

Vocational Practical Question Bank

First & Second Year

Building Construction and Maintenance Technician

Course Code : 315



State Institute of Vocational Education

O/o the Commissioner of Intermediate Education

Andhra Pradesh, Hyderabad

&

Board of Intermediate Education,

Andhra Pradesh, Hyderabad

First Year

BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year (P.C - 315/21)****Subject : Civil Engineering Lab****Paper - I****Time : 3 Hours****Max. Marks : 50****Section - I****1 x 40 = 40 Marks**

1. Prepare standard solution of Na_2CO_3 . (Aim, Equipments, Procedure, Calculations and Result).
2. Determine the normality of Hydrochloric acid present in given solution. (Aim, Equipments, Procedure, Calculations and Results)
3. Determine the Hardness of a given sample of water. (Aim, Equipments, Procedure, Calculation and Results)
4. Determine the concentration of free chlorine available in water. (Aim, Equipments, Procedure, Calculation and Results)
5. Determine the pH of a given sample. (Aim, Equipments, Procedure, Calculation and Results)
6. Determine the conductivity of a given sample (Aim, Equipments, Procedure, Calculation and Results)
7. Determine the Dissolved Oxygen content in the given sample. (Aim, Equipments, Procedure, Calculation and Results)
8. Determine the total solids present in the water sample. (Aim, Equipments, Procedure, Calculation and Results)
9. Determine the concentration of total solids in a given water sample (Aim, Equipments, Procedure, Calculation and Results).
10. Determine the chemical oxygen demand of a given sample (Aim, Equipments, Procedure, Calculation and Results).
11. Connecting given length of pipe line using coupling, T-ee and Union. (Aim, Equipments, Procedure, Calculation and Results).
12. Perform connection for a given length of pipe using following specials reducer, Elbow. (Aim, Equipments, Procedure, Calculation and Results).

13. Perform the cutting and threading of a given G.I pipe / PVC / with diset. (Aim, Equipments ,Procedure , Calculation and Results).
14. Prepare pipe line in Bath Room with joints and turns. (Aim, Equipments,Procedure , Calculation and Results).
15. Find out leakages in water supply connections and their Repairing. (Aim, Equipments ,Procedure , Calculation and Results).
16. Assemble the Hand pump connections. (Aim, Equipments, Procedure, Calculation and Results).
17. Assemble the connections of electric Heaters in building. (Aim, Equipments,Procedure , Calculation and Results)
18. Prepare half lap joint of the given wooden piece. (Aim, Equipments ,Procedure, Calculation and Results).
19. Prepare Dovetail joint of the given wooden piece. (Aim, Equipments ,Procedure, Calculation and Results).
20. Prepare Tenon joint of with given wooden. (Aim, Equipments ,Procedure, Calculation and Results).
21. Perform the connection of one lamp controlled by a single switch. (Aim, Equipments ,Procedure , Calculation and Results).
22. Make L shape job by using M.S.Flate. (Aim, Equipments ,Procedure , Calculation and Results).
23. Make the connection of stair case wiring. (Aim, Equipments ,Procedure, Calculation and Results).
24. To prepare earthing in house wiring. (Aim, Equipments ,Procedure , Calculation and Results).
25. To conduct tension test on the given steel specimen. (Aim, Equipments, Procedure , Calculation and Results).
26. To perform torsion test on mild steel specimen for finding out the modulus of rigidity. (Aim, Equipments ,Procedure , Calculation and Results).
27. To Determine the characteristics compressive strength of given wooden piece. (Aim, Equipments ,Procedure , Calculation and Results).

Section - II

Record	5 Marks
Viva	5 Marks

BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year**

MODEL QUESTION PAPER

Subject : Civil Engineering Lab**Paper - I**

Time : 3 hours**Max. Marks : 50**

Section - I**1 x 40 = 40 Marks**

26. To perform torsion test on mild steel specimen for finding out the modulus of rigidity. (Aim, Equipments ,Procedure , Calculation and Results).

Section - II

Record

5 Marks

Viva

5 Marks

Note : The serial numbers of the questions mentioned in are the serial numbers in question bank. In practical examination only the serial number of the questions will given, the examiner shall decode it with question bank and give the questions.

BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year****PRACTICAL SCHEME OF VALUATION****Subject : Civil Engineering Lab****Paper - I****Time : 3 hours****Max. Marks : 50****Section - I****1 x 40 = 40 Marks**

Equipment and Materials	:	10 Marks
Procedure	:	10 Marks
Presentations	:	10 Marks
Result	:	10 Marks

Section - II

Record	:	5 Marks
Viva	:	5 Marks

BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year (P.C -315/22)**

Subject : Surveying Practice

Paper - II

Time : 3 Hours**Max. Marks : 50****Section - I****1 x 40 = 40 Marks**

1. Determine area of the given field by the method of Chain Triangulation.
2. Determine area of the given field by conducting Cross-Staff Survey.
3. Find the bearings of given station points and calculate their included angles.
4. Conduct a Compass Survey along the closed traverse and plot the traverse.
5. Find the Reduced Levels of the given points using Levelling instrument. Take Bench Mark as 100.000m.
6. Find the Reduced Levels of the given points involving atleast one point lying above the line of collimation.
7. Determine the Horizontal Angle between the given points by Repetition method using Theodolite.
8. Determine the Horizontal Angle between the given points by Reiteration method using Theodolite.
9. Measure the Vertical Angle of a given point with respect to the instrument station and other given point by using Transit Theodolite.
10. Determine the Height of a given object by measuring Vertical Angle using Transit Theodolite.
11. Measure the Horizontal Angle and Distance between given Two Stations using Total Station.
12. Measure the area of a closed traverse using Total station.

Section - II

Record

5 Marks

Viva

5 Marks

BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year****MODEL QUESTION PAPER****Subject : Surveying Practice****Paper - II****Time : 3 hours****Max. Marks : 50****Section - I****1 x 40 = 40 Marks**

10. Determine the Height of a given object by measuring Vertical Angle using Transit Theodolite.

Section - II

Record

5 Marks

Viva

5 Marks

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BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year**

PRACTICAL SCHEME OF VALUATION

Subject : Surveying Practice**Paper - II**

Time : 3 hours**Max. Marks : 50**

Section - I**(1 x 40 = 40 Marks)**

Aim equipment and material required	:	5 Marks
Procedure and Tabular formula	:	10 Marks
Recording and Observations	:	15 Marks
Calculations	:	5 Marks
Result	:	5 Marks

Section - II

Record	:	5 Marks
Viva	:	5 Marks

BUILDING CONSTRUCTION AND MAINTENANCE TECHNICIAN**First Year (PC-315/23)****Subject : Engineering Drawing****Paper - III****Time : 3 Hours****Max. Marks : 50****Section I****2 x 5 = 10 Marks**

1. Choose one question from the following

- (a) What are the recommended size of letters and numbers.
- (b) State the object of drawings.
- (c) Print the following in single stroke lettering of given size 12mm.

“Vocational Education”

- (d) Mention the system of dimensioning.
- (e) State the aligned system of dimensioning.

2. Choose one Question from the following

- (a) Draw an Isometric scale.
- (b) What is an Isometric projection
- (c) Draw an Isometric projection of a rectangle.
- (d) State the difference between isometric view and isometric projection.

3. Choose one question from the following

- (a) Where do you keep object in first angle projection
- (b) Draw a Projection of point “A” above HP and in front of VP.
- (c) Where do you keep the object in third angle protection.
- (d) What is the meaning of orthographic projection.
- (e) Draw a projection of line length 70 mm parallel to both H.P and V.P.

4. Choose one question from the following
- (a) Identify and list of various input device.
 - (b) Identify and list of various output device.
 - (c) Write different window accessories.
 - (d) Write any four uses of computer.
 - (e) Write the components of computer.
5. Choose one question from the following
- (a) Define Hardware and Software
 - (b) What is an Icon.
 - (c) How do you create new document in MS Word.
 - (d) What are the various types of storage devices.

Section II**3 x 10 = 30 Marks**

6. Inscribe a regular pentagon in given circle of a radius 50 mm.
7. Inscribe a regular heptagon in given circle of radius 60 mm.
8. Inscribe a regular hexagon in a given circle of radius 30 mm.
9. Construct an Ellipse by concentric circles method major axis as 120 mm and minor axis 60 mm.
10. Draw a parabola hyperbola through and axis height of 60 mm by rectangular method.
11. Draw a rectangular hyperbola through a point "Q" which is at distance 40mm from "OY" and 60mm from "OX".
12. Draw a projections of following points on same ground
- (a) is 40 mm above HP and 25 mm in front of VP.
 - (b) "B" is in the HP and 20 mm in front of VP.
13. Draw a projection of the following points on same ground
- (a) "A" is 30 mm below of HP and 25 MM behind the VP.
 - (b) "B" is 40 mm below the HP and 20 mm in front of VP.

