

4. Two dimensional figure of a cone is shown here. It is intersected by the plane of X₁ - X₂ inclined to mid axis. When the upper portion beyond the cutting line is removed, and looked at the three dimensional shape, along the mid axis, the visible top plane view is

a circle
an ellipse.

5. When this plane figure is inspected, the group of figures shown are

- (1) parallelogram, rhombus, trapezium and square.
- (2) square, parallelogram, triangle and rhombus.
- (3) parallelogram, triangle, trapezium and rhombus.
- (4) square, parallelogram, triangle and trapezium.
- 6. The length of three sides A, B, C is given in mm separately on the table below. What is the option that includes data, which can construct a triangle according to these data?

	Side A	Side B	Side C
(1)	100	80	40
(2)	120	80	20
(3)	150	70	80
(4)	160	90	50

7. Figure 1 shows a three dimensional shape of a box and its development is shown in figure 2.



Out of the planes in the development, select the letter that denotes the unsuitable plane, out of the planes in the development.

(4) T

(3) R

- (1) P (2) Q
- 8. What is the incorrect statement, out of the following?
 - (1) Out of all lines which can connect two points on the same plane, the shortest line is a straight line.
 - (2) The sum of the three internal angles of the equilateral, isosceles and scalene triangles are different from each other.
 - (3) The angles made between two perpendicularly intersecting lines are right angles.
 - (4) Sextant is $\frac{1}{6}$ of the circumference of a circle
- 9. The most suitable type of saws to cut a wheel from a wooden plank are
 - (1) tenon saw and hand saw (2) compass saw and bow saw
 - (3) dovetail saw and tenon saw (4) handsaw and dovetail saw.
- 10. The raw materials used in manufacturing plywood are
 - (1) saw dust and adhesives.
 - (2) small pieces of timber and adhesives.
 - (3) veneers sawn methodically and adhesives.
 - (4) wood pulp and adhesives

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11	. The most accurate tool used to measure the diameter of a hole is (1) try square. (2) inside caliper. (3) measuring tape. (4) outside caliper.
12	 The most efficient equipment/tool used to drill a hole on a piece of timber is (1) electric hand drilling machine. (2) ratchet brace. (3) auger. (4) hand drilling machine.
13	 When screws are named as 1"×8, the length of the nail is considered as 1 inch. No. 8 there represents (1) diameter of the head of screw nail. (2) height of the screw thread of screw nail. (3) diameter of the shank of screw nail. (4) size of the countersink of screw nail.
14.	. What is the type of coating that can be used for both wood and metal surfaces? (1) Enamel (2) Sealer (3) Varnish (4) French Polish
15.	The most suitable and durable finishing method for a wooden item, which is exposed to sunlight is (1) finishing with sealer and wood finish. (2) finishing with water base material (3) finishing with varnish. (4) finishing with lacquer.
16.	 Level 7 of the National Vocational Qualification (NVQ Level-7) frame is (1) National Level certificate. (2) Diploma Level certificate. (3) Higher Diploma Level certificate. (4) Degree Level certificate.
17.	Figure shows a timber joint used to increase the width. What is that joint? (1) Grooved and tongued joint (2) Cross tongued joint (3) Rebated joint (4) Square edge joint
18.	The load imposed on a building by its own roof is(1) a live load(2) a dead load(3) an environmental load.(4) a mechanical load.
19.	The 'surface tension', of a construction material is a(1) chemical property(2) physical property.(3) thermal property(4) mechanical property.
20.	Consider the following statements. A – Lubrication B – Removing the grinding powder C – Preventing the corrosion of tools D – Preventing the heating of a tool Out of the above, the pair of statements which mentions the causes of applying oil to the oilstone and water to the sandstone when sharpening cutting iron of planes and blades of chisel is (1) A and B (2) A and C (3) B and C (4) B and D
21.	Out of the following, what is the most suitable apparatus, to draw a line parallel to an edge of a planed and prepared piece of timber? (1) Try square (2) Steel ruler (3) Marking gauge (4) Scriber

