Tertiary and Vocational Education Commission
Knowledge Assessment – March/ April 2021
Draftsperson
National Vocational Qualification – Level 04

Time: 03 Hours

Instructions for the Candidates

- The A Part of this question paper consists of 30 Multiple Choice Questions (MCQ). Answer all the questions. Choose the most suitable answer from the given four answers of each and mark as "X" in the appropriate places of the answer sheet
- Answering Question Numbers Part B is Compulsory.
- Use of Calculator and BSR Sheet are allowed.
- SLS 573 to the exam hall is allowed.
- This question paper consists of 09 pages.

Part – A

1. Which one of the followings is not essential to be considered when building a house?
   a. The width of the access road to the construction area of the house
   b. The manner water is supplied to the proposed site
   c. The land area of neighboring houses
   d. The distance between Toilets and the well.

2. The floor tiles needed to be laid for a bedroom with measurements of 12'-0" x 10'-0" are (not necessary to calculate the skirting)
   a. 600mm x 600mm 25 Tiles.
   c. 450mm x 900mm 33 Tiles.
   b. 300mm x 600mm 50 Tiles.
   d. 450mm x 600mm 40Tiles.

3. The Hot water supply type of Pipe **not suitable** for use is,
   a. Copper Pipe
   b. Polybutylene Pipe/PB
   c. UPVC Pipe
   d. CPVC Pipe

4. The minimum distance between Toilets and neighboring well
   a. 50m
   c. 15ft
   b. 50ft
   d. 20ft

5. The array in the Auto Cad consists of several commands. which one of the following accordingly correct?
   1) Rectangular Array
   2) Polar Array
   3) Triangle Array
   4) Path Array
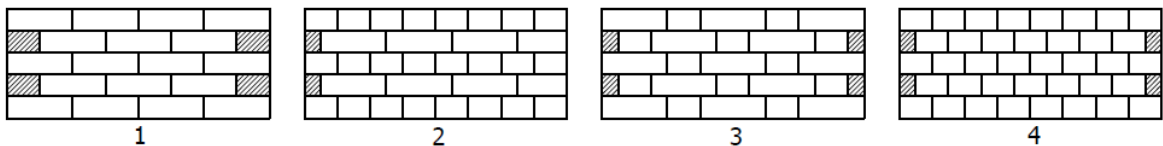
a. 1, 2 and 3 are correct
b. 1, 2 and 4 are correct
c. 1, 3 and 4 are correct
d. 2, 3 and 4 are correct

6. The method used in an elliptical drawing in a geometrical construction
   1) Isometric Method
   2) Trapezoidal Method
   3) Cutting Arc Method
   4) Trammel Method
   a. 3 and 4
   b. 2 and 3
   c. 1 and 4
   d. 1 and 2

7. In building construction several different types of brick bond patterns are used. Following are some of them. The order of them shown as

   a. Header Bond, English Bond, Flemish Bond, Stretcher Bond
   b. Stretcher Bond, Dutch Bond, English Bond, Header Bond
   c. Stretcher Bond, English Bond, Flemish Bond, Header Bond
   d. Stretcher Bond, Flemish Bond, English Bond, Header Bond

8. Theodolite equipment is used for the purpose of
   a. to measure the area of the planning of the land
   b. to measure the level of the land
   c. to indicate the border of the land
   d. to draw the plan of the land

9. In the irrigation sector, the unit of the volume of the lake is measured as,
   a. Acre-Feet
   b. Liters
   c. Millimeters
   d. None of them

