, in lettering are executed to an angle of
A 60°.
B 45°.
C 90°.
D 70°.

21. If there is no scale specified on a drawing, how can dimensions be gotten from the drawing?
A Read using a graduated ruler.
B Read using a protractor.
C Used graphical scale from proportional calculation.
D Read using pair of dividers.

22. In dimensioning on drawings, dimensions are placed
A Under the dimension line.
B Centralized in the middle of the dimension line and above the dimension line.
C At the left side of the dimension line.
D At the right side of the dimension line.

23. What is the purpose of leaders on drawings as illustrated on the figure 4?

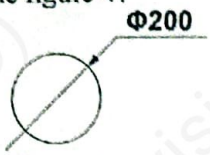

Figure 4
A Indicate the scale of the drawing.
B Indicate the different types of lines.
C Indicate vital information and notes on drawings.
D Indicates figures.

24. When the different views of an object are projected on the different image planes, we are in
A Orthogonal projection.
B Oblique projection.
C Axonometric projection.
D Cavalier projection.

25. Which view of an object is projected on the horizontal image plane?
A The bottom view.
B The top view.
C The left or right-side views.
D The front view.

26. Window shopping is represented in the figure 5. Identify the dihedral angle of projection.

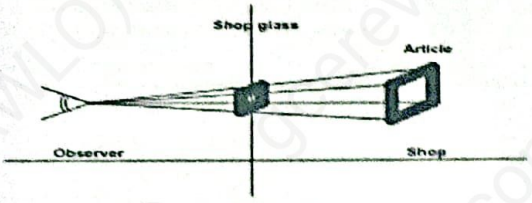

Figure 5
A 1st angle projection.
B 2nd angle projection.
C 3rd angle projection.
D 4th angle projection.

27. When the pictorial view of an object is projected with unequal axis of projection, we have
A Trimetric projections.
B Obliques projections.
C Isometric projections.
D Dimetric projections.

28. In conical perspective the
A Receding sight lines are at 30°.
B Receding sight lines are perpendicular to the image plane of projection.
C Receding sight lines are at 45° to the front view of the object.
D Receding sight lines converged at a common meeting point.

29. The weathering component of a building that protects it from rain is
A Walls.
B Openings.
C Roof.
D Finishing.

30. Mechanical access to the different levels in a high-rise building is by
A Central staircase.
B Service staircase.
C Helicopter.
D Lift/elevator.

31. The component of the building in direct contact with the resistant soil and ensures its stability is the
A Ground beam.
B Foundation.
C Foundation wall.
D Slab on grade.

32. The height of the horizontal plane that defines the floor plan is placed at
A ±0.000.
B +2.00m above the considered floor.
C +1.00m above the floor level or +0. 10cm above the highest window opening.
D -3.00m of the basement floor.

33. All are the documents of the architectural package for a building construction project except
A Site investigation reports.
B Architectural plans.
C Structural plans.
D Service plans.

34. It is a written document that gives the financial cost of the project.
A Bill of quantities.
B Technical specifications.
C Cost estimates.
D Work methodology.

35. Which is the plan that shows the spatial architectural management of a building?
A Equipment/furniture plan.
B Internal decoration plan.
C Roof plan.
D Floor distribution plan.

36. Rain conductors are best represented on the
A Roof plans.
B Floor plans.
C Elevations.
D Cross-sections.

37. The architectural plans that are submitted for administrative approvals in Cameroon are drawn to scale
A 1/25.
B 1/50.
C 1/75.
D 1/100.

38. Construction components that are drawn to enlargement scales are
A Sections.
B Floor plans.
C Elevations.
D Details.

39. On which plans are elevational altitudes/heights indicated?
A Floors plans/sections.
B Elevations/roof plans.
C Elevations/sections.
D Floor plans/roof plans.

40. The grid illustrated in figure 6 are best used in the elaboration of

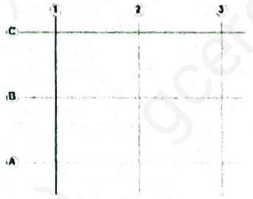

Figure 6

A Architectural plans.
B Structural plans.
C Opening schedules.
D Service plans.

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41. Name the plan on which is positioned the components of the rain water drainage network.
A Floor plans.
B Foundation plans.
C Frame work plans..
D Roof plans

42. The underground buried networks and its accompanying water treatment facilities are best illustrated in the
A Plumbing service plans.
B Framework plans.
C Foundation plans.
D Ground floor plans.

43. Which is the waste plumbing fixture that is represented in 7?

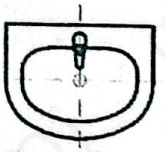

Figure 7

A Bidet.
B Lavatory.
C Bathtub.
D Shower tray.

44. State that which is not a function of the utility room in a building.
A Serves as a technical room for the installation of boosting equipment.
B Serves as a space for laundry activities.
C Serves as a dining space.
D Serves as a technical room for the Installation of heating equipment.

45. The yellow color is the standard conventional color coding for the
A Domestic cold-water distribution.
B Domestic gas distribution network.
C Domestic hot water distribution network
D Domestic waste water distribution network.

46. What is the main intention of the designer in ergonomy?
A Make the installations beautiful.
B Make the installations user's friendly.
C Make the installations outstanding.
D Make the installations durable.

47. Plumbing rough-in is
A Dimensions of plumbing fixtures.
B Dimensions of plumbing networks.
C Dimensions of plumbing dispositions to be respected during construction for ulterior and final installation processes.
D Dimensions of septic equipment.

48. All are characteristics of symbolic pipe drawings except
A Single line representation of pipes.
B Pictorial representation of plumbing components.
C Single line symbolic representation of pipe fittings.
D Single line symbolic representation of valves/equipment.

49. The utility space of a fixture as in the figure 8.

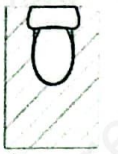

Figure 8

A Permits the successful installation of the fixture.
B Ensures the effective use of the fixture.
C Provide maintenance possibilities for the fixtures.
D Improves the beauty of the plumbing space.

50. Identify the valves whose symbolic representation is illustrated in figure 10.

Figure 10

A Check valve
B Gate valve
C Globe valve
D Ball valve.

STOP

GO BACK AND CHECK YOUR WORK