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22. The chemical 'Creosote' is used (1) for timber preservation (2) for curing of concrete (3) to resist the corrosion of steel members. (4) to control the setting time of cement 23. In a machine, turning the parts easily, smooth performance and efficiency happen as a result of (1) seasoning. (2) lubricating. (3) preservating (4) finishing 24. Tools are divided into two main categories based on the method of using. These two categories are (1) cutting tools and drilling tools. (2) tamping tools and construction tools. (3) finishing tools and sharpening tools. (4) hand tools and power tools 25. The storey pole is used to (1) measure the length and the thickness of a brick wall. (2) arrange the bricks of a course in a straight row. (3) check the horizontality and verticality of a brick wall (4) check the height of brick courses 26. Out of the following, the chemical property of various materials used in construction is (1) melting point. (2) specific heat (4) viscosity. (3) electric resistance. 27. The ability to elongate and bend a material without breaking it is (1) fusibility (2) plasticity. (3) ductility. (4) elasticity. 28. The dimensions of a stretcher face of a brick, manufactured in accordance with Sri Lanka standard specification is (1) 215 mm × 65 mm. (2) 220 mm \times 65 mm (4) 230 mm × 75 mm. (3) 225 mm × 75 mm. 29. The figure shows a front elevation of a brick wall constructed in stretcher bond. Select the correct option that gives the terminology used for A, B and C in that order. (1) toothing, raking back and lap (2) toothing, raking back and bed joint (3) raking back, toothing and bed joint (4) raking back, toothing and lap C30. Select the correct statement with reference to English bond. (1) Uses for load bearing walls. (2) Minimum width of the wall is equal to $\frac{1}{2}$ brick. (3) The wall thickness may be increased by $\frac{3}{4}$ of bricks. (4) Lap of the bond is $\frac{1}{2}$ brick. 31. Select the answer which bears the correct material ratio of mass concrete without reinforcement. (2) 1: 1 - 3(1) 1:1:2 (3) 1:3:6 (4) 1:2:4 32. What is the main objective of concrete compaction? (1) Forming porosity of concrete (2) Increasing tensile strength of concrete (3) Expediting setting time of concrete (4) Removing air trapped inside the concrete

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33	 The ratio of a certain concrete mix is stated as 1:2:4 (12). What is meant by (12) there? (1) Diameter of the reinforcement bar (2) The size of the coarse aggregate (3) The compressive strength (4) The volume of water 		
34. 35.	 Consider the following statements A - grading of aggregates B - correct mixing ratio C - water - cement ratio D - Curing the concrete mix Out of the above statements, what statements include the factors affecting the quality of a concrete? (1) A, B and C (2) A, B and D (3) A, C and D (4) B, C and D To prevent the errosion of soil bunds and edges, a rough rubble masonry walls type covered with a wire mesh is used. The name of this type is 		
	 (1) Gabion retaining wall (2) random rubble coursed masonry (3) random rubble uncoursed masonry. (4) ashlar rubble masonry 		
36.	 'Water hammer' phenomenon takes place in a pipe system, because of using (1) a bend (2) an elbow bend. (3) a reducing elbow bond (4) a joining socket 		
37.	When Galvanized Iron pipes are joined with accessories to prevent the liquid leaking through the threads, the material used to wrap around it is known as (1) thread seal tapes (2) coconut fibre. (3) polythene strips (4) twine		
38.	 A \$\overline{0}\$20 mm water tap has to be installed to the temporary stop of the PVC pipe as shown in the figure The necessary material required are (1) reducing socket, faucet socket, solvent cement and water tap. (2) thread seal tape, reducing socket, solvent cement and water tap. (3) faucet socket, thread seal tape, solvent cement and water tap. (4) faucet socket, solvent cement, el-bow and water tap. 		
39.	What is the solvent used to dissolve emulsion paint in finishing work?(1) Thinner(2) Turpentine(3) Water(4) Kerosene oil		
40.	 Consider the following statements. A - Closing the small pores on the surface B - Controlling the absorption of secondary coat C - Creating a colourful appearance in the wall paint D - Controlling the abrasions on the wall caused with contacts E - Facilitating drying Select the statements that mention the basic objectives of applying primary coat before applying paint in finishing work of construction members. (1) A and B (2) B and C (3) C and D (4) D and E 		
	 E - Facilitating drying Select the statements that mention the basic objectives of applying primary coat paint in finishing work of construction members. (I) A and B (2) B and C (3) C and D (4) D and E * * 		