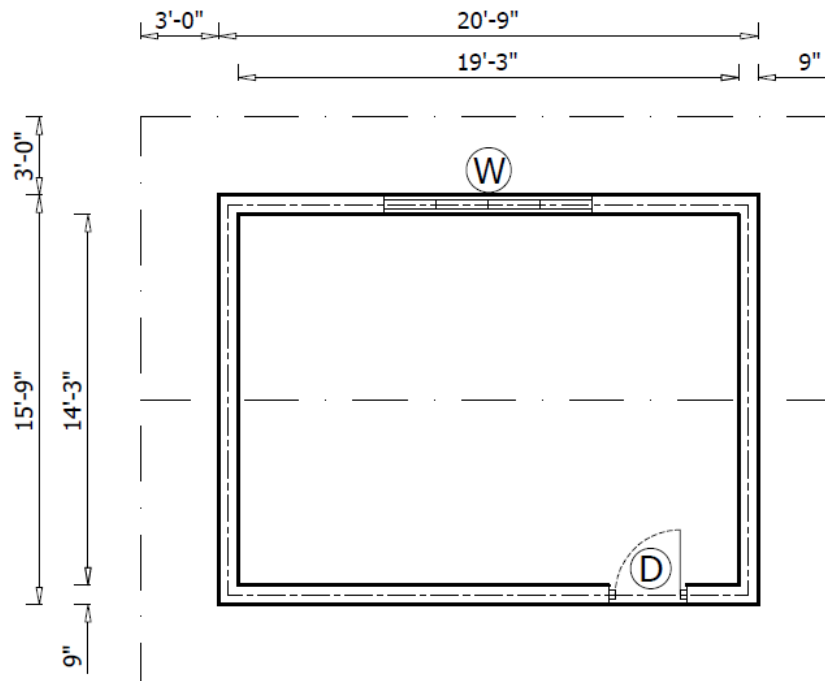10. The minimum measurements needed to be made when building an attached toilet and bathroom are
    a. 1.2m x 0.9m
    b. 1.2m x 0.8m
    c. 1.7m x 0.9m
    d. 1.7m x 0.8m

11. The software **not used** in 3D figure in a computer related drawing is,
    a. Revit
    b. MS Project
    c. Lumion
    d. Sketch Up

12. In an Auto Cad drawing mi is applied
    a. to a draw a circular image
    b. to obtain a image
    c. to take the drawing to another place
    d. to take copy of the drawing

13. The maximum and minimum steps that are possible to have in a stair case are
    a. 20 and 02
    b. 18 and 05
    c. 16 and 03
    d. 15 and 04

14. The correct statement regarding the rainy seasons in Sri Lanka of the following are,
    a. The south western monsoon is from March to April and the South eastern monsoon is from October to November
    b. The south western monsoon is from May to September and the South eastern monsoon is from December to February
    c. The south western monsoon is from December to February and the South eastern monsoon is from May to September
    d. None of the above is correct

15. Several concrete mixtures are used in construction while the grade that is equal to the 1:2:4 (¾") ratio?
    a. G 10   c.   G 20
    b. G 15   d.   G 25

16. When designing a housing plan, the dimensions of Plan, Front elevation and the side elevation are
    a. 1:50   c.   1:1000
    b. 1:250   d.   1.:100

17. The orderly concrete making process is
    a. Mixing, depositing, compacting and curing
    b. depositing, mixing, compacting and curing
    c. mixing, depositing, curing and compacting
    d. depositing, mixing, curing and compacting.

18. The cross section extent of the wood usually used for a door frame
    a. 100mm x 50mm   c.   125mm x 50mm
    b. 100mm x 75mm   d.   175mm x 100mm

19. The minimum height of a hand rail to be made for a staircase is,
    a. 1.2m
    b. 1.0m
    c. 0.9m
    d. 0.8m

Answer questions No. from 20 - 23 using the drawing as shown below.

20. The Centre Line of the above drawing is
    a. 55'-0"   c.   67'-0"
    b. 70'-0"   d.   73'-0

21. According to the above drawing, when making the roof for the building to be constructed the wood need to make the ridge plate is
    a. 20'-9"   c.   21' - 9"
    b. 15'-9"   d.   26' - 9"

22. According to the above drawing, when making the roof for the building to be constructed the wood need to make the wall plate is
    a. 20'-9"   c.   21' - 9"
    b. 15'-9"   d.   26' - 9"

23. It is hoped to construct a flat asbestos ceiling only for the interior of this building. If you are using 4'-0" x 4'-0" sized asbestos ceiling sheet what are amount of the sheets that are needed?
    a. 20
    b. 18
    c. 16
    d. 15

24. What are the standard sizes of A_2 papers that are required for plan drawings
    a. 297 x 210 mm
    b. 420 x 297 mm
    c. 594 x 420 mm
    d. 840 x 594 mm

