

Construction Materials_Past Question Collection

1. The tendency of a stone is to split along:

[Civil Er. 6th 2079/02/21]

- A. Cleavage
- B. Structure
- C. Texture
- D. Fracture

Correct Answer: A

Explanation:

a. Cleavage

Cleavage refers to the tendency of a mineral to break along specific planes of weakness in its crystal structure, resulting in smooth, flat surfaces. This occurs because atomic bonds are weaker in certain directions within the crystal lattice.

b. Structure

In mineralogy, structure denotes the orderly and repeating arrangement of atoms, ions, or molecules within a mineral, forming its crystal lattice. This internal framework determines the mineral's external shape and physical properties.

c. Texture

Texture describes the physical characteristics of a rock, including the size, shape, and arrangement of its mineral grains or crystals. It provides insights into the rock's history and the conditions under which it formed.

d. Fracture

Fracture is the manner in which a mineral breaks when it does not cleave along its

natural planes of weakness. The resulting surfaces are often uneven or irregular. Types of fractures include conchoidal (smooth, curved surfaces), uneven, and splintery.

2. Which is the best wood for door and window purpose?

[Civil Er. 6th 2079/02/21]

- A. Mango
- B. Bamboo
- C. Deodar
- D. Teak

Correct Answer: D

3. The soil good for making bricks is:

[Civil Er. 6th 2079/02/21]

- A. black cotton
- B. silty
- C. alluvial
- D. sand and silt

Correct Answer: C

4. The capacity of a stone to withstand the impact loads is:

[Civil Er. 6th 2079/02/21]

- A. Toughness
- B. Hardness
- C. Compressive Strength
- D. Shear strength

Correct Answer: A

5. The stainless steels are alloys steels in which the most important alloying elements are:

[Civil Er. 6th 2079/02/21]

- A. Nickel and Chromium
- B. Chromium and Zinc
- C. Zinc and Copper
- D. Copper and Tin

Correct Answer: A

Explanation:

- A) ✓ Nickel and Chromium: The standard recipe for stainless steel (e.g., "18/8" steel contains 18% Chromium and 8% Nickel).
- B) ✗ Chromium and Zinc: Chromium is for stainless steel; Zinc is used for "Galvanized Steel" to prevent rusting.
- C) ✗ Zinc and Copper: This combination creates Brass, not steel.
- D) ✗ Copper and Tin: This is the classic mix for Bronze, one of the oldest known alloys.

6. Hydraulic lime is obtained by:

[Civil Er. 6th 2079/02/21]

- A. Burning of lime stone
- B. Burning of Kankar
- C. Adding water to quick lime
- D. Calcination of pure clay

Correct Answer: B

Explanation:

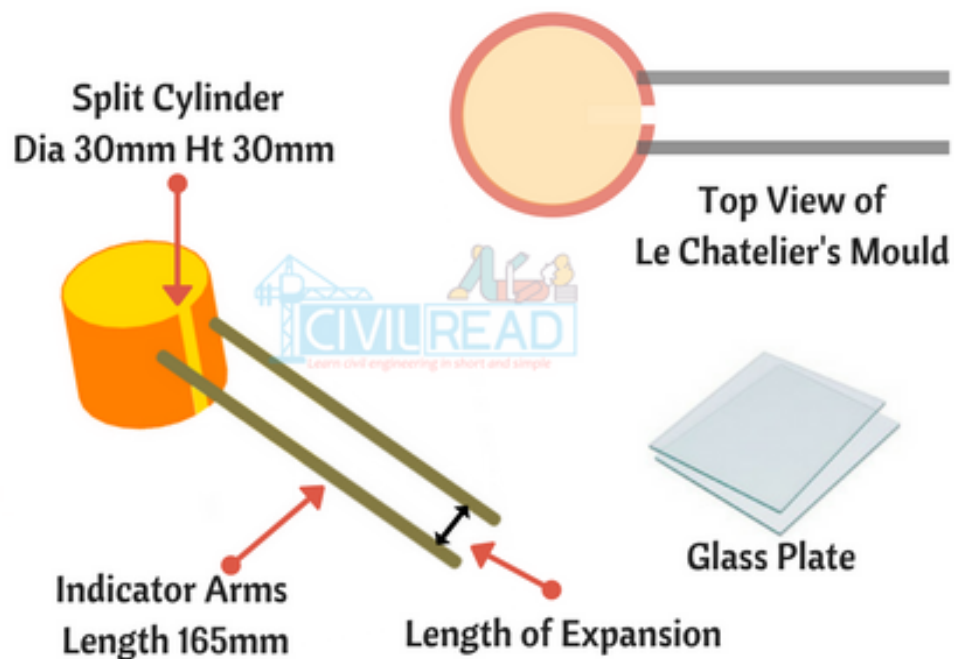
~ or by burning relatively impure limestone.

7. The expansion of Portland Cement can be tested by:

[Civil Er. 6th 2079/02/21]

- A. Fineness test
- B. Soundness test
- C. Setting time
- D. Consistency test

Correct Answer: B



Explanation:

The Soundness test specifically measures the ability of cement to retain its volume after hardening. If cement contains excess free lime or magnesia, it undergoes delayed expansion, which can cause cracking and structural failure.

Analysis of Options

- A) ✗ Fineness test: Measures the particle size of cement (using a sieve or air permeability method); affects the rate of hydration.
- B) ✓ Soundness test: Detects volume changes (expansion) using the Le Chatelier

apparatus or Autoclave test.

- C) ✘ Setting time: Measures the time taken for cement to stiffen (Initial set) and harden (Final set) using the Vicat needle.
- D) ✘ Consistency test: Determines the amount of water needed to create a standard paste for other tests.

8. The most important constituent of an oil paint is:

[Civil Er. 6th 2079/02/21]

- A. Thinner
B. Pigment
C. Base
D. All of these

Correct Answer: D

9. A piece of timber under 5cm thick and less than 10 cm in width is called :

[Civil Er. 6th 2079/02/21]

- A. strip
B. plank
C. batten
D. cant

Correct Answer: B

Explanation:

According to IS 707:2011 Timber Technology and Utilisation of Wood

- ✓ Batten — A piece of sawn timber whose crosssectional dimensions do not exceed 5 cm in either direction.
- ✓ Plank — A piece of sawn timber whose thickness does not exceed 5 cm but the width exceeds 5 cm.

✓ Cant — Thick piece of timber with or without squared edges, sawn from a flitch or a log and intended for further conversion into smaller sizes.

From definition a plank has thickness under 5 cm but width exceed 5 cm (here given 10 cm). So, it is a plank.

Some other terminology

✓ Baulk — A piece of sawn timber whose cross-functional dimensions exceed 5 cm in one direction and 20 cm in other direction.

✓ Scantling — A piece of timber whose cross-sectional dimensions exceed 5 cm but do not exceed 20 cm in both directions.

10. Fire bricks are used:

[Civil Er. 6th 2079/02/21]

- A. to reflect heat
- B. to increase heat flow
- C. to decrease heat flow
- D. none of the above

Correct Answer: C

11. The strength of building stone should not be less then:

[Civil Er. 6th 2079/02/21]

- A. 1000 kg/cm²
- B. 500 kg/cm²
- C. 1500 kg/cm²
- D. 300 kg/cm²

Correct Answer: A

12. The most commonly used retarder in cement is

[Civil Er. 7th Level 2080/10/27]

- A. Gypsum
- B. Calcium chloride
- C. Aluminum Sulphate
- D. None of the above

Correct Answer: A

13. The pigments in paint is mixed to give desired.....

[Civil Er. 7th Level 2080/10/27]

- A. Smoothness
- B. Color
- C. Appearance
- D. Durability

Correct Answer: B



14. Bitumen is generally obtained from.....

[Civil Er. 7th Level 2080/10/27]

- A. Organic material
- B. Synthetic material
- C. Petroleum product
- D. Coal

Correct Answer: C

15. The steel used in R.C.C work is.....

[Civil Er. 7th Level 2080/10/27]

- A. Stainless steel
- B. Mild steel
- C. High carbon steel
- D. Wrought iron

Correct Answer: B

16. Plastic asphalt is a

[Civil Er. 7th Level 2080/10/27]

- A. Mixture of cement and asphalt
- B. Natural asphalt
- C. Refinery product
- D. Bitumen

Correct Answer: A

17. Compared to ordinary Portland cement, the ultimate strength of the Pozzolana Portland cement is....

[Civil Er. 7th Level 2080/10/27]

- A. Same
- B. More
- C. Less
- D. Very much less

Correct Answer: B

18. Which polymer is used in various plastic applications and is known for its transparency, high impact resistance, and versatility?

[Civil Er. 7th Level 2080/10/27]

- A. Polyethylene
- B. Polystyrene
- C. Polyvinyl chloride (PVC)
- D. Polypropylene

Correct Answer: A

19. What is the primary raw material used in the production of ceramic tiles?

[Civil Er. 7th Level 2080/10/27]

- A. Limestone
- B. Sand
- C. Clay
- D. Gypsum

Correct Answer: C

20. Which property of building materials describes their resistance to deformation under an applied load without undergoing permanent deformation?

[Civil Er. 7th Level 2080/10/27]

- A. Ductility
- B. Elasticity
- C. Brittleness
- D. Hardness

Correct Answer: B

21. Which metal is commonly alloyed with iron to create stainless steel, which is known for its corrosion resistance?

[Civil Er. 7th Level 2080/10/27]

- A. Aluminum
- B. Copper
- C. Nickel
- D. Zinc

Correct Answer: C

22. Which material is commonly used for framing in residential construction due to its high strength-to-weight ratio?

[Civil Er. 7th Level 2080/10/27]

- A. Concrete
- B. Timber
- C. Steel
- D. Brick

Correct Answer: C

23. Better stable base is constructed with

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. One size aggregate
- B. Well grade aggregates
- C. Finer size of granular material
- D. Flaky aggregates

Correct Answer: B

Explanation:

Well-graded aggregates provide a better stable base in road construction because they contain a range of particle sizes. This mix allows for a denser packing, reducing voids and improving stability and load-bearing capacity compared to using one size of aggregate or flaky aggregates. Finer granular materials may not provide the necessary strength and stability required for a base.

24. The thick structure above millimeter that can be identified with magnifying glass or naked eyes is called as

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Real structure
- B. Meso-structure
- C. Micro-structure
- D. Macro-structure

Correct Answer: D

25. Uniform seasoning of wood is done by:

[रा .प. तृतीय, हाइवे, २०७०/११/१०, ११]

- A. water seasoning
- B. vapour seasoning
- C. kiln seasoning
- D. electric seasoning

Correct Answer: C

Explanation:

- In kiln Seasoning, wood is placed in a kiln where temperature, humidity and air circulation are controlled to ensure even drying.

26. The good soil for making bricks is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. alluvial
- B. clay
- C. sandy
- D. silty

Correct Answer: B

27. An undisturbed sample of soil has a volume of 100 cm³ and weight 180 grams. The soil sample when dried for 24 hours in an oven, weighs 160 grams. The dry density of the soil is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. 1.4
- B. 1.5
- C. 1.6
- D. 1.7

Correct Answer: C

28. Silts have the following property:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. plasticity
- B. limited plasticity
- C. no plasticity
- D. elasticity

Correct Answer: B

Explanation:

Hints: Silts generally exhibit limited plasticity, meaning they can deform slightly under pressure but do not have the extensive plastic behavior that clays do.

29. The hollow concrete blocks are manufactured in Nepal with nominal concrete mix of proportion:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. 1:1:2
- B. 1:2:4

C. 1:3:6

D. 1:4:8

Correct Answer: C

Explanation:

- Concrete blocks are often made of 1:3:6 concrete with a maximum size aggregate of 10mm or a cement-sand mixture with a ratio of 1:7, 1:8 or 1:9.

Source: FAO

30. Which of the following terms is not associated with a timber floor?

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

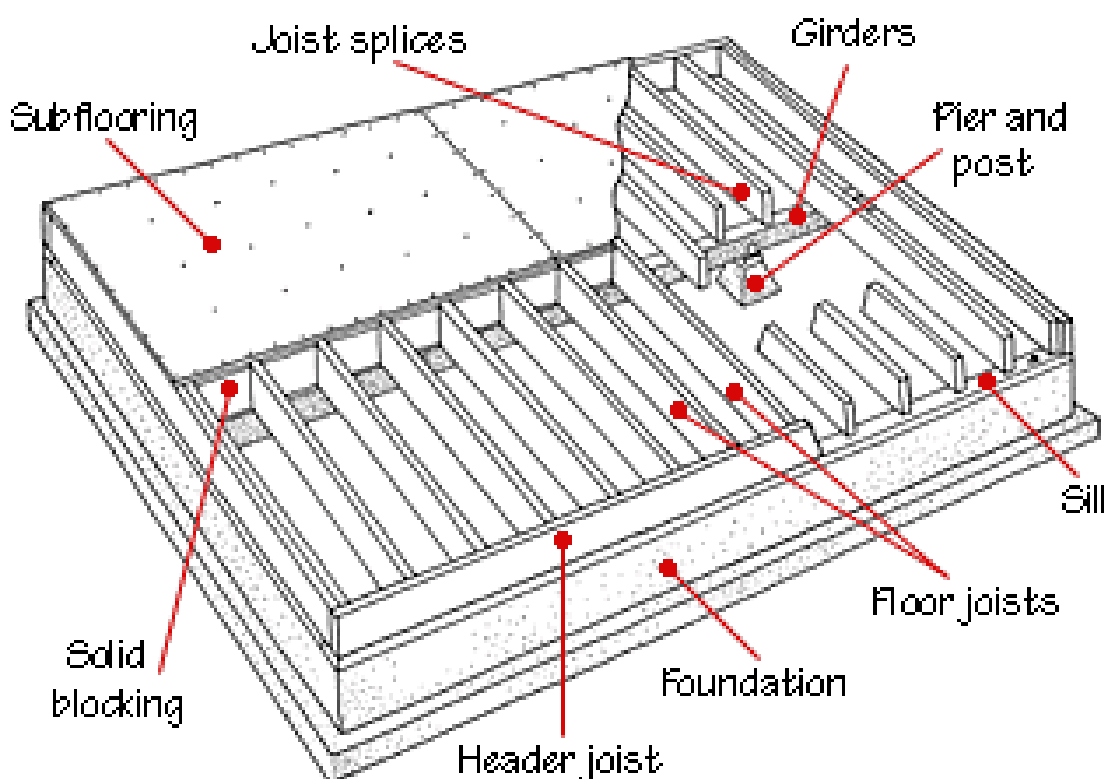
A. girder

B. joist

C. gusset plate

D. planking

Correct Answer: C



Explanation:

Girder: A large beam that supports the joists in a timber floor system.