14. A line PQ 80mm long is in the HP and make an angle 45° with the VP. Its end 25mm behind VP. Draw projections.
15. A line PQ 75mm long is parallel to both HP and VP and 30mm above HP and 20 mm in front of VP.
16. Draw the front view, top view, side view of figure shown.

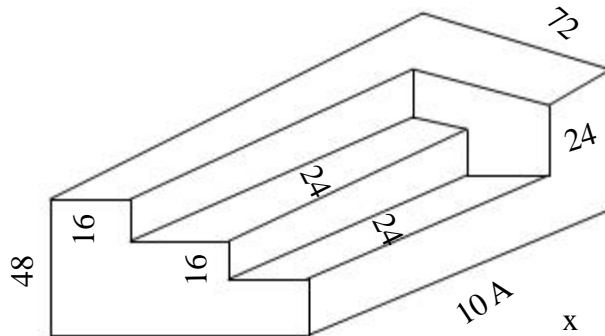


Fig 1. All Dimensions in mm

17. Draw the front view, top view, side view of figure shown.

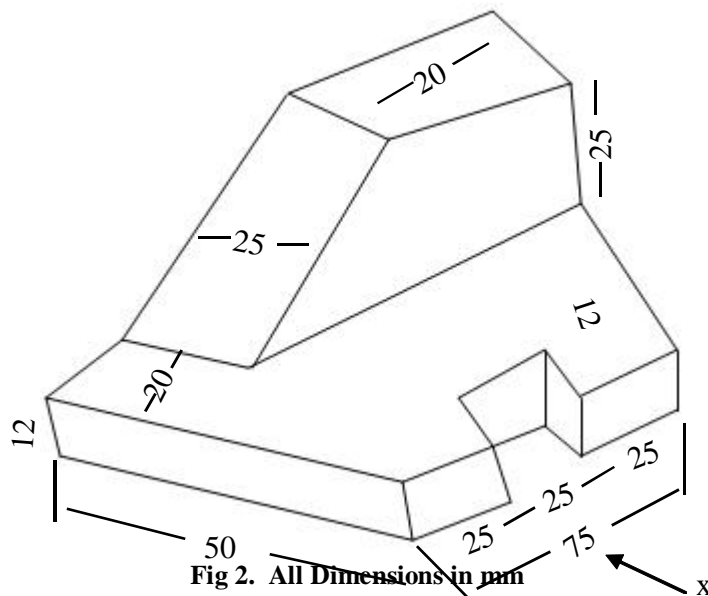


Fig 2. All Dimensions in mm

18. Draw an Isometric view of circle diameter 80 mm.

19. Draw an Isometric view of a box as per the following figures.

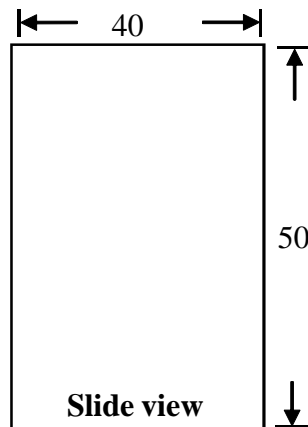
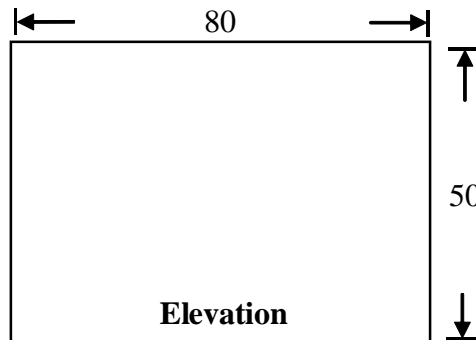
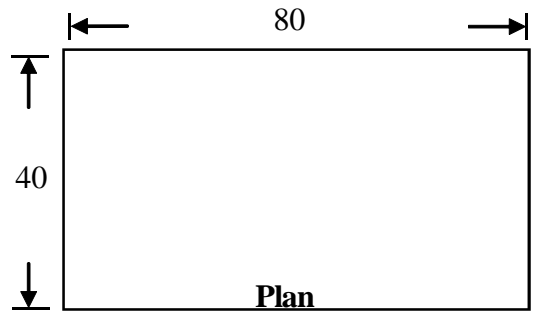