25. Before the construction of a building there is a process of setting out. Finding the possibility of the accuracy of the setting out of the rectangular building is,
    a. Measuring the length along the setting out.
    b. Measuring length of both the design and the setting out
    c. By measuring the diagonals
    d. None of the above

26. Assistance to draw a straight line in Auto Cad is
    a. Construction line (XL)
    b. Ortho Mode (F8)
    c. Extend (EX)
    d. Match Properties (MA)

27. When the water is filling up in a lake, it creates ripples in the surface. To prevent damages causing to the bank of the lake by such waves, what is built for the prevention?
    a. Break-water
    b. sluice
    c. sluice gate
    d. spill

Answer questions No. from 28,29 and 30 using the drawing as shown below.

| 05 T 12 08 – 200 BW |

28. In this drawing what is indicated as 12?
    a. The radius of the reinforcement Bar to be used
    b. The distance between the reinforcement Bar to be used
    c. The number allocated to the reinforcement Bar to be used
    d. The amount of reinforcement bars to be used

29. In this drawing what is indicated by 08?
    e. The radius of the reinforcement Bar to be used
    f. The distance between the reinforcement Bar to be used
    g. The number allocated to the reinforcement Bar to be used
    h. The amount of reinforcement bars to be used

30. In this drawing what is indicated by 200?
    a. The radius of the reinforcement Bar to be used
    b. The distance between the reinforcement Bar to be used
    c. The number allocated to the reinforcement Bar to be used
    d. The amount of reinforcement bars to be used

(1×30 = 30 Marks)

Part - B

Answering All Question is Compulsory.

1. Name 05 persons we need to contact when constructing a building   (05 Marks)

2. When doing an Auto CAD drawing several keys that are being used mostly. Identify them.
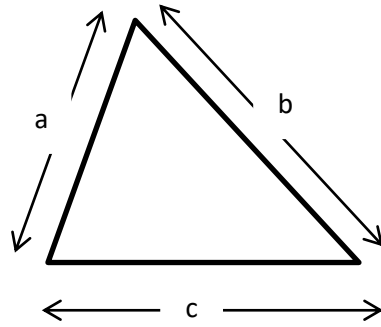   (10 Marks)

C ←⏐

EX ←⏐

MA ←⏐

AL ←⏐

TR ←⏐

3. Introduce garbage appliances and waste appliances and write 02 examples of each
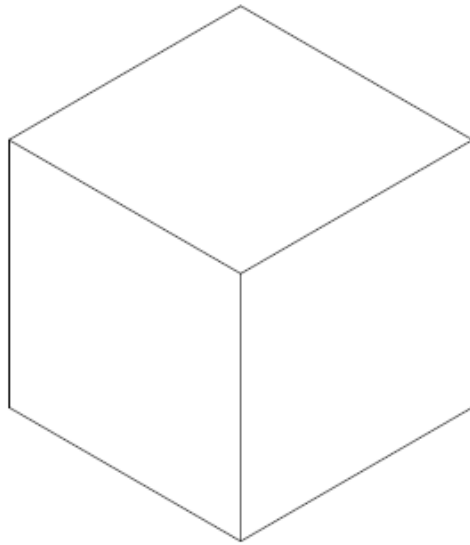   (06 Marks)

4. If a = 10cm , b = 13cm , c = 17cm is as shown, find the area and the parameter of the triangle

(06 Marks)

5. Construct of Isometric Circle on the surface following Cubicle   (09 Marks)

6. Write 05 matters needed to be concerned of when purchasing a land to build a house.

(05 Marks)

7. Write 06 Accessories used to remove rain water   (06 Marks)

8. Explain what is DPC and mention the importance of it.   (08 Marks)

9. Identify the following used in Irrigation and write short notes of them   (05 Marks)

    MSL   –

    FSL   –

    BTL   –

    DSL   –

    HFL   –

10. The following square grid of a land shows the Dumpy levels of respective points in meters. On this grid, draw and show the contours of 10.00m , 10.50m , 11.00m , 11.50m , 12.00m

(10 Marks)