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Draw the following views of above isometric drawing according to third angle projection. Front elevation, seen through direction arrow A Side elevation, seen through direction of arrow B Plan, seen through direction of arrow C Used scale should be 1:1.

(ii) Draw two circles with 25 mm radius of each with 100 mm distance between two centers and draw the common external tangent.

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- 2. When finishing a certain product, the finishing method should be decided based on the material used for construction.
 - (i) Name four finishing methods that can be used for timber designs.
 - (ii) Smoothing is necessary in the process of finishing a timber product. Explain three factors that should be considered during smoothing.
 - (iii) How does the preservation of a product take place due to the finishing? Explain with three examples

3. The efficiency of a tool is diminuated when the tool is not sharpened.

- (i) What is the shape of the file used when a handsaw is sharpened?
- (ii) State the space that should exist between cutting iron of plain and back iron of plain in planing of soft wood and hard wood.
- (iii) State the four steps of sharpening a handsaw in order.
- 4. (i) Three pairs of water pipe accessories are given below Explain the difference between accessories of each pair.
 - (a) Bend and L-bow
 - (b) Joining socket and Reducing socket
 - (c) Faucet socket and valve socket
 - (ii) Name four tools / equipment used to finish a water supply system of a house and describe their uses briefly.
- 5. Brick walls and reinforced concrete are mostly used in building construction.
 - (i) Name a suitable type of brick bond for external walls,
 - (ii) Draw separately the plan views of first and second course of 90° wall corner with two brick length of each side in the type of brick bond named in (i) above.
 - (iii) A cross-section of a Lintel is given below Copy the figure to the answer script and mark compressive zone, tensile zone and neutral axis



- 6. 'Personal safety' is essential in the construction process
 - (i) What is the safety advice that can be seen at first by a person who enters a construction site?
 - (ii) Name five safety wear which should be worn by craftsmen who work at a wall construction site.
 - (iii) Describe two precautions that should be taken for the safety of students who walk about close to a construction site at school premises.
- 7. It has been decided to pave 11 m long, 3 m wide road with 225 \times 110 \times 60 mm paving blocks.
 - (i) How many paving blocks are required for this task?
 - (ii) Number of labour hours required to pave and finish a 1 m² of road and their payments are shown below.
 - one trained craftsman (block paver) 1 hour
 - payment per hour for one person Rs 250/-
 - two helpers 1 hour
 - payment per hour for one person Rs. 200/-

Calculate the total payment that should be made to craftsmen and helpers to finish the above task.

10 සහ 11 ශෝණි සං	දහා ගුන්ථ නාමාවලිය
(අ.පො.ස) සාමානූ පෙළ 11 ශේුණිය – කෙටි සටහන්	Grade 11 - Short Notes
සිංහල මාධප	Buddhism
10-11 සිංහල වාහාකරණ	Mathematics - 1
10-11 සිංහල සාහිතාය රසාස්වාදය	Mathematics - 2
බුද්ධ ධර්මය	Biology
කතෝලික ධර්මය	Physics
සිංහල භාෂාව හ <mark>ා සාහිත</mark> ාය	Chemistry
සිංහල සාහිත <mark>ාය සංගුහය</mark>	History
English Language	Business & Accounting Studies
ගණිතය - 1	Geography
ගණිතය - 2	Civic Education
ජීව විදහාව	ICT
භෞතික විදාාව	Health & Physical Education
රසායන විදහාව	10-11 English Literary (Poetry)
ඉතිහාසය	10-11 English Literary (Drama)
වාාපාර හා ගිණුම්කරණ අධායනය	10-11 English Literary (Short Story)
භූගෝල විදහාව	
පුරවැසි අධාාපනය	Grade 11 - Model Papers
පෙරදිග සංගීතය	English Medium
නර්තනය	Civic Education
නාටා හා රංග කලාව	
චිතු කලාව	
තොරතුරු හා සන්නිවේදන තාඤණය	10 ශේුණිය – කෙටි සටහන්
සන්නිවේදනය හා මාධා අධායනය	සිංහල මාධ්ය
සෞඛාය හා ශාරීරික අධාාපනය	සම්ප්ධ ධර්මය
කෘෂි හා ආහාර තාක්ෂණය	කතෝලික ධර්මය
ගෘහ ආර්ථික විදාහාව	සිංහල භාෂාව හා සාහිතාය
" _ " " " "	සිංහල සාහිතාය සංගුහය
II ශේණය - පුශ්නෝත්තර	සිංහල රචනා අත්වැල
සිංහල මාධ්	English Language
සිංහල භාෂාව හා සාහිතාය	ගණිතය - 1
බුද්ධ ධර්මය	ගණිතය - 2
ඉතිහාසය	ජීව විදහාව
වාාපාර හා ගිණුම්කරණ අධායනය	ෙ භෞතක විදහාව
පුරවැසි අධාාපනය	රසායන විදහාව

ඉතිහාසය	Grade 10 - Short Notes				
ඉතිහාසය රූප සටහන් අශිුත කෙටි සටහන්	English Medium				
වාහාපාර හා ගිණුම්කරණ අධායනය - 1	Buddhism				
වාහාපාර හා ගිණුම්කරණ අධාායනය - 2	Mathematics - 1				
භූගෝල විදහාව	Mathematics - 2				
පුරවැසි අධාාපනය	Biology				
පෙරදිග සංගීතය	Physics				
තර්තනය	Chemistry				
නාටා හා රංග කලාව	History				
චිතු කලාව	Business & Accounting Studies - 1				
 තොරතුරු හා ස <mark>න්නිවේ</mark> දන තාඤාණය	Business & Accounting Studies - 2				
 සන්නිවේදන <mark>ය හා මාධා අධ</mark> ායනය	Geography				
 ຣසෟබාය හා ශා <mark>ර</mark> ීරික අධාාපනය	Civic Education				
කෘෂි හා ආහාර තාක්ෂණය	ICT				
ගෘහ ආර්ථික විදාහාව	Health & Physical Education				
ජපත් භාෂාව					
	Grade 10 - Model Papers				
10 ශේණිය – පුශ්නෝත්ත <mark>ර</mark>	English Medium				
සිංහල මාධස	Mathematics				
සිංහල භාෂාව හා සාහිතාය	Science				
බුද්ධ ධර්මය	Civic Education				
ගණිතය	Geography				
 විද ා ව	English Activity Book				
ඉතිහාසය	English Work Book				
පුරවැසි අධාාපනය					
භූගෝල විදහාව	අනෙකුත් ගුන්ථ				
පෙරදිග සංගීතය	හෙළදිව කතිකාවත				
	– අරුණශාන්ත අමරසිංහ				
පාඩමෙන් පාඩමට මාසික ඇගයීම්	📃 හොල්මන් අවතාර සහ යකදුරන්				
සිංහල මාධ්ය	අරුණශාන්ත අමරසිංහ				
10-ශේණිය - විදහාව	සිස-ගරු අත්පොත නාටා හා රංග				
11-ශෝණිය - විදාහව	කලාව 10-11 ශේණි සඳහා (නව විෂය				
	නිර්දේශය) - නන්දන අල්ගේවත්ත				
සියලු ම ශේණි සඳහා කෙටි සටහන්, පුශ්න පතු කට්ටල සහ					
වැඩ පොත් අප සතුව තිබෙන අතර, මෙම ඕනෑම ගුන්ථයක්					
වට්ටම් සහිත් ව මබ්ට නිවසට ම ගෙන්වා ගත හැකි ය					