Joist: Horizontal members that support the flooring material.

Planking: Refers to the wooden boards that make up the floor surface.

Gusset plates, on the other hand, are typically associated with trusses and structural connections rather than specifically with timber floor construction.

31. The effect of increase in temperature on the strength of concrete is not much up to temperature of about:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. 150° C
- B. 250° C
- C. 350° C
- D. 450° C

Correct Answer: D

Explanation:

✓ **Temperature Limit:** Concrete strength is not significantly affected up to approximately 400°C, as observed in multiple studies and standards.

✓ **Research Studies:**

Sadhana Journal: Notes that significant degradation in mechanical properties, including compressive strength, begins prominently between 400°C to 600°C.

Procedia Structural Integrity: Confirms that concrete retains much of its strength up to 400°C before a pronounced decline occurs.

- ✓ Fire Technology Review: Verifies that for normal strength concrete, compressive strength moderately decreases up to 400°C, with a rapid decline beyond this threshold.
- ✓ High-Strength Concrete: May exhibit different behavior, but the general trend remains consistent across various grades of concrete.

32. Thermoplastic is a polymer which:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. visco elastic at intermediate temperatures and fluid at high temperature
- B. do not deform on mechanical stressing
- C. is produced by condensation polymerization
- D. cannot be remoulded into any new shape

Correct Answer: A

33. The bending stress as well as tensile stress of a timber member is lowest when it is in:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. inside location
- B. outside location
- C. wet location
- D. air conditioned environment

Correct Answer: C

Explanation:

The bending and tensile stress capacity of timber is lowest in wet locations due to higher moisture content reducing its strength.

Key Points

- ✓ Moisture Impact: Higher moisture content (wet conditions) weakens timber, lowering its bending and tensile strength.
- ✓ Wet Location (C): Maximum moisture content reduces strength properties compared to drier environments.
- ✓ Air-Conditioned (D): Low moisture content increases strength, making stress capacity higher.
- ✓ Inside/Outside (A/B): Moisture varies but not as severely as in explicitly wet conditions.

Although the question says stress it is actually trying to imply strength as stress depends on the loading condition.

34. Suitable type of stone for bridge piers construction is:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. sand stone
- B. lime stone
- C. slate
- D. gneiss

Correct Answer: D

Explanation:

Gneiss is a metamorphic rock that is strong, durable, and resistant to weathering, making it suitable for bridge pier construction. Its structural integrity and ability to withstand heavy loads make it an excellent choice for foundational applications like bridge piers. While sandstone and limestone can also be used in some contexts, gneiss is generally preferred for its superior strength and stability.

35. Ingredients required for coal tarring are:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. unslaked lime, tar and kerosene oil
- B. tar, turpentine and linseed oil
- C. slaked lime, tar and spirit
- D. cerosote, 'tar and linseed oil

Correct Answer: A

Explanation:

As per IS 334:2023 Glossary of Terms Relating to Bitumen and Tarr Coal Tarr is defined as:

✓ Tar, Coal (Crude Coal Tar) — Tar produced by the destructive distillation of bituminous coal.

The ingredients used during coal tarring typically include:

✓ Coal Tar: The primary ingredient, a thick liquid obtained from the destructive distillation of coal, used for its protective and adhesive properties.

✓ Kerosene Oil: Often mixed with coal tar to enhance its application properties and improve workability.

✓ Lime: Sometimes included to improve the binding and durability of the mixture.

✓ Filler Materials: Such as sand or other aggregates that may be added to enhance the mixture's performance.

These components work together to create a durable coating for wood and other surfaces, providing protection against moisture and decay.

36. The soil good for making bricks is:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२, रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. alluvial soil
- B. clay soil
- C. sand and silt
- D. silt

Correct Answer: B

37. The ultimate tensile stress of mild steel of grade I is:

[रा .प. तृतीय, विल्लिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. 500 N/mm²
- B. 400 N/mm²
- C. 412 N/mm²
- D. 600 N/mm²

Correct Answer: C



IS : 432 (Part I) - 1982

TABLE 1 MECHANICAL PROPERTIES OF BARS
(Clause 8.1)

Sl. No.	TYPE AND NOMINAL SIZE OF BAR	ULTIMATE TENSILE STRESS,	YIELD STRESS	ELONGATION* PERCENT,
		Min	Min	Min
1. Mild Steel Grade I				
	For bars up to and including 20 mm	410	250	23
	For bars over 20 mm, up to and including 50 mm	410	240	23
2. Mild Steel Grade II				
	For bars up to and including 20 mm	370	225	23
	For bars over 20 mm, up to and including 50 mm	370	215	23
3. Medium Tensile Steel				
	For bars up to and including 16 mm	540	350	20
	For bars over 16 mm, up to and including 32 mm	540	340	20
	For bars over 32 mm, up to and including 50 mm	510	330	20

*Elongation on a gauge length $5.65 \sqrt{S_0}$ where S_0 is the cross-sectional area of the test piece.

38. Expansive cement expands mostly during its:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. initial hardening period
- B. final hardening period
- C. whole life
- D. all of above

Correct Answer: A

39. Tung oil is used for making:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. very dilute colours
- B. colourless paints & varnishes
- C. very delicate colour
- D. superior paints and varnishes

Correct Answer: D

Explanation:

Option D) superior paints and varnishes is generally considered the best answer in this context. This is because tung oil is primarily known for its exceptional qualities as a base for paints and varnishes. It offers superior durability, water resistance, and a beautiful finish, making it a preferred choice for many applications.

While option B) is also correct, it doesn't fully capture the unique advantages of tung oil as a high-quality coating material.

Tung oil, derived from the seeds of the tung tree (*Aleurites fordii*), is primarily used as a drying oil in wood finishing and protective coatings.

Also used for waterproofing.

Used in natural paints, varnishes, and as a binder in oil-based paints because of its hard, glossy finish when dried.

40. In blasting rocks with dynamites; the recommended diameter of drill for depth 1.80 m to 3.50 m is:

[रा.प. तृतीय, हाइवे, २०६७/१२/१०]

- A. 25 mm
- B. 40 mm
- C. 50 mm
- D. 60 mm

Correct Answer: B

These rules provide a first estimate in the absence of any better data.

Blast hole diameter in mm \leq 15 x Bench height (BH) in metres

Bench height (BH) in metres \geq (Blast hole diameter (D) in mm)/15

Burden (B) = (25 to 40) x (D)

Spacing (S) = 1.15 x B (This gives an equilateral pattern)

Subdrill = (3 to 15) x D

Charge length (C) \geq 20 D

Stemming \geq 20 x D or (0.7 - 1.2) x B

Burden stiffness ratio = BH/B : 2 to 3.5 good fragmentation
: > 3.5 very good fragmentation

Stemming material size = D/10 to D/20 (Angular material with minimum fines)

Explanation:

According to a manual by Dyno Nobel (a leading explosive manufacturer) the rule of thumb for drill hole diameter is

41. The paint which gives illumination during night is called

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Fluorescent paint
- B. Cellulose paint
- C. Enamel paint
- D. None of the above


Correct Answer: A

42. Mild steel contains carbon upto

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. 0.05%
- B. 0.10%
- C. 0.15%
- D. 0.30%

Correct Answer: D



In The Basis Of Carbon Content Steel Are Classified

Type of steel	Carbon content
Dead mild steel	< 0.15%
Mild steel	0.15-0.3%
Medium carbon steel	0.3-0.8 %
High carbon steel	0.8-1.5%
Hard steel	>1%(also called as cast steel)

43. Standard size of brick as per Nepal standard is

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. 190mmx90mmx90mm
- B. 200mm*108mm×95mm
- C. 224mmx108mmx57mm
- D. None of the above

Correct Answer: D

Explanation:

- (240+/-10 mm * 115+/- 5 mm * 57+/- 3 mm), (length*width*thickness) as per NBC 109:1994.

44. The property due to which steel can withstand hammer blows is called

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Toughness
- B. Hardness
- C. Ductility
- D. Malleability

Correct Answer: A



45. The carbon content in mild steel is in the range of

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. 0.1 to 0.2%
- B. 0.15 to 0.30%
- C. 1 to 1.5%
- D. 2 to 2.5%

Correct Answer: B

46. The lime which has high calcium oxide content and which sets only in the presence of carbon dioxide is called

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Fat lime
- B. Hydraulic lime
- C. Magnesium lime
- D. Lean lime

Correct Answer: A

Explanation:

- Quick Lime: has greater affinity towards water produced by burning pure limestone. cheapest and highly amorphous and caustic.
- Slaked Lime (Hydrate of lime) : obtained by slaking ie. by adding water to quick lime. Highly used for mortar applications and in plastering and in a cement as a binder.
- Fat Lime: Contains calcium oxide in high content. also called rich, high calcium or pure lime. It slakes vigorously when water is added to it. used for pointing in masonry, foundation with surkhi to thicken the masonry walls etc.
- Hydraulic Lime: Also called water lime. Contains 30% of silica and 5% of alumina along with iron oxide. Lime sets when water is added to it. It is further classified into Eminently hydraulic , semi- hydraulic, Non- Hydraulic .

47. Under metamorphism, which of the following is correct?

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Granite changes into gneiss
- B. Sand stones changes into quartzite
- C. Lime stone changes into marble
- D. All of the above

Correct Answer: D

48. The maximum final setting time for ordinary Portland cement is

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. 60 minutes...
- B. 300 minutes
- C. 600 minutes
- D. 900 minutes

Correct Answer: C

49. The chief chemical components of ordinary Portland Cement are.

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Calcium and silica
- B. Alumina
- C. Iron
- D. All of the above

Correct Answer: D

50. The chemical formula of slaked or Hydrated lime is,

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Cao
- B. CaCo
- C. Ca(OH)₂
- D. Cacl

Correct Answer: C

51. The two main raw materials used for the manufacturing of Portland Cement are

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Argillaceous materials and silica
- B. Calcareous materials and limestone
- C. Calcareous materials and argillaceous materials
- D. Limestones and industrial wastes

Correct Answer: C

52. Bricks shall be soaked in water before use for a minimum period of

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. One hour
- B. Two hour
- C. Three hour
- D. Four hour

Correct Answer: A

53. Galvanizing of structural steel plates is a process of

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Zinc coating
- B. Iron coating
- C. Copper coating
- D. None of the above

Correct Answer: A

54. Workability of concrete is measured by

[रा.प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Compaction factor
- B. Flow test
- C. Remoulding test

D. All of the above

Correct Answer: D

55. Bitumen is a bi-product of

[रा .प. तृतीय, वि.एण्ड आ., २०७३/११/०२]

- A. Woods
- B. Ground waters and minerals
- C. Petroleum
- D. None of the above

Correct Answer: C

56. The water content of soil is the ratio of

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Volume of water to volume of soil
- B. Volume of water to weight of soil
- C. Weight of water to weight of soil solids
- D. Weight of water to weight of air in soil

Correct Answer: C

57. Seasoning of timber makes it

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Lighter
- B. Stronger
- C. Resistant to decay
- D. All of the above

Correct Answer: D



58. Plaster of paris is obtained from the calcination of.

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Lime stone
- B. Bauxite
- C. Dolomite
- D. Gypsum

Correct Answer: D

59. Refractory bricks are used in

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Retaining walls
- B. Columns
- C. Piers
- D. Combustion chambers

Correct Answer: D

60. Chemically marble is known as

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Metamorphic rocks
- B. Argillaceous rock
- C. Calcareous rock
- D. Siliceous rock

Correct Answer: C

61. The lime which consists almost entirely of calcium oxide, is called

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Poor lime
- B. Rich lime
- C. Hydraulic lime
- D. Lime stone.

Correct Answer: B

62. The most fire resistant paints are

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Enamel paints
- B. Aluminum paints
- C. Asbestos paints
- D. Cement paint

Correct Answer: C

63. The maximum percentage of water absorption of first class bricks in 24 hours should be limited

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. 10%
- B. 15%
- C. 20%
- D. 25%

Correct Answer: B

64. Chemical reaction between water and cement compounds is known as:

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Abstraction
- B. Hydration

- C. Titration
- D. Precipitation

Correct Answer: B

65. As compared to steel the tensile strength of wood is nearly
[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Half
- B. One third
- C. 1/4 to 1/5
- D. 1/5 to 1/7

Correct Answer: C

Explanation:

- Tensile Strength of wood = 70- 140 MPa (105 MPa)
- Tensile Strength of steel = 420- 540 MPa (480 MPa)
- Strength Ratio wood/steel = 0.218 (range= 1/4-1/5)

66. Fiber glass

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Retains heat-longer
- B. Has a higher strength to weight ratio
- C. Is shock proof and fire retardant
- D. All of the above

Correct Answer: D

67. The property of a material due to which it can resist deformation is called,
[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Ductility
- B. Brittleness
- C. Stiffness
- D. Creep

Correct Answer: C

Explanation:

- Ductility = capacity of material to deform permanently (stretch, bend or spread) in response to stress.
- Stiffness = A materials ability to return to its original form after being subjected to a force i.e. the extent to which an object resists deformation in response to an applied force.
- brittleness = property of material that fractures when subjected to stress but has a little tendency to deform before rupture.
- Creep = tendency of a solid material to undergo slow deformation while subjected to persistent mechanical stresses.

68. Annual rings of the tree represents its,

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Density
- B. Type
- C. Age
- D. Strength

Correct Answer: C

69. Bitumen is generally by product of

[रा .प. तृतीय, स्थानिटरी ., २०७३/१०/२५]

- A. Synthetic material
- B. Coal product
- C. Petroleum product
- D. Polymer product

Correct Answer: C

70. The separation of water from a freshly mixed concrete is known as

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Separation
- B. Creeping
- C. Bleeding
- D. Segregation

Correct Answer: C

71. Three raw materials used in the production of steel are:

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Coal, sulphur and iron ore
- B. Carbon, sulphur and iron ore
- C. Coal, limestone and iron ore
- D. Carbon, limestone and iron ore

Correct Answer: C

72. In a well-seasoned timber, the moisture content will be in the range of

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. 20-25%
- B. 15-20%
- C. 10-12%

D. 5-7%

Correct Answer: C

73. The amount of local bricks required for one cubic meter masonry as per Nepal Standard are

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. 520
- B. 530
- C. 560
- D. 600

Correct Answer: C

74. The commonly used thinner in oil paints is,

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Naphtha
- B. Turpentine
- C. Both (A) and (B)
- D. None of the above

Correct Answer: C

75. Fineness of cement means:

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. It has a great effect on the rate of hydration and hence rate of gain of strength.
- B. It increases the rate of evolution of heat.
- C. It offers a great surface area for hydration
- D. All of the above

Correct Answer: D

76. The red colour obtained by bricks is due to the presence of
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Lime
- B. Silica
- C. Manganese
- D. Iron oxide

Correct Answer: D

77. Stainless steel resists corrosion due to,
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Carbon
- B. Sulphur
- C. Chromium
- D. Vanadium

Correct Answer: C

78. The maximum percentage of water absorption of first class bricks in 24 hrs should be limited to,
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. 15%
- B. 10%
- C. 20%
- D. 25%

Correct Answer: A

Explanation:

- In Nepali Standard = 15%
- In Indian Standard = 20%

79. For construction of structures under water, the lime used is,
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Pure lime
- B. Quick lime
- C. Fat lime
- D. Hydraulic lime

Correct Answer: D

80. Cutback bitumen is generally prepared by mixing specified quantity of
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Diesel
- B. Petrol
- C. Mobil
- D. All of the above

Correct Answer: D

81. Which of the following has the highest crushing strength?
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Lime stone
- B. Granite
- C. Gneiss
- D. Laterite

Correct Answer: C

82. Length of the brick should be equal to
[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Twice of width
- B. Twice of width plus one-mortar joint
- C. Twice of width plus 10 cm
- D. Three times of height of brick

Correct Answer: B

83. Water absorption of a good brick after 24 hours of immersion should not be less than

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. 25%
- B. 20%
- C. 15%
- D. 10%

Correct Answer: C

84. Which test is required to check the strength of stone?

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. Hardness test
- B. Brand test
- C. Crushing test
- D. Smith test

Correct Answer: C

85. The suitable door for entrance in an air conditioned building is a

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. revolving door
- B. Louvered door

- C. Collapsible door
- D. Swinging door

Correct Answer: A

86. Paint which are most resistant to fire are

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. enamel paint
- B. aluminum paint
- C. asbestos paint
- D. cement paint

Correct Answer: C

87. The Carbon Content in mild steel is in the range of

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. 0.1 to 0.15%
- B. 0.15 to 0.3%
- C. 1 to 1.5%
- D. 2 to 4.5%

Correct Answer: B

88. The rock commonly used in roofing in hilly regions of Nepal is called

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. granite
- B. basalt
- C. slate
- D. talc

Correct Answer: C

89. Heartwood is wood that as a result of a naturally occurring chemical transformation has become more resistant to

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. Growth
- B. Decay
- C. Falling
- D. Flowering

Correct Answer: B

90. The Ductility Test' of bitumen gives a measure of

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. adhesive property
- B. elastic property
- C. shrinkage property
- D. plastic property

Correct Answer: A

Explanation:

- The ductility test measures the distance that a bitumen specimen can stretch before breaking.
- The ductility test of bitumen measures its adhesive property, ability of bitumen to stretch and deform without breaking.
- Provides information about its tensile strength and ductility grade.

91. Consistency of the soil-is governed by0

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. Void ratio

- B. Porosity
- C. Water content
- D. Degree of saturation

Correct Answer: C

92. Lime stones comes under the category of

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. aqueous rocks
- B. stratified rocks
- C. sedimentary rocks
- D. All of the above

Correct Answer: D

93. Three basic raw materials needed for the productions of steel in large scale are

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. iron ore, coal & limestone
- B. iron ore, coal and sulphur
- C. iron ore, carbon and sulphur
- D. iron ore, carbon and limestone

Correct Answer: A

94. A good quality stone absorbs water less than

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. 5%.
- B. 10%
- C. 15%

D. 20%

Correct Answer: A

95. The range of carbon content in mild steel is generally:

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

A. less than 0.1%

B. 0.2 to 0.5%

C. 0.5 to 1.0%

D. 2 to 5%

Correct Answer: B

Explanation:

- Steel is an alloy of iron and carbon along with small amount of other alloying elements or residual elements as well.
- The plain steel contains 0.002-2.1% by wt carbon.
- For most of materials it varies from 0.1%-1.5%.
- 3 types of plain steel:
 - Low-carbon steel : Carbon content in the range of $< 0.3\%$. (mild steel lies here)
 - Medium carbon steel : Carbon content in the range of 0.3-0.6%.
 - High carbon steel : Carbon content in the range of 0.6-0.8% .

Hence, the most suitable answer is option b.

96. The portion of the brick cut across its width and having its length equal to that of full brick is called

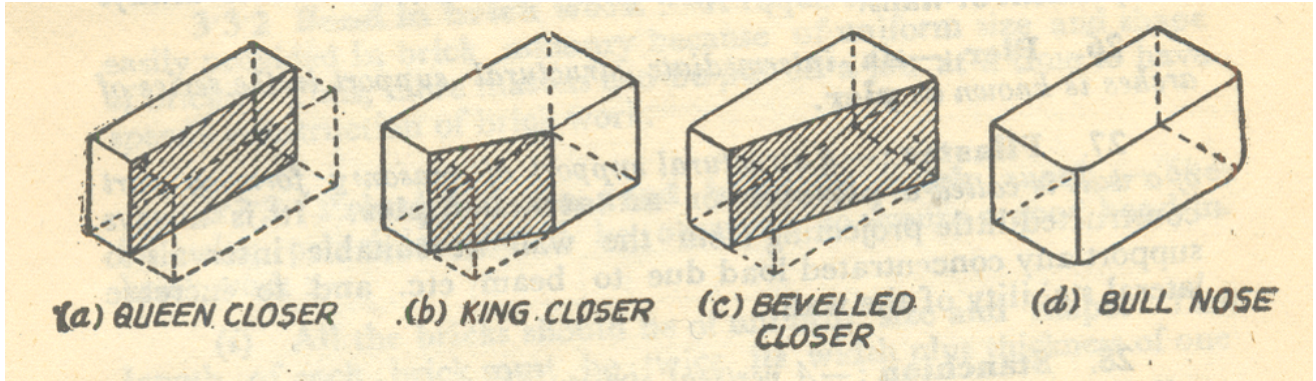
[रा .प. तृतीय, हाइवे, २०७१/११/०९]

A. closer

B. Queen closer

- C. King closer
- D. Prince closer

Correct Answer: B



97. The function of aggregates in concrete is to serve as

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. binding material
- B. filler
- C. catalyst
- D. all of the above

Correct Answer: B

LOKSEWA
with Ghoksewa



98. The seven day compressive strength of a good portland cement as obtained from the compressive test on cement-sand mortar cubs, should not be less than

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. 125 kg/cm²
- B. 150 kg/cm²
- C. 175 kg/cm²
- D. 200 kg/cm²

Correct Answer: C

99. The process of adding water to lime to convert it into a hydrated lime is termed as

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. watering
- B. curing
- C. baking
- D. slaking

Correct Answer: D

100. Plywood is obtained from

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Bamboo
- B. Commonly available timber
- C. Teak wood
- D. Shisham wood

Correct Answer: B

Explanation:

According to IS 303:1989 Plywood for General Purposes - Specifications Clause 6.1

✓ Any species of timber may be used for plywood manufacture. However, a list of species, for the manufacture of plywood is given in Annex B for guidance.

✓ 87 different types wood are mentioned which ranges from rosewood, oak, walnut, sisso, teak, neem, mango, dhup, etc. to mention few.

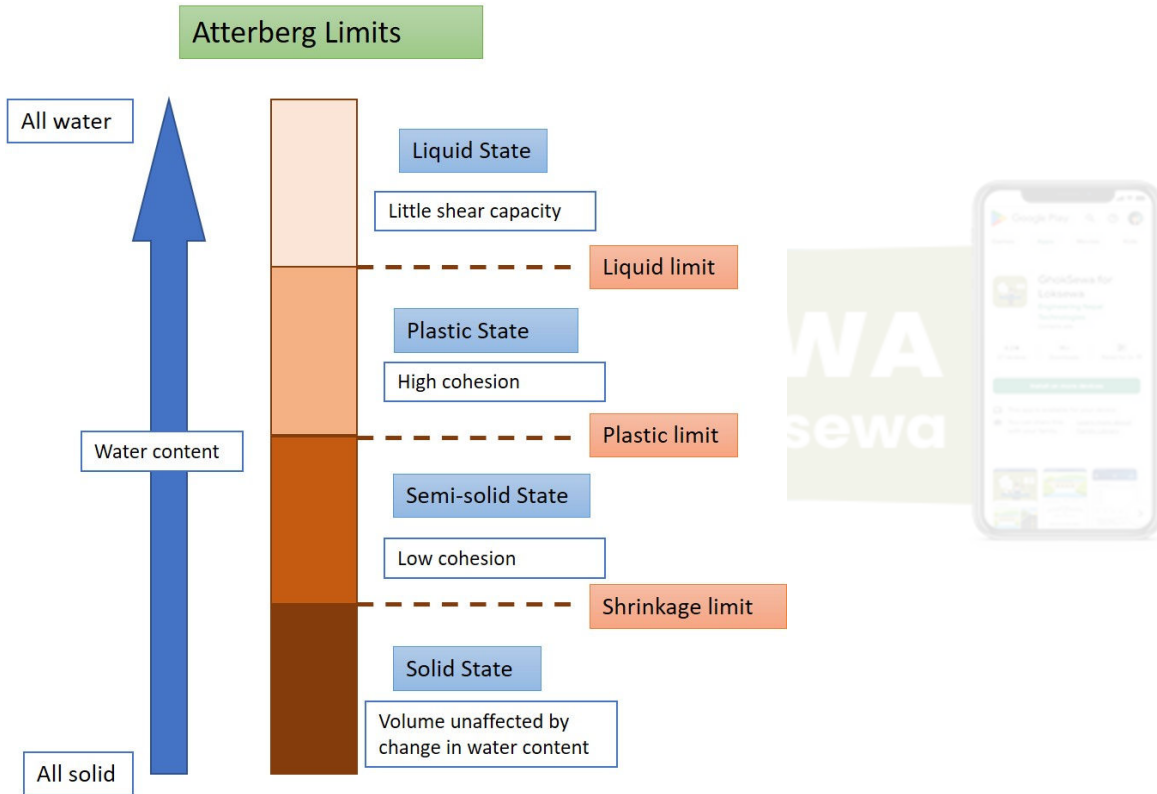
So the answer is b) commonly available timber. Bamboo 🌿 is not used to make plywood.

101. The minimum water content at which the soil just begins to crumble when rolled into thread 3mm in diameter is known as:

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Shrinkage limit
- B. Plastic limit
- C. Liquid limit
- D. Consistency limit

Correct Answer: B



102. Which of the following trees yields hard wood?

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Deodar
- B. Chir
- C. Shishum
- D. Pine

Correct Answer: C

103. The age of a tree can be known by examining

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Cambium layer
- B. Annular rings
- C. Medullary rays
- D. Heart wood

Correct Answer: B

104. The bulk density of an aggregate does not depend upon

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Size and shape of aggregates
- B. Specific gravity of aggregates
- C. Grading of aggregates
- D. Size and shape of the container

Correct Answer: D

105. Efflorescence in cement is caused due to an excess of

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Alumina
- B. Iron oxide
- C. Silica
- D. Alkalis

Correct Answer: D

106. The following material does not belong to calcareous rocks

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Lime stone
- B. Marl
- C. Chalk
- D. Laterite

Correct Answer: D

107. The range of liquid limit of most of the clay soils is considered at:

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. 0-40%
- B. 20-50%
- C. 30-70%
- D. 50-90%

Correct Answer: D

Explanation:

- The liquid limit is the moisture content at which the groove, formed by a standard tool into the sample of soil taken in the standard cup, closes for 10 mm on being given 25 blows in a standard manner.
- At this limit the soil possess low shear strength.
- The identification and classification of fine-grained soil is done with the help of liquid and plastic limits.
- Most clay has a liquid limit of the order of 50%–90%; however it can exceed 100%.

108. The principal requirement of a building stone may not be its:

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Strength

- B. Porosity
- C. Density
- D. Durability

Correct Answer: B

Characteristics of Good Building Stones

- **Appearance & color** – uniform color, lighter shades preferred, free from clay holes, bands or spots
- **Structure** – Not dull in appearance, crystalline homogenous close grained is good, stratification should not be visible.
- **Weight** – heavier are compact, less porous, good for hydraulic structures
- **Strength** – generally compressive strength needed, igneous rock stones are stronger
- **Hardness** – resistance to abrasion, friction and wear. Hardness scale 1 to 10
- **Toughness** – Withstand impact, vibrations, moving loads
- **Dressing** – uniform texture and softness for fine surface finish

Explanation:

- ✓ **Strength:** Essential for bearing structural loads and ensuring the stability of a building.
- ✓ **Durability:** Crucial for resisting weathering and ensuring the longevity of the structure.
- ✓ **Density:** Important for determining the weight and thermal properties of the stone, affecting both structural integrity and insulation.
- ✓ **Porosity:** Refers to the volume of pores or voids within the stone. While it influences water absorption and durability, it is not always a primary consideration in selecting building stones, especially if the stone is treated or used in protected environments.

109. The penetration test for bitumen is conducted at a temperature
[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. 60°c
- B. 37%
- C. 25°c
- D. 50°c

Correct Answer: C

Explanation:

- Penetration test measures the harness and softness of bitumen.
- Depth of penetration is measured and denoted as 1/10th of a millimeter.
- Needle is 100gm, 1mm dia and 50mm long.
- Temperature of bitumen sample is 25 degree Celsius.

110. The compacting factor test of cement concrete determines its
[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Strength
- B. Porosity
- C. Degree of compaction under loads
- D. Workability

Correct Answer: D

Explanation:

- * Tests for workability (consistency) of concrete
- Slump Test
- Compaction Factor Test
- Vee bee test
- Flow Table test
- kelly ball test etc.

111. A heavy stone is suitable for
[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Arches
- B. Rubble masonry
- C. Roads
- D. Retaining walls

Correct Answer: D

112. Which one of the following pairs is correctly matched?
[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Sandstone... igneous rock
- B. Limestone.....sedimentary rock
- C. Basalt Metamorphic rock
- D. Granite..... Argillaceous rock

Correct Answer: B

113. The total thickness of pavement by CBR method depends on the CBR value of
[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Base course
- B. Surface course
- C. Sub grade
- D. All layers

Correct Answer: C

114. In the plate bearing test, if the load applied is in the form of an inflated type of wheel, then this mechanism corresponds to

[रा .प. तृतीय, वि.एण्ड आ, २०७१/११/१०]

- A. Rigid plate
- B. Flexible plate
- C. Semi-rigid plate
- D. Semi-elastic plate

Correct Answer: B

115. Which constituent of cement, up on addition of water, set and hardness first

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. tri-calcium silicate
- B. tri-calcium aluminate
- C. di-calcium silicate
- D. free lime

Correct Answer: B

Compound	Cement Chemist Notation	Purpose
<i>Tricalcium Silicate</i> $(CaO)_3, SiO_2$	C_3S	Enhances the strength and develops early strength
<i>Dicalcium Silicate</i> $(CaO)_2, SiO_2$	C_2S	Hydrates slowly, Strength generated over extended period of time
<i>Tricalcium Aluminate</i> $(CaO)_3, Al_2O_3$	C_3A	Promotes rapid hydration, affects thickening time and initial setting of the cement, makes the cement susceptible to sulfate attack
<i>Tetracalcium Aluminoferrite</i> $(CaO)_4, Al_2O_3, Fe_2O_3$	C_3AF	Responsible for slow hydration

116. Which the following has highest crushing strength?

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. basalt
- B. granite
- C. gneiss
- D. laterite

Correct Answer: C

117. Total lateral earth pressure is proportional to:

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. depth of soil
- B. square of depth of soil
- C. angle of internal friction of soil
- D. None of the above

Correct Answer: B

118. The objective of compaction of concrete is to

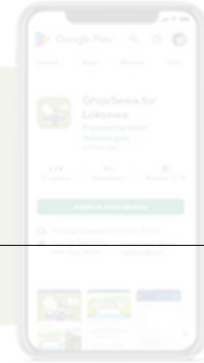
[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. eradicate air holes
- B. give maximum density
- C. maintain level surface
- D. all of the above

Correct Answer: D

119. The most important tool in brick laying for lifting and spreading mortar and for forming joints is

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]



- A. trowel
- B. square
- C. bolster
- D. scutch

Correct Answer: A

120. Dry rot of timber works is caused mainly due to the attack of

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. Fungus
- B. Bacteria
- C. Virus
- D. None of the above.

Correct Answer: A

121. Brass is an alloy of:

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. Copper and zinc
- B. Zinc and lead
- C. tin and silver
- D. Zinc and nickel

Correct Answer: A

122. The steel used in RCC is

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. stainless steel
- B. mild steel
- C. high carbon steel

D. wrought iron.

Correct Answer: B

123. Mastic asphalt is,

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. acid resisting
- B. Non corrosive materials
- C. Corrosive material
- D. heating resisting material

Correct Answer: B

124. The process of mixing clay, water and other ingredients to make brick is known as

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. kneading
- B. moulding
- C. Pugging
- D. drying

Correct Answer: A

125. Sand stone is

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. sedimentary rock
- B. metamorphic rock
- C. igneous rock
- D. volcanic rock

Correct Answer: A

126. The maximum quantity of aggregate per 50 kg of cement should not exceed

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. 100 Kg
- B. 200 Kg
- C. 350 Kg
- D. 450 Kg

Correct Answer: D

127. The initial and final setting times of quick setting cements are

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. 15 minutes and 45 minutes
- B. 20 minutes and one hour
- C. 10 minutes and 30 minutes
- D. 5 minutes and 30 minutes

Correct Answer: D

LOKSEWA
with Ghoksewa



128. Hydraulic lime is obtained by

[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. burning of lime stone
- B. burning of kankar
- C. adding water to quick lime
- D. calcination of pure clay

Correct Answer: B

129. Segregation in concrete results in

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Honey combing
- B. Porous layers
- C. Surface scaling
- D. All of the above

Correct Answer: D

130. Decay of timber means the destruction of wood due to activities of

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Marine-borers
- B. Termites
- C. Ants
- D. Fungi

Correct Answer: D

131. Bitumen with higher value of softening point is preferred in the areas with

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Warm climate
- B. Ice
- C. Cool climate
- D. Fuggy climate

Correct Answer: A

Explanation:

- Bitumen having Higher softening point for Warm Climate
- Bitumen having lower softening point for hot climate

132. Marble used in flooring comes from

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Sedimentary rock
- B. Metamorphic rock
- C. Igneous rock
- D. None of the above

Correct Answer: B

133. Plaster of paris can be obtained from calcinations of

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Lime stone
- B. Gypsum
- C. Dolomite
- D. Bauxite

Correct Answer: B

134. The initial setting time of hydraulic lime is:

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. 120 mins
- B. 60 mins
- C. 30 mins.
- D. 90 mins

Correct Answer: A

135. Hollow bricks are generally used with the purpose of

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Reducing the cost of construction

- B. Providing insulation against heat
- C. Increasing the bearing area
- D. Ornamental look

Correct Answer: B

136. Apparent density is the dry mass per unit volume of a substance under
[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Natural conditions
- B. 25°c
- C. Room temperature
- D. Loading condition

Correct Answer: A

137. A stone is rejected if it absorbs water more than
[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. 5%
- B. 10%
- C. 15%
- D. 20%

Correct Answer: B

138. For construction of structures under water, the type of lime used, is
[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Hydraulic lime
- B. Fat lime
- C. Quick lime
- D. Pure lime

Correct Answer: A

139. A soil has a bulk density of 1.80g/cm^3 at water content of 5%. If the void-ratio remains constant then its bulk density for a water content of 10% will be

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. 1.98 g/cm^3
- B. 1.88 g/cm^3
- C. 1.80 g/cm^3
- D. 1.70 g/cm^3

Correct Answer: B

140. For practically impervious type of soil the coefficient of permeability is determined using

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Variable head test
- B. Constant head test
- C. Consolidation test
- D. Pumping test

Correct Answer: A

Explanation:

- Constant head test for non cohesive soil (Pervious soil) eg. sand
- Variable head test for Cohesive soil (impervious soil) eg. clay

141. Stainless steels generally contain chromium as the main alloying element at an amount of

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Between 0-5%

- B. Between 10-20%
- C. Between 50-100%
- D. Between 20-30%

Correct Answer: B

142. Carbon content in mild steel is upto

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. 0.1%
- B. 0.5%
- C. 0.3%
- D. 1%

Correct Answer: C

143. Seasoning of timber is required to

[रा .प. तृतीय, जनरल, २०७१/११/०२]

- A. Soften the timber.
- B. They are glued under pressure
- C. Plies are placed at right angles to each other
- D. Remove sap from the timber

Correct Answer: D

144. The concrete having a slump of 6.5cm is said to be

[रा .प. तृतीय, इरिगेशन, २०७१/११/१६]

- A. dry
- B. earth moist
- C. semi-plastic
- D. plastic

Correct Answer: D

Consistency	Slump	Compaction Factor
Moist earth	0	0.65-0.7
Very Dry	0-25	0.7-0.8
Dry	25-50	0.8-0.85
Plastic	50-100	0.85-.95
Semi-fluid	100-175	0.95-1

145. The building stone can be dressed easily:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. just after quarrying
- B. after some months of quarrying
- C. after seasoning
- D. at any time

Correct Answer: A

146. In paints, the pigment is responsible for:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. durability
- B. smoothness
- C. colour
- D. glassy face

Correct Answer: C

147. Plate is a material which is thicker than:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. 15 mm
- B. 10 mm
- C. 5 mm
- D. 3mm

Correct Answer: C

148. In stone masonry, the direction of pressure line is:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. perpendicular to natural bed
- B. parallel to natural bed
- C. inclined to natural bed at 45°
- D. inclined to natural bed at 30°

Correct Answer: A

149. Hollow bricks are used for:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. thermal insulation
- B. reduction in cost
- C. ornamental design
- D. all the above

Correct Answer: D

150. Distemper is used on:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. plastered surface exposed to weather
- B. plastered surface not exposed to weather
- C. compound wall
- D. roof top

Correct Answer: B

151. The crushing strength of class I brick should be

[रा.प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. 35 kg/cm²
- B. 70 kg/cm²
- C. 105 kg/cm²
- D. 140 kg/cm²

Correct Answer: C

152. A fixed glass panel in window is fixed by:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. frame and style
- B. frame only
- C. style only
- D. none of the above

Correct Answer: A

Explanation:

A fixed glass panel in a window is typically secured using a combination of the frame and style (the vertical members of the window frame). The frame provides the overall structure and support, while the styles hold the glass in place, ensuring stability and proper alignment.

153. The property of steel due to which it can withstand the blow of hammer is known as:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. toughness
- B. hardness
- C. malleability
- D. ductility

Correct Answer: A

154. Snowcem is a:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. distemper
- B. synthetic enamel paint
- C. primer
- D. water proof cement paint

Correct Answer: D

155. Porcelain is used as

[रा .प. तृतीय, हाइवे, २०७१/११/०९]

- A. sanitary wares
- B. Electrical insulators
- C. Medical equipment
- D. None of the above

Correct Answer: B

Explanation:

- Porcelain is a common material for electrical insulators, especially for high voltage cables and antennas.

- porcelain is also used in chemical porcelain, sanitary ware and dental porcelain.
- Best option is electrical insulators

156. Geologically marble is known as:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. sedimentary rock
- B. igneous rock
- C. both of the above
- D. none of the above

Correct Answer: D

Explanation:

- Metamorphic Rock = Marble is formed when limestone is subjected to intense heat and pressure leading to its metamorphism.

157. Terracotta is essentially:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. an igneous rock
- B. a sedimentary rock
- C. a clay product
- D. a burnt-up brick

Correct Answer: C

158. A good quality bitumen suitable for paving jobs should not indicate a loss in weight more than :

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. 1%
- B. 3%
- C. 7%
- D. 9%

Correct Answer: A

159. The rock having calcium carbonate as main mineral constituent, is known as:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. calcareous rock
- B. argillaceous rock
- C. siliceous rock
- D. sandy rock

Correct Answer: A

160. Seasoning of timber is done:

[रा .प. तृतीय, बिल्डिंग एंड अर्किटेक्ट, २०७१/११/१२]

- A. to make it water proof
- B. to paint its surface
- C. to increase its temperature
- D. to remove water

Correct Answer: D

161. Distemper is used on:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. plastered surface exposed to weather
- B. concrete surfaces

- C. brick walls
- D. plastered surfaces not exposed to weather

Correct Answer: D

162. Age of tree may be ascertained by:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. radius of stem
- B. circumference of stem
- C. number of annual rings
- D. number of branches

Correct Answer: C

163. Sand stone is a:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. igneous rock
- B. siliceous rock
- C. sedimentary rock
- D. both A & C above

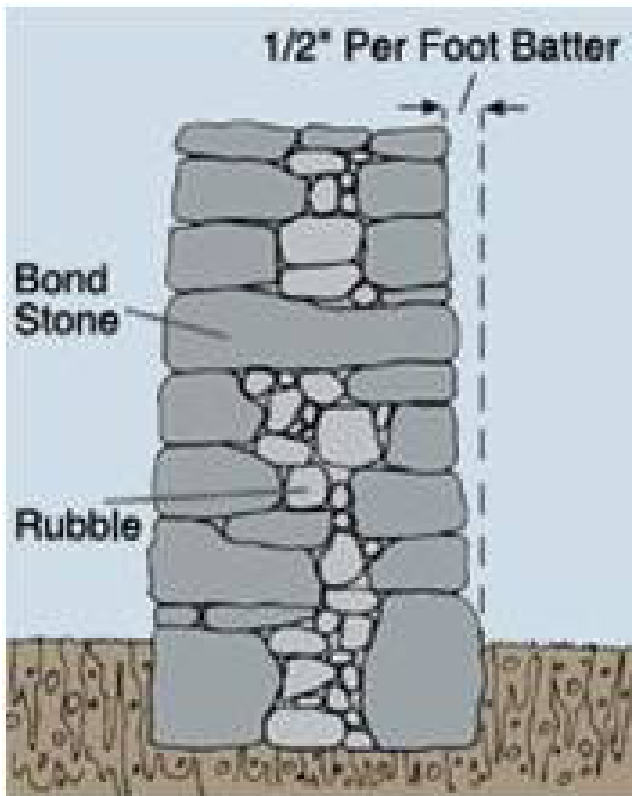
Correct Answer: C

164. In random masonry, bond stone shall be provided the rate of at

[रा .प. तृतीय, जनरल, २०७३/११/१६]

- A. One to every 0.9 sq. m. of the exposed face
- B. One to every 0.5 sq. m. of the exposed face
- C. One to every 1:3 sq. m. of the exposed face
- D. None of the above

Correct Answer: B



Explanation:

- In stone masonry, bond stones also known as through stones, perpend stones or tie stones, should be provided at regular intervals to ensure the walls integrity.
- Through bond stones of one piece shall be provided, one every 0.5 sqm of face and should extend to the full thickness of wall.

165. The stone that exhibit highest compressive strength is:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. slate
- B. gneiss
- C. granite
- D. lime stone

Correct Answer: C

166. The process of adding water to lime to convert it in hydrated lime, is

known as:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. hydration.
- B. slaking
- C. calcination
- D. watering

Correct Answer: B

167. Bitumen felt is

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. made from bitumen and hession fibre
- B. used as damp proofing materials,
- C. used as water proofing materials
- D. all of the above:

Correct Answer: D

168. The main function of alumina in brick earth is to:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. prevent shrinkage.
- B. impart plasticity
- C. increase durability
- D. none of the above

Correct Answer: B

169. The timber whose thickness is less than 5 cm and width more than 12 cm, is called a:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. log
- B. board
- C. plank
- D. batten

Correct Answer: B

Explanation:

- Batten = breadth and thickness do not exceed 50mm.
- Baulk = one x-sectional dimension exceeds 50mm and other exceeds 200mm.
- Board = width >150mm and Thickness < 50mm
- Deal = width <=230mm and thickness = 50-100mm
- Plank = thickness < 50mm and width > 50mm
- Pole = Diameter <=200mm , also called spar.
- Quartering = square shape having 50-150mm side length.
- Scantling = Breadth and thickness > 50mm but are less than 200mm in length.

170. The good clay for making bricks is :

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. black cotton soil
- B. unweathered clay
- C. weathered clay
- D. silted soil

Correct Answer: C

171. Which-of-the-following is the most non-porous rock?

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. slate

- B. basalt
- C. granite
- D. sandstone

Correct Answer: C

172. The maximum bearing capacity of soil is that of:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. black cotton soil
- B. dry coarse sandy soil
- C. hard rock
- D. loose fine sandy soil

Correct Answer: C

173. Marble is a

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. sedimentary rock
- B. igneous rock
- C. metamorphic rock
- D. stratified rock

Correct Answer: C

174. Seasoning of timber is essential to remove :

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. roughness of timber
- B. knots from timber
- C. sap from timber
- D. twisted fiber from timber

Correct Answer: C

175. The property by virtue of which lime sets under water, is known as:

[रा .प. तृतीय, हाइवे, २०७०/११/१०]

- A. hydraulicity
- B. slacking
- C. setting
- D. calcining

Correct Answer: A

176. Distemper is used on:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. plastered surface exposed to weather
- B. concrete surfaces
- C. brick walls
- D. plastered surfaces not exposed to weather

Correct Answer: D

177. Age of tree may be ascertained by:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. radius of stem
- B. circumference of stem
- C. number of annual rings.
- D. number of branches

Correct Answer: C

178. Sand stone is a:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. igneous rock
- B. silicious rock
- C. sedimentary rock
- D. both A & C above

Correct Answer: C

179. The stone that exhibit highest compressive strength is:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

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- D. lime stone

Correct Answer: C

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[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. hydration
- B. slaking
- C. calcination
- D. watering

Correct Answer: B

181. Bitumen felt is:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. made from bitumen and hession fibre
- B. used as damp proofing materials

- C. used as water proofing materials
- D. all of the above

Correct Answer: D

182. The main function of alumina in brick earth is to:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. prevent shrinkage
- B. impart plasticity
- C. increase durability
- D. none of the above.

Correct Answer: B

183. The timber whose thickness is less than 5 cm and width more than 12 cm. is called a:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. log
- B. board
- C. plank
- D. batten

Correct Answer: B

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[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. black cotton soil
- B. unweathered clay
- C. weathered clay
- D. silted soil

Correct Answer: C

185. Which of the following is the most non-porous rock?

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. slate
- B. basalt
- C. granite
- D. sandstone

Correct Answer: C

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[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. black cotton soil
- B. dry coarse sandy soil
- C. hard rock
- D. loose fine sandy soil

Correct Answer: C

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[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. sedimentary rock
- B. igneous rock
- C. metamorphic rock
- D. stratified rock

Correct Answer: C

188. Seasoning of timber is essential to remove :

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. roughness of timber
- B. knots from timber
- C. sap from timber
- D. twisted fiber from timber

Correct Answer: C

189. The property by virtue of which lime sets under water, is known as:

[रा .प. तृतीय, हाइवे, २०७०/११/११]

- A. hydraulicity
- B. slacking
- C. setting
- D. calcining

Correct Answer: A

190. Fineness of cement is measured in units of:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. area/mass
- B. volume/mass
- C. mass/volume
- D. mass/area

Correct Answer: A

191. Bitumen is dissolved in:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. water

- B. sodium chloride
- C. carbon disulphide
- D. carbon dioxide

Correct Answer: C

192. Frog means:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. a depression on a face of a brick
- B. an apparatus to lift the stone
- C. soaking brick in water
- D. vertical joint in a brick work

Correct Answer: A

193. Softest rock is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. talc
- B. marble
- C. slate
- D. granite

Correct Answer: A

194. The commonly used thinner in oil paints is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. turpentine
- B. olive oil
- C. sprit
- D. all of the above

Correct Answer: A

195. Distemper is used on:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. brick walls
- B. concrete surfaces
- C. plastered surfaces exposed to weather
- D. plastered surfaces not exposed to weather

Correct Answer: D

196. In mild steel, carbon content is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. less than 0.25%
- B. between 0.25 and 0.75%
- C. between 0.75 and 1.5%
- D. more than 1.5%

Correct Answer: A

197. The liquid medium used in enamel paints is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. thinner
- B. alcohol
- C. turpentine
- D. varnish

Correct Answer: D

198. For construction of structures under water, the type of lime uses is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. hydraulic lime
- B. fat lime
- C. quick lime
- D. none of these

Correct Answer: A

199. Thermal characteristic is observed when:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. water is added to stones
- B. water is added to bricks
- C. water is added to slaked lime
- D. water is added to fat lime

Correct Answer: D

200. The commonly used raw material in the manufacture of cement, is:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. slate
- B. sand stone
- C. lime stone
- D. basalt

Correct Answer: C

201. A good quality stone absorbs water less than:

[रा .प. तृतीय, जनरल, २०७०/११/०८]

- A. 10%
- B. 15%
- C. 5%

D. 25%

Correct Answer: C

202. Slump test of concrete is a measure of its:

[रा.प. तृतीय, जनरल, २०७०/११/०८]

- A. consistency
- B. compressive strength
- C. tensile strength
- D. impact value

Correct Answer: A

203. Rocks formed from molten magma are known as:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. sedimentary rocks
- B. igneous rocks
- C. metamorphic rocks
- D. none of the above

Correct Answer: B

204. The percentage of alumina in a good brick lies between:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. 5 to 10%
- B. 20 to 30%
- C. 40 to 46%
- D. 50 to 70%

Correct Answer: B

205. A good quality sand should be devoid of:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. clay
- B. stone powder
- C. minute stone grain
- D. none of the above

Correct Answer: A

206. Fat lime is obtained by:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. putting water in sand
- B. putting water in cement
- C. putting water in surkhi
- D. putting water in quick lime

Correct Answer: D

207. 1 cubic meter of concrete for a 1:2:4 may used

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. 1 bag of cement
- B. 6.6 bags of cement
- C. 66 bags of cement
- D. none of the above

Correct Answer: B

208. For partition works of 1/2 brick thick masonry, the mortar mix should be at least: (cement:sand)

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. 1:8
- B. 1:6
- C. 1:4
- D. 1:2

Correct Answer: B

209. Prefabrication method takes..... for construction when compare to conventional construction.

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. more time
- B. less time
- C. equal time
- D. none of the above

Correct Answer: B

210. Plastering is for:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. improving the strength of wall
- B. improving the appearance of the wall
- C. improving the fire resistance of the wall
- D. none of the above

Correct Answer: B

211. For normal white wash of plastered surfaces, the material used is:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. plaster of paris
- B. lime

- C. white cement
- D. white distemper

Correct Answer: A

212. Good quality bricks should have a crushing strength of not less than
[रा .प. तृतीय, हाईडोवाटर, २०७१/११/१४]

- A. 30 kg/cm²
- B. 40 kg/cm²
- C. 55 kg/cm²
- D. 65 kg/cm²

Correct Answer: D

Explanation:

- Crushing strength of
- 1st class brick = 10N/mm²
- 2nd Class brick= 7 N/mm²
- 3rd class brick= 3.5 N/mm²

So the near best answer is option d 65kg/cm²

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213. A cavity wall is constructed to resist :

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. axial forces
- B. wind loads
- C. heat flow
- D. dampness

Correct Answer: C

214. A retaining wall is designed to resist :

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. wind load
- B. live loads
- C. rolling loads
- D. pressure of earth filling

Correct Answer: D

215. The maximum pressure to which cast iron pipes may be subjected to, is:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. 3 kg/cm²
- B. 5 kg/cm²
- C. 7 kg/cm²
- D. 10 kg/cm²

Correct Answer: C

216. For concrete slabs (props left under) the form work is generally removed after:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. 2 days
- B. 3 days
- C. 7 days
- D. 14 days

Correct Answer: B

Formwork Type	Formwork Removal Time
Wall Sides, Columns, and Vertical faces of the beam	24 hours to 48 hours
Slabs (props left under)	3-4 days
Beam soffits (props left under)	7 days
Props Removal of Slabs:	
i) Slabs spanning up to 4.5m	14 days
ii) Slabs spanning over 4.5m	14 days
Props Removal for beams and arches	
i) Span up to 6m	14 days
ii) Span over 6m	21 days

217. Under pinning is used to:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. strength the foundation
- B. strength the superstructure
- C. strength the roof
- D. none of the above

Correct Answer: A

218. Shoring is:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. permanent construction
- B. semi permanent construction
- C. temporary construction
- D. none of the above

Correct Answer: C

219. The arrangement made to support an unsafe structure temporarily, is known as

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. scaffolding
- B. shoring
- C. jacking
- D. under pinning

Correct Answer: B

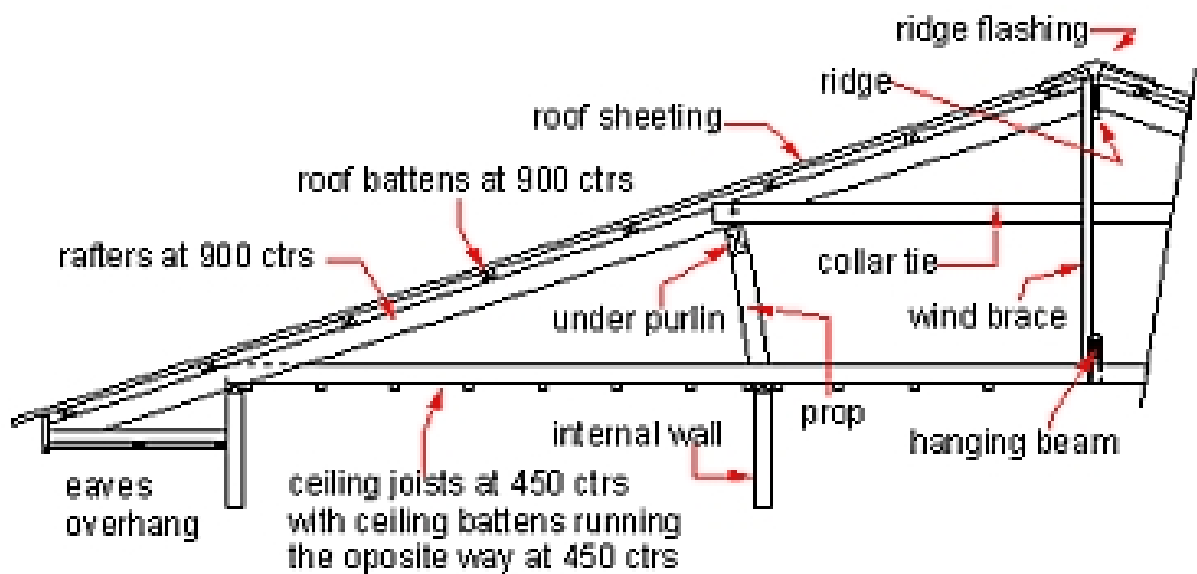
220. The timber element covering the edge sections of rafters on the outer side of a sloped roof building is called:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. batten
- B. eaves board
- C. gutter
- D. purlin

Correct Answer: B

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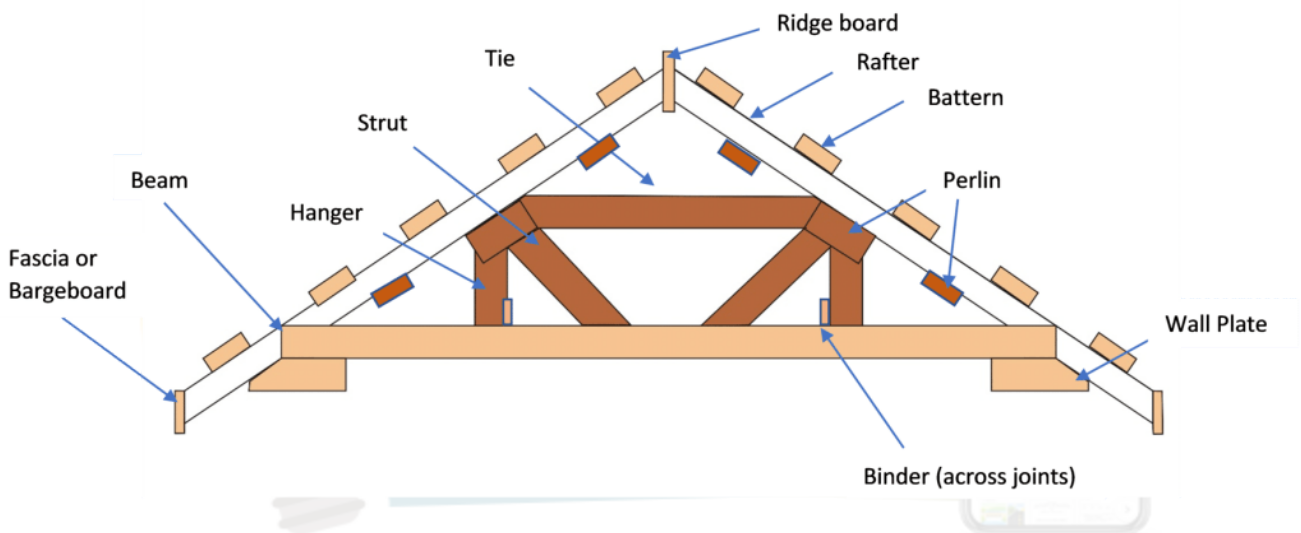


221. The lower edge of a pitched roof from where rain water drops down, is called:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. eaves
- B. hip
- C. ridge
- D. corner

Correct Answer: A

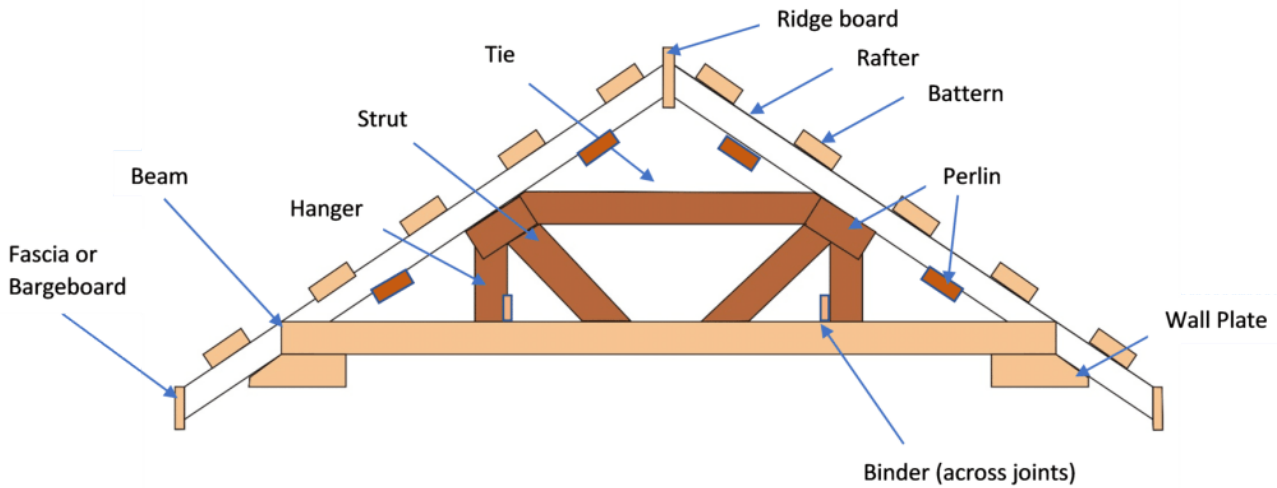


222. The member which is placed horizontally to support common rafter of a sloping roof, is:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. purlin
- B. cleat
- C. batten
- D. strut

Correct Answer: A

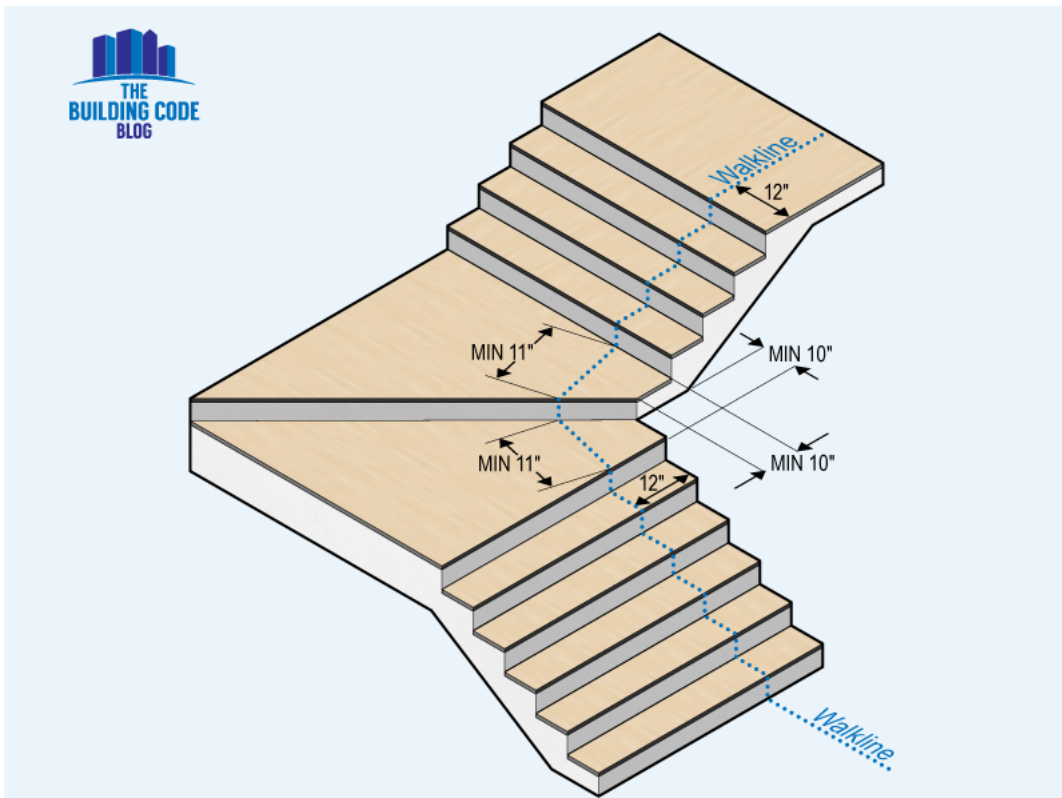


223. The staircase with triangular shaped steps in landing is called:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. dog legged
- B. bifurcated
- C. open newel
- D. winder

Correct Answer: D



224. FAR stands for:

[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. false aspect ratio
- B. floor aspect ratio
- C. floor area ratio
- D. floor access ratio

Correct Answer: C

225. The density of a normal concrete is:

[रा.प. तृतीय, स्यानिटरी, २०६९/१०/०८]

- A. 2000 kg/m³
- B. 2400 kg/m³
- C. 3000 kg/m³
- D. 2500 kg/m³

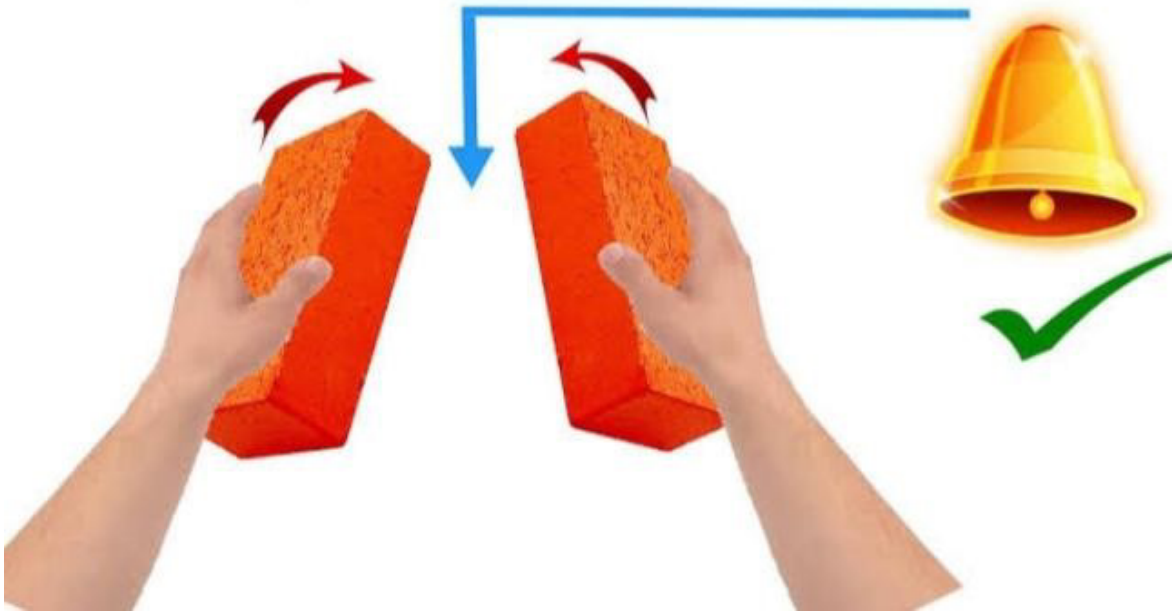
Correct Answer: B

226. What is the simplest method of testing the compactness of brick?

[रा.प. तृतीय, स्यानिटरी, २०६९/१०/०८]

- A. color
- B. ringing sound
- C. size
- D. water absorption

Correct Answer: B



Explanation:

Ringing Sound Test: Striking two bricks together produces a clear, metallic ringing sound if the bricks are well-fired and compact.

- ✓ This test requires no tools or equipment, making it the easiest and quickest method for assessing brick compactness on-site.
- ✓ A dull sound may indicate internal cracks or poor compaction, suggesting the brick is of inferior quality.
- ✓ Widely used in field conditions due to its effectiveness and ease of execution.

Therefore, the ringing sound test is the most straightforward and effective method to assess the compactness of bricks.

227. Major component of a gun-metal is:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. zinc
- B. Copper
- C. tin

D. lead.

Correct Answer: B

228. Which of the following is most widely used as a vehicle for all ordinary painting works?

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. turpentine
- B. kerosene
- C. linseed oil
- D. red lead

Correct Answer: C

229. Veneers are the thin sheets or slices of wood superior quality, having thickness varying from 0.4 mm to 6 mm or more:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. plywood
- B. veneers
- C. laminated board
- D. block boards

Correct Answer: A

230. The percentage of silica in a good clay brick should vary from :

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. 20-30%
- B. 30-40%
- C. 40-50%

D. 50-60%

Correct Answer: D

Explanation:

= Constituents of a Brick

Silica (sand)= 50-60% by weight

Alumina (clay) = 20-30% by weight

Lime = 2 to 5% by weight

Iron Oxide \leq 7% by weight

Magnesia = $<$ 1% by weight

231. Which of the following is a mineral?

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. basalt
- B. granite
- C. quartz
- D. syenite



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Correct Answer: C

Explanation:

- granite, syenite and basalt are rock .

232. Clay and silt content in a good brick earth must be at least:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. 20%
- B. 25%
- C. 30%

D. 50%

Correct Answer: D

233. The most commonly used base for timber painting is:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. red lead
- B. white lead
- C. zinc white
- D. titanium white

Correct Answer: B

234. Geologically, rocks are classified as:

[रा .प. तृतीय, स्यानिटरी , २०६९/१०/०८]

- A. argillaceous, siliceous and calcareous
- B. stratified and unstratified
- C. igneous, sedimentary and metamorphic rock
- D. siliceous, calcareous and igneous

Correct Answer: C

235. The workability of concrete may improved by:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. increase flaky aggregate
- B. decrease fine aggregate
- C. increase fine aggregate
- D. increase coarse aggregate

Correct Answer: D



236. The important test to be conducted on a stone used in docks and harbours is:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. hardness test
- B. workability test
- C. weight test
- D. toughness test

Correct Answer: C

237. When the water table is under the base of the footing at a depth equal to half of the width footing, the bearing capacity of soil is reduced to:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. one-fourth
- B. one-half
- C. two-third
- D. Three-fourth

Correct Answer: D

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Effect of Water Table on Bearing Capacity:

Terzaghi and Meyerhof equations give the ultimate bearing capacity based on the assumption that the water table is located well below the foundation. However, if the water table is close to the foundation, the bearing capacity will decrease due to the effect of water table, some modification of the bearing capacity equations (Terzaghi and Meyerhof) will be necessary.

The values which will be modified are:

1. (q for soil above the foundation) in the second term of equations.
2. (γ for the underlying soil) in the third (last) term of equations.

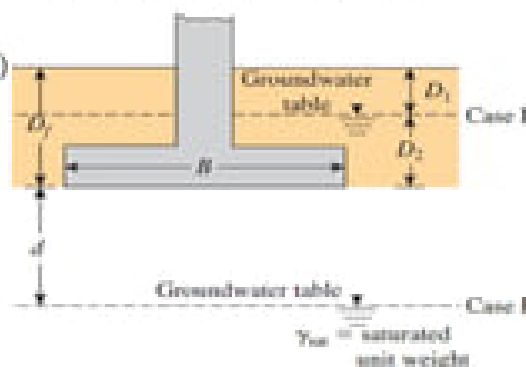
Case I. The water table is located so that $0 \leq D_1 \leq D_f$ as shown in the following figure:

- For the soil above the foundation) The factor q , (second term) $q = D_1 \gamma_d + D_2 (\gamma_{sat} - \gamma_w)$
- For the soil under the foundation) The factor γ , (third term) $\gamma = \gamma_{sat} - \gamma_w$

Case II. The water table is located so that $0 \leq d < B$ as shown in the following figure:

- The factor q , (second term) $= q = D_f \gamma_d$
- The factor γ , (third term) $= \gamma = \gamma' + \frac{d}{B} (\gamma_d - \gamma')$

Case III. The water table is located so that $d \geq B$, in this case the water table is assumed have no effect on the ultimate bearing capacity.



238. The lime suitable for making mortar is:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. fat lime
- B. quick lime
- C. hydraulic lime
- D. white lime

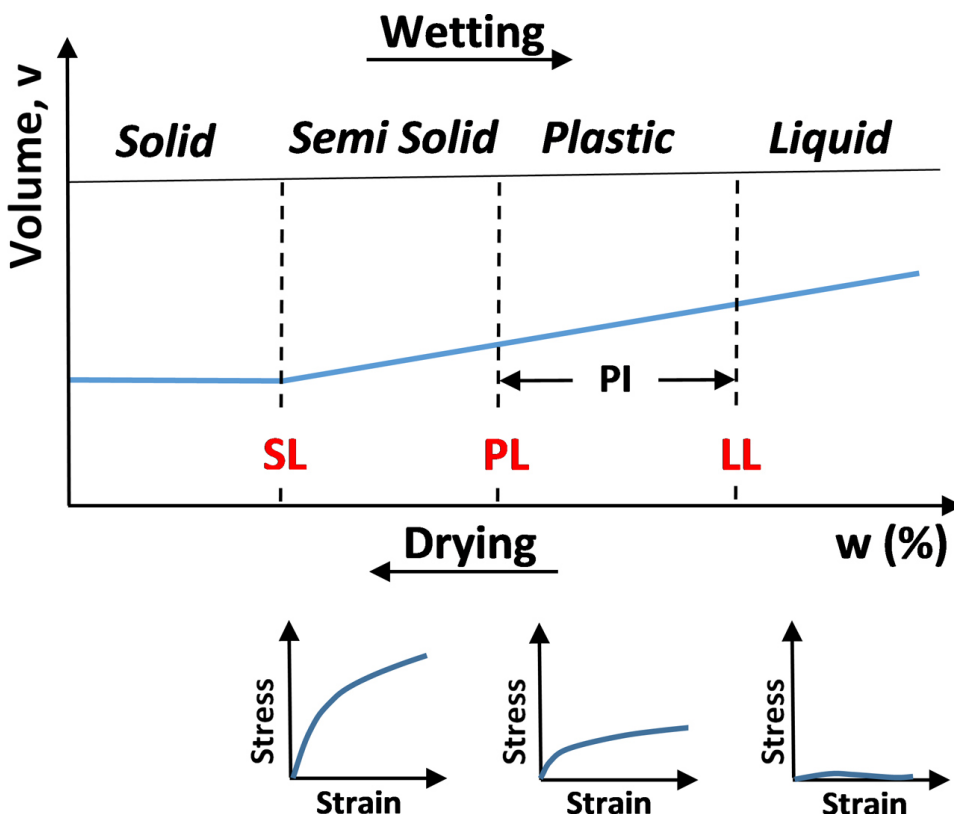
Correct Answer: C

239. The property of soil of stickiness, friability and plasticity is, in general, termed as:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. consistency
- B. plasticity index
- C. liquid limit
- D. shrinkage

Correct Answer: A



Explanation:

- Consistency= the strength with which soil materials are held together or the resistance of soils to deformation and rupture. For wet soils, it is expressed as both stickiness and plasticity.

- Plasticity Index (PI)= a measure of a soil's plasticity, or its ability to deform without cracking.

$$PI = \text{liquid limit (LL)} - \text{plastic limit (PL)}$$

- Liquid Limit (LL)= the water content at which soil changes from a plastic to a liquid state.

- Plastic Limit (PL) = the water content at the change from a plastic to a semi-solid state.

- Shrinkage Limit (SL)= the water content at which the soil changes from a semi-solid to a solid state

240. A metamorphosed mineral entirely composed of silica is known as:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. Marble
- B. Granite
- C. Slate
- D. Quartz

Correct Answer: D

241. The minimum compressive strength of common building brick should not be less than:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. 15 N/mm²
- B. 7:5 N/mm²

- C. 50 N/mm²
- D. 3.5 N/mm²

Correct Answer: D

About Civil Engineering Compressive Strength OF Bricks

- 1] First class brick — 105 kg/cm²
- 2] Second class brick — 70 kg/cm²
- 3] Common Building brick — 35 kg/cm²
- 4] Sundeied Brick — 15-25 kg/cm²
- 5] Fly Ash brick — 90-100 kg/cm²
- 6] AAC BLOCK — 30-40 kg/cm²

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242. The essential constituent of all varnishes is:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. turpentine
- B. resin
- C. oil
- D. alcohol

Correct Answer: B

243. The best primer used for structural steel work is:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. white lead
- B. red lead
- C. zinc oxide
- D. iron oxide

Correct Answer: B

244. Bronze is a metal alloy consisting of:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. copper and tin
- B. copper and steel
- C. copper and iron
- D. tin and iron

Correct Answer: A

245. The weight of ordinary Portland cement per cubic metre is taken at:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. 1700 kg
- B. 1400 kg
- C. 1200 kg
- D. 1000 kg

Correct Answer: B

Unit Weights

Unit Weight of R.c.c	- 2500Kg/M ³
" " " P.c.c	- 2400Kg / M ³
Brick work	- 1800Kg / M ³
Soil	- 1600Kg / M ³
Coarse Aggregate	- 2300Kg / M ³
Fine Aggregate	- 2350Kg / M ³
Cement	- 1440Kg / M ³
Steel	- 7850Kg / M ³
Stone Masonry	- 2300Kg / M ³
Cement Motter	- 2100Kg / M ³

246. Which of the following bricks are used for lining of furnaces?

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. over burnt
- B. under burnt
- C. refractory
- D. first class

Correct Answer: C

247. The thickness of 24 gauge galvanized iron sheet is:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. 1/24 inch
- B. 1/30 inch
- C. 1/12 inch
- D. 1/48 inch

Correct Answer: D

Gauge	Thickness	
	inch	mm
7	0.1443	3.665
8	0.1285	3.264
9	0.1144	2.906
10	0.1019	2.588
11	0.09074	2.305
12	0.08081	2.053
14	0.06408	1.628
16	0.05082	1.291
18	0.04030	1.024
20	0.03196	0.812
22	0.02535	0.644
24	0.02010	0.511
26	0.01594	0.405
28	0.01264	0.321
30	0.01003	0.255

248. From which type of rock, marble is extracted?

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. sedimentary rock
- B. metamorphic rock
- C. igneous rock
- D. none of above

Correct Answer: B

249. The first class brick should absorb water:

[रा .प. तृतीय, जनरल , २०६९/१०/०२]

- A. maximum 15%
- B. maximum 30%
- C. maximum 20%
- D. maximum 10%

Correct Answer: A



250. The formworks used for construction of arches is known as
[प्रा.प.नी. सिभिल समूह, आर्किटेक्ट २०७०/१०/१८]

- A. trenching
- B. centering
- C. shoring
- D. farming.

Correct Answer: B

Explanation:

- Centering is the temporary structure required to support brick, stone or concrete work of arch, dome etc during its construction.

251. Which of the following is a mineral ?

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. basalt
- B. granite
- C. quartz
- D. none of above

Correct Answer: C

252. The minimum hardness number for marble is about:
















[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. 10
- B. 8
- C. 5
- D. 3

Correct Answer: D

GEM SELECT

Mohs Hardness Scale

Name	Scale Number	Common Object
 Diamond	10	
 Corundum	9	← Masonry Drill Bit / 8.5 
 Topaz	8	
 Quartz	7	← Steel Nail / 6.5 
 Orthoclase	6	
 Apatite	5	← Knife / 5.5 
 Fluorite	4	
 Calcite	3	← Penny (Copper) / 3.5 
 Gypsum	2	
 Talc	1	← Fingernail / 2.5 

253. Softest rock is:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. marble
- B. talc
- C. diamond
- D. slate

Correct Answer: B

254. Special material of construction capable of withstanding high temperature is:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. insulator
- B. glass
- C. clay products

D. refractory

Correct Answer: D

255. Strength of cement with storage:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

A. increase

B. same

C. decrease

D. none of the above

Correct Answer: C

256. Which of the following pairs gives a correct combination of the useful and harmful constituents respectively of a good brick earth?

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

A. lime stone and alumina

B. silica and alkalis

C. alumina & iron

D. alkali and magnesium

Correct Answer: B

257. The ultimate tensile strength of a good hydraulic lime in (1:3) lime sand mortar should not be less than:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

A. 1.0 N/mm²

B. 0.7 N/mm²

C. 0.5 N/mm²

D. 0.3 N/mm²

Correct Answer: B

Explanation:

- With 1:3 (Lime : Sand) Mortar, Ultimate Tensile Strength of
 - a. Good hydraulic lime= at least 7kg/sq cm
 - b. Fat Lime = at least 2.8kg/sq cm

258. Granite is mainly composed of:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. quartz and mica
- B. felspar and mica
- C. quartz and felspar
- D. quartz, felspar and mica

Correct Answer: D

259. The timber whose thickness is less than 5 cm and the width exceeds 12 cm is called a :

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. Board
- B. plank
- C. batten
- D. batten

Correct Answer: A

260. The commonly used grade of bitumen that is used in moderate temperature range of Nepal is:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. 60/100
- B. 70/100
- C. 80/100
- D. 90/100

Correct Answer: C

261. The trunk of the tree left after cutting all the branches is known as:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. Log
- B. batten
- C. plank
- D. baulk

Correct Answer: A

262. Which type of floor is NOT appropriate for a hospital?

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. ceramic tile
- B. marble
- C. wood
- D. stone

Correct Answer: C

Explanation:

- Good hygiene and infection control are paramount important in hospitals.
- Flooring should be easy to clean and disinfect to minimise the risk of transmitting infections. hence wooden flooring is not suitable for hospital.

263. The recent material used in cladding multi storied commercial buildings in Kathmandu is :

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. stainless steel
- B. aluminium composite panel
- C. marble
- D. iron sheets

Correct Answer: B

264. Marble is a

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. sedimentary rock
- B. metamorphic rock
- C. igneous rock
- D. none of the above

Correct Answer: B



LOKSEWA
with Ghoksewa

265. The age of tree can be judged from:

[रा .प. तृतीय, इरिगेशन , २०६९/११/०८]

- A. the diameter
- B. annual rings
- C. piths
- D. height

Correct Answer: B

266. The liquid medium used in oil paint is :

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. alcohol
- B. Thinner
- C. linseed oil
- D. turpentine

Correct Answer: C

267. Slate is formed by metamorphic action on

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. shale
- B. limestone
- C. sandstone
- D. granite

Correct Answer: A

268. Which of the following cement is suitable for use in massive concrete structures such as big dams?

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. ordinary Portland cement
- B. low heat cement
- C. rapid hardening cement
- D. sulphate resisting cement

Correct Answer: B

269. Corner stones having two faces made plane in a masonry is termed as :

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. closer
- B. queen

- C. quoin
- D. rubble

Correct Answer: C

270. Addition of chromium to steel makes it:

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. soft
- B. more elastic
- C. more abrasive
- D. very hard

Correct Answer: C

271. Quick lime on reaction with water gives:

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. hydraulic lime
- B. hydrated lime
- C. poor lime
- D. slaked lime

Correct Answer: D

272. Which of the following is not a characteristic of soil?

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. cohesion
- B. capillarity
- C. permeability
- D. turbulence

Correct Answer: D

273. The maximum limit for water absorption for first class brick in terms of its dry weight after 24 hours of immersion is: .

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. 10%
- B. 15%
- C. 20%
- D. 25%

Correct Answer: B

274. The degree of grinding of a cement is called:

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. fineness
- B. soundness
- C. impact value
- D. bulking

Correct Answer: A



275. The process of mixing clay, water and other ingredients to make a brick is known as

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. kneading
- B. moulding
- C. pugging
- D. drying

Correct Answer: A

276. Which type of timber is used for construction of houses in Himalayan

Region of Nepal?

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. Sal wood
- B. Rose wood
- C. Pine wood
- D. Oak

Correct Answer: C

277. What is the minimum thickness of stone masonry wall in Nepal ?

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. 200 mm
- B. 300 mm
- C. 450 mm
- D. 500 mm

Correct Answer: B



LOKSEWA
with Ghoksewa

278. The highest crushing strength in

[रा .प. तृतीय, हाइवे , २०६९/१०/०६]

- A. granite
- B. gneiss
- C. laterite
- D. lime stone

Correct Answer: B

279. The commonly used material in the manufacture of the cement is

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. slate
- B. graphite
- C. limestones
- D. sand stones

Correct Answer: C

280. The age of tree can be judged from:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. the diameter
- B. piths
- C. annual rings
- D. the height

Correct Answer: C

281. The chemical name of lime used in masonry construction is:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. calcium hydroxide
- B. magnesium carbonate
- C. silicon oxide
- D. phosphorous hydroxide

Correct Answer: A

282. Expansion joints are provided when the length of the concrete structures generally exceeds:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. 10 m.
- B. 12 m.

- C. 20 m.
- D. 45 m.

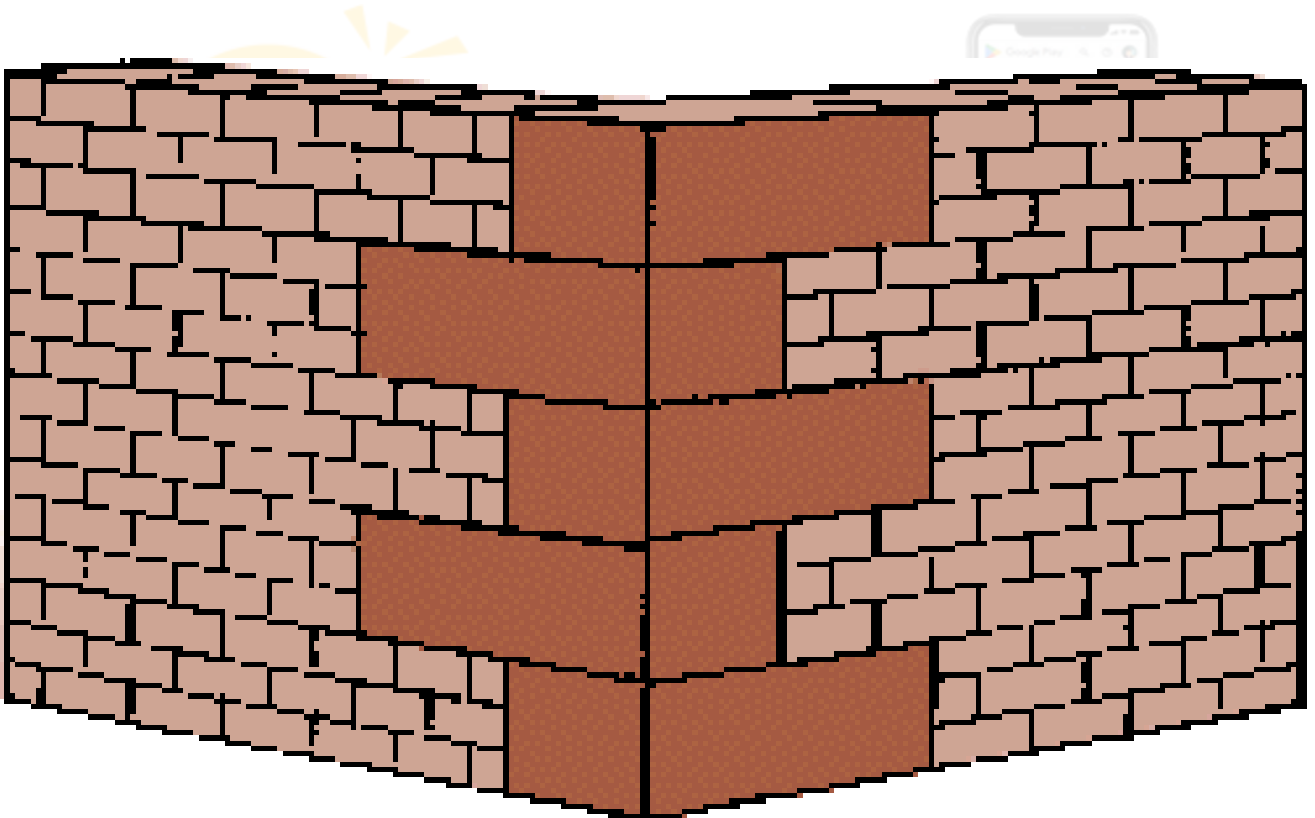
Correct Answer: D

283. What are the corner stones having two faces made plane called?

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. flag stones
- B. rubbles
- C. free stones
- D. quoins

Correct Answer: D



284. To prevent the attack of insects, lower ends of the wooden posts that are embedded in ground are generally:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. charred
- B. tarred
- C. creosoted
- D. painted

Correct Answer: A

285. A Polymerization is a process in which:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. two or more chemically different monomers are polymerized to form long chain molecules
- B. two or more chemically same monomers are polymerized to form long chain molecules
- C. two or more chemically same monomers to form a cross-linked polymer
- D. two or more chemically different monomers to form a cross-linked polymer

Correct Answer: B

286. The upper limit of carbon content for steel is:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. 1.0%
- B. 2.0%
- C. 1.5%
- D. 2.1%

Correct Answer: B

Explanation:

- Carbon steel can be divided into different categories, such as

- i) low carbon with a carbon content less than 0.25%,
- ii) medium carbon with a carbon content between 0.25% and 0.5%, and
- iii) high carbon with a carbon content between 0.5% and 1.25%.

But,

- The maximum(upper limit) carbon content in carbon steel is 2%. A carbon-iron alloy with carbon content more than 2% is called cast iron.
- Carbon greatly influences the mechanical properties of carbon steel, including its mechanical strength, hardness, and ductility.

287. The lime mortar is made from:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. quick lime
- B. fat lime
- C. lean lime
- D. hydraulic lime

Correct Answer: D

288. The shape of shear stress diagram for a reinforced concrete section is:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. wholly parabolic
- B. wholly rectangular
- C. parabolic above neutral axis & rectangular below neutral axis
- D. rectangular above neutral axis & parabolic below neutral axis

Correct Answer: C

289. The important test to be conducted on a stone used in docks and harbours is:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. hardness test

- B. workability test
- C. weight test
- D. toughness test

Correct Answer: C

290. The process of mixing clay, water and other ingredients to make brick is known as:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. kneading
- B. moulding
- C. pugging
- D. drying

Correct Answer: A

291. Timber has more strength:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. across the grain
- B. along the grain
- C. perpendicular to the grain
- D. diagonal to the grain

Correct Answer: B

292. The bond produced by laying alternate headers and stretchers in each course in brick masonry is known as:

[रा .प. तृतीय, इरीगेशन , २०६८/११/१२]

- A. English bond

- B. Double Flemish bond
- C. Zigzag bond
- D. Single Flemish bond

Correct Answer: A

Explanation:

- The English bond = stands out for its strength within the spectrum of brick bonding types. One row consists of bricks laid lengthwise (stretchers), and the next includes bricks laid widthwise (headers). This pattern is often employed in load-bearing walls.

- Zigzag Bond= This visually striking pattern lays bricks to create a zigzag pattern, marking a unique spot among different types of brick bonds. While eye-catching, it's typically not used for structural walls due to its strength limitations.

-Single flemish Bond = This classic bond alternates between headers and stretchers in each row, which makes the pattern look more decorative. The alternating sequence requires more skill and time to lay correctly but provides a balanced and strong wall.

Double Flemish Bond= Every course consists of headers and stretchers placed alternately and

Queen closer are placed next to the quoin header in every alternative course each course and presents the same appearance both in front and back faces. Hence, it gives a better appearance than the English bond. But, it is not as strong as the English bond.

293. The process of adding water to lime to convert it in hydrated lime is known as:

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. slaking
- B. watering
- C. calcinations
- D. hydrations

Correct Answer: A

294. The maximum percentage of water absorption of first class bricks in 24 hrs should be limited to:

[रा .प. तृतीय, विलिदंग एण्ड आर्किटेक्ट, २०६ॢ/१२/०७]

- A. 15%
- B. 24%
- C. 20%
- D. 10%

Correct Answer: A

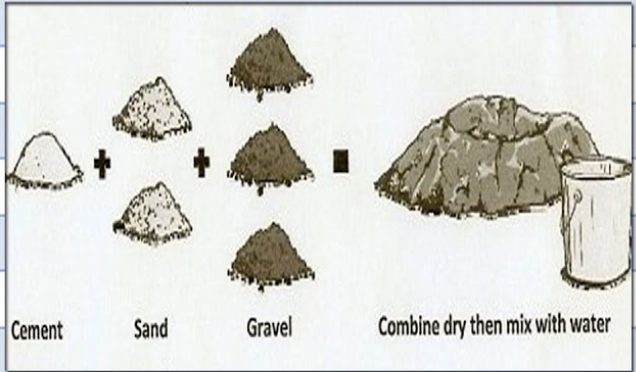
295. PCC (1:3:6) means:

[रा .प. तृतीय, विलिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. M200
- B. M100
- C. M230
- D. M150

Correct Answer: B

Grades of Concrete	Ratios of Concrete mix (Cement:Sand:Aggregate)
M5	1:5:10
M7.5	1:4:8
M10	1:3:6
M15	1:2:4
M20	1:1.5:3
M25	1:1:2
M30	1:0.75:1.5
M35	1:0.5:1
M40	1:0.25:0.5



296. The permissible compressive stress in bending of M20 grade concrete is:

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. 7 N/mm²
- B. 10 N/mm²
- C. 20 N/mm²
- D. 25 N/mm²

Correct Answer: A

Grade of Concrete	Permissible Stress in Compression	
	Bending σ_{cbc} (N/mm ²)	Direct σ_{cc} (N/mm ²)
M15	5.0	4.0
M20	7.0	5.0
M25	8.5	6.0
M30	10.0	8.0
M35	11.5	9.0
M40	13.0	10.0
M45	14.5	11.0

297. The density of marble used in flooring in buildings is:

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. 20 KN/m³
- B. 27 KN/m³
- C. 30 KN/m³
- D. 35 KN/m³

Correct Answer: B

298. The wet rot defect in timber is caused due to:

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. fungus
- B. alternate drying and wetting of timber
- C. seasoning of timber
- D. over maturity of timber

Correct Answer: B

299. Which of the following is a most suitable priming material for painting structural steel?

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. white lead
- B. grease oil
- C. red oxide of iron
- D. red lead

Correct Answer: D

300. Tar is made by the distillation of:

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. petrol
- B. coal
- C. asphalt
- D. bitumen

Correct Answer: B

301. Ceramic material is amaterial not made of a metal alloy :

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. a metal alloy.
- B. an organic material.
- C. an inorganic material
- D. cement & concrete

Correct Answer: C

Explanation:

-Ceramic materials are non-metallic, inorganic materials made from minerals like clay, oxides, carbides, and nitrides.

-They are known for their hardness, brittleness, heat resistance, and electrical insulation properties.

-Ceramics are made by heating a mixture of materials to a high temperature to create a stiff and durable material.

302. The water content of soil at which just shear strength develops is called:

[रा .प. तृतीय, विल्दिंग एण्ड आर्किटेक्ट , २०६८/१२/०७]

- A. liquid limit

- B. plastic limit
- C. elastic limit
- D. shrinkage limit

Correct Answer: A

303. A first class brick should have a minimum crushing strength of:

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. 70 kg/cm²
- B. 105 kg/cm²
- C. 125 kg/cm²
- D. 140 kg/cm²

Correct Answer: B

304. A material can be beaten or rolled into plates due to its property of:

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. ductility
- B. malleability
- C. elasticity
- D. plasticity

Correct Answer: B

305. A first class brick immersed in water for 24 hours should not absorb water by weight more than:

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. 5%
- B. 20%
- C. 25%

D. 30%

Correct Answer: B

306. Turpentine oil is used in paints as:

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. drier
- B. thinner
- C. vehicle
- D. bare

Correct Answer: B

307. Concrete mainly consists of:

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. aggregates
- B. cement
- C. water,
- D. all of the above

Correct Answer: D

308. What type of primer coat should be applied in painting galvanized iron surface?

[रा .प. तृतीय, विल्लिदंग एण्ड आर्किटेक्ट , २०६ॢ/१२/०७]

- A. lead oxide
- B. iron oxide
- C. zinc oxide
- D. none of the above

Correct Answer: C

309. Soundness of the material means the resistance of the material against the effect of:.

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. moisture attack
- B. heat
- C. alternate freezing thawing
- D. all of the above

Correct Answer: C

310. Flint glasses are also known as:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. Aluminum-silicate glass
- B. Boro-silicate glass
- C. Lead glass
- D. Soda-lime glass

Correct Answer: C

LOKSEWA
with Ghoksewa



311. The crudest form of iron is:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. steel
- B. pig iron
- C. cast iron
- D. wrought iron

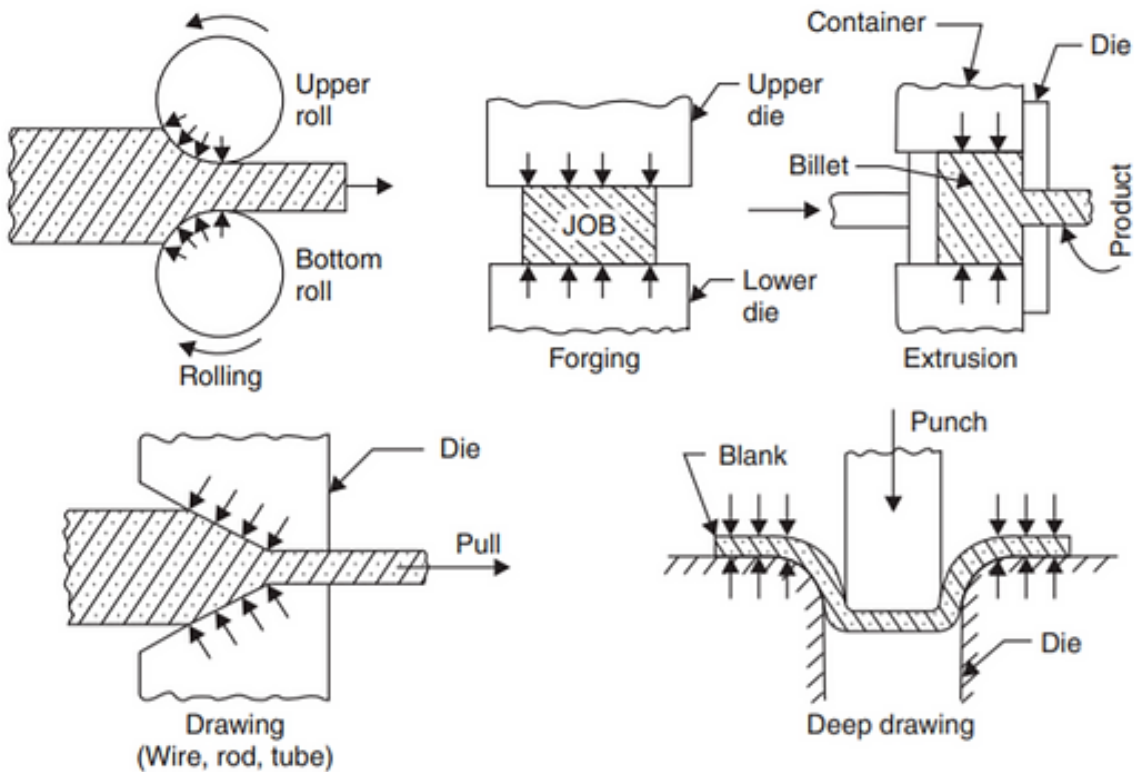
Correct Answer: B

312. The process at which steel is passed through a small hole to make cylindrical rods and wires is:

[रा.प. तृतीय, हाइवे , २०६८/११/२६]

- A. drawing
- B. rolling
- C. extrusion
- D. forging

Correct Answer: C



313. To prevent the attack of insects, the lower ends of the wooden posts that are to be embedded in ground are generally:

[रा.प. तृतीय, हाइवे , २०६८/११/२६]

- A. creosoted
- B. charred
- C. tarred
- D. painted

Correct Answer: B

314. The main constituent of a Portland cement is:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. magnesium oxide
- B. lime
- C. alumina
- D. iron oxide

Correct Answer: B

315. The most commonly used accelerator for concreting is:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. calcium sulphate
- B. gypsum
- C. Calcium chloride
- D. calcium oxide

Correct Answer: C

316. As per IS specification, the minimum time for initial setting of ordinary Portland cement is...

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. 10 hours
- B. 20 minutes
- C. 30 minutes
- D. 60 minutes

Correct Answer: C

317. As assembled product made up of veneers and adhesives is called:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. batten
- B. board
- C. plank
- D. plywood

Correct Answer: D

318. Hollow bricks are used for:

[रा.प. तृतीय, हाइवे , २०६८/११/२६]

- A. earthquake resistance
- B. ornamental design
- C. thermal insulation
- D. none of the above

Correct Answer: C

319. The liquid part of the paint is called

[रा.प. तृतीय, हाइवे , २०६८/११/२६]

- A. drier,
- B. pigment
- C. vehicles
- D. solvent

Correct Answer: C

Explanation:

- Drier= which speeds oxidation without harming stability.
- pigment= imparts color to paint.
- vehicles= an oily liquid which facilitates paint to be conveniently spread evenly over the surface.
- solvent= Create transparent layers and clean brushes.

320. The commonly used cement in cement paints is:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. alumina cement
- B. white cement
- C. Portland cement
- D. red cement

Correct Answer: B

321. The compressive strength of stone is found out by:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. impact test
- B. attrition test
- C. Crushing test
- D. hardness test

Correct Answer: C

322. The standards size of a brick as per the Nepal Standard (NS) is:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. $224*108*57 \text{ mm}^3$
- B. $18*8*8 \text{ cm}^3$
- C. $19*9*9 \text{ cm}^3$
- D. $20*10*10 \text{ cm}^3$

Correct Answer: A

323. Quick setting cement is used:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. to obtain very light strength
- B. for the construction of structures under water
- C. where resistance to acidic water is required
- D. none of the above

Correct Answer: B

324. Specific gravity of a good stone suitable for structural purposes:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. should not less than 1.5
- B. should not less than 2.7
- C. should not be more than 5.0
- D. should be equal to 1.6

Correct Answer: B

325. The size of a machine made brick in Nepal is:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. 225 x 110 x 55 mm
- B. 240 x 120 x 60 mm
- C. 300 x 150 x 75 mm
- D. 300 x 175 x 80 mm

Correct Answer: B

Explanation:

- 240*115*57 mm with tolerance of +/- 10*5*3 mm respectively.

326. In paints, pigment is responsible for:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. fineness
- B. smoothness
- C. consistencies
- D. color

Correct Answer: D

327. What should be the ratio of water absorption of a first class brick after 24 hour immersion?

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. 20%
- B. 22%
- C. 25%
- D. 28%

Correct Answer: A

328. The small recess on the top of a brick surface forming a key for the mortar is called a

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. cowl
- B. frog
- C. key
- D. extrados

Correct Answer: B

329. If the modulus of elasticity is equal to zero. the material is said to be:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. plastic
- B. flexible
- C. rigid
- D. none of these

Correct Answer: A

330. The liquid part of the paint is called:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. pigment
- B. vehicle
- C. solvent
- D. drier

Correct Answer: B

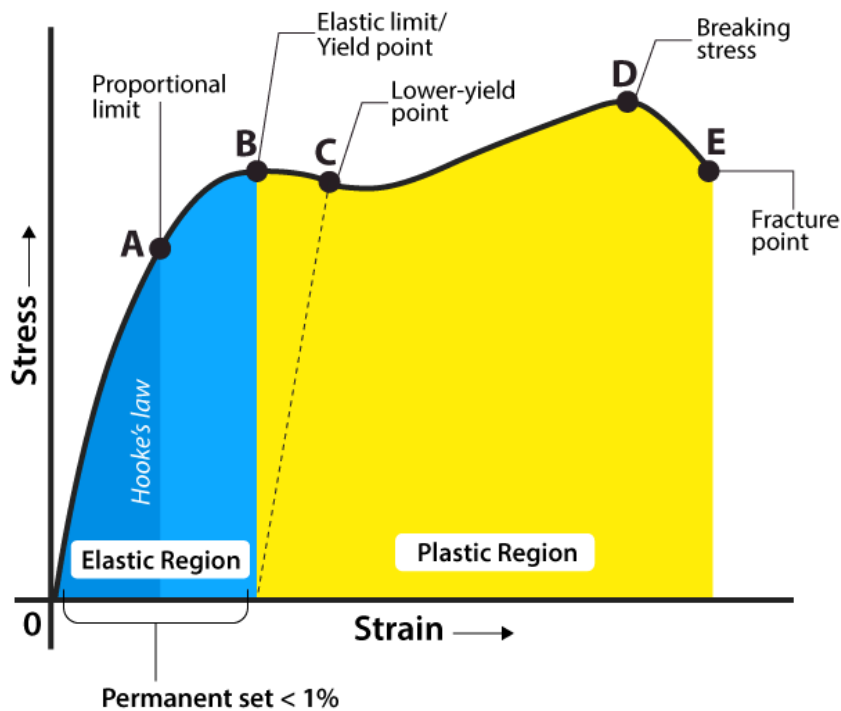
331. At yield point a test piece:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. materials obeys Hooke's law
- B. materials behave in an elastic manner
- C. materials regain its original shape on removal of load
- D. material undergoes plastic deformation

Correct Answer: D





332. Slate is formed by metamorphic action on :

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. shale
- B. limestone
- C. sandstone
- D. granite

Correct Answer: A

333. The age of a tree can be known by:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. sapwood
- B. cambium layer
- C. number of branches
- D. number of annual rings

Correct Answer: D

334. The process of mixing clay, water and other ingredients to make brick is known as

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. kneading
- B. moulding
- C. pugging
- D. drying

Correct Answer: A

335. Aluminium is extensively used in aeroplane industries because:.

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. its tensile strength is very low
- B. it is a non-magnetic metal
- C. it is a very tough and light metal
- D. none of the above

Correct Answer: C

336. Bronze is an alloy of:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. copper and tin
- B. copper and zinc
- C. iron and tin