CANDIDATE NAME

CANDIDATE No

Sample Paper



The Institute Of Carpenters

FOUNDATION CERTIFICATE

SAMPLE ANSWERS Each question is worth 10 marks THEORY PAPER

TIME ALLOWED ONE AND A HALF HOURS

The following instructions should be read by ALL CANDIDATES before they commence work

To obtain full marks Candidates must answer **ALL** questions Answers **MUST** be submitted on the question paper immediately below the question Your candidate name and number **MUST** be written clearly in the top right hand corner of this sheet 1. State whether Beech is classified as a Hardwood or Softwood.

Mark

Hardwood

2. Name a type of adhesive that would be suitable for external use.

A synthetic, or Casein, or External PVA adhesive

3. Using a compass and ruler, construct an equilateral triangle whose sides are 40 mm long.



4. State why timber components must always be stored under cover on site.

To protect materials from the weather and from gaining excess moisture. Also from accidental damage.

5. Calculate the volume of a length of timber 250 mm x 75 mm x 3.5 m.

 $(.250 \ x \ .075 \ x \ 3.5) = 0.065625 mm^2$

6. State **TWO** reasons for seasoning timber.

To obtain the correct moisture content for the situation.
To avoid timber movement. Or Easier to work, or lighter.



8. Name the type of roof shown in Fig.1.



9. State the purpose of using architraves around a door frame.

To conceal the gap between the wall and frame. Provides a decorative finish to the frame.

10. Name **TWO** items of safetyware recommended when working on a building site.

1. Steel toe-cap boots.2. Hard hat. Or Ear protectors. Or Eye protectors. Or Gloves

11. Give **TWO** examples where a masonry nail may be used as a method of fixing.

Fixing timber grounds to receive panelling.
Fixing skirting. Or Dado rails. Or Picture rails.

Mark

12. Name the type of joints used when constructing a panelled door.

Mortise and tenon joints with haunches where required

13. State the reason why an orbital electric sander should not be used on a door that is to receive a polish finish.

Because of the circular action of the sander, it would leave minute circular scratches on the surface which will show when the polish has been applied Mark

14. Sketch the type of chisel that would best be suited for cleaning out the bottom a housing joint.



15. State the angle used when constructing a drawing in isometric.

30°

16. Add together the following :-

1.200 m 34.560 m .566 mm .23 mm

Total: 36.556

17. Name the top horizontal member of a door frame.

Head

18. Name the type of joint that would be used to secure the sides to the front of a drawer.

Mark

Dovetail or Shouldered Housing joint

19. State **ONE** reason why a scribing joint would be used at an internal angle when fitting skirting.

To disguise the effect of shrinkage

20. Describe why formwork is coated with a release agent prior to pouring in the concrete.

To prevent the concrete from sticking to the formwork

21. State why working platforms should be stored flat on bearers.

This prevents twisting or warping of the components as well as preventing damp getting into any timber components . Also safety

22. Using a compass, bisect the angle shown in Fig.2 to form a 22.5° angle.



Fig.2

23. Describe the role of an Architect.

Takes the clients requirements to design working scale drawings thatwill be used to construct the building.

24. Sketch **ONE** method of timber conversion.



Mark

25. State the act of 1974 that must be obeyed by both employers and employees.

Health and Safety at Work Act (HSAWA)

26. Name a type of screw that would be used to secure beading around a glazed opening.

Raised head

27. State **ONE** situation which would cause an outbreak of Dry Rot.

High moisture content Lack of ventilation. Or no light

28. Sketch a type of hinge that would be used on ledged and braced door.



Tee hinge

29. State the purpose of the plinth at the base of a cupboard unit.

Covers up the gap at the bottom of the cupboard unit and allows a persons foot to fit under the pot-board. Also prevents marks on the plinth board 30. State the cause of condensation forming on a single glazed window.

Warm air holds water so when warm air comes into contact with a surface it will condense leaving small droplets of water on the glass.

31. Explain the main reason why oil is used on an oilstone when sharpening tools.

This prevents minute metal particles from going into the stone which eventually clogs up the stone. The oil will help remove these. Also it acts as a cooling agent and prevents the cutting iron from getting hot.

32. Describe why a reduced voltage of 110 volts is recommended for portable electric power tools.

A lot safer than 240 volts as if there was a possibility of electrocution it should not be fatal to the operative.

33. Calculate the area of a circle with a radius of 50 mm.

 $\pi r^2 = 3.142 \ x \ 50 \ x \ 50 = 7855 \ mm^2$

34. Sketch **TWO** types of screw heads.





Roundhead or

Raisedhead

or Countersunk

С

35. Fig.3 shows a frame that has been assembled. Indicate on the drawing the method used to check for "square". Measure the diagonals

Fig.3

- 36. Name the side vertical members of a four panelled door.

Stiles

37. State the tool used to form a groove down the length of a piece of timber.

Plough plane

- 38. Using notes and sketches, describe **ONE** method to ensure tight fitting floor boards.
 - Floor joist

Floor cramp

39. Describe **ONE** situation where a spirit level would be used.

Laying floors. Or Fitting kitchens. Or fixing dado rails. Or frames

40. List the ironmongery to be used on a single casement window.

One pair of butts.	
Casement stay	
Casement fastener	
Security ironmongery	CRT05

Mark