Fig 3. All Dimension in mm

20. Draw an Isometric view of a regular Hexagon whose side 40 mm.

21. Draw an Isometric view from the following orthographic views.

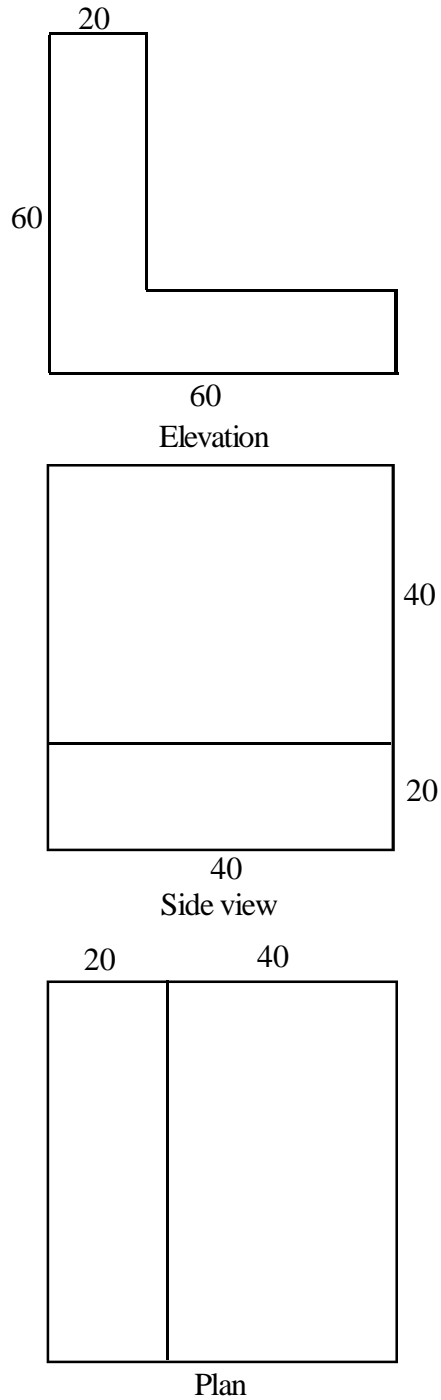


Fig 4. All Dimensions in mm

22. Create soft copy using MS word with assume own statical data.

23. Create soft copy using MS Excel with assume own statical data.

Section - III

Record

5 Marks

Viva

5 Marks

**BUILDING CONSTRUCTION AND MAINTENANCE
TECHNICIAN**

First Year

MODEL QUESTION PAPER

Subject : Engineering Drawing

Paper - III

Time : 3 hours

Max. Marks : 50

Section - I

2 x 5 = 10 Marks

2. Choose one Question from the following

- (a) Draw an Isometric scale.
- (b) What is an Isometric projection
- (c) Draw an Isometric projection of a rectangle.
- (d) State the difference between isometric view and isometric projection.

5. Choose one question from the following

- (a) Define Hardware and Software
- (b) What is an Icon.
- (c) How do you create new document in MS Word.
- (d) What are the various types of storage devices.

Section - II

3 x 10 = 30 Marks

12. Draw the front view, top view, side view of figure shown

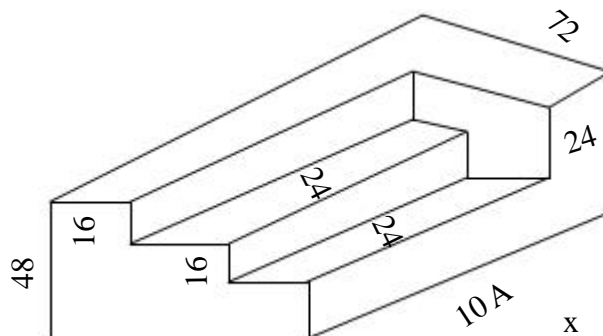


Fig 1. All Dimensions in mm

17. Create soft copy using MS word with assume own statical data.

Section - III

Record

5 Marks

Viva

5 Marks

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(i) Drawing : 3 Marks

(ii) Usage of instrument / Description : 2 Marks

Section - II**1 x 10 = 10 Marks**

(i) Drawing : 5 Marks

(ii) Usage of instrument / Description : 2 Marks

(iii) Result : 3 Marks

Section - III

Record : 5 Marks

Viva : 5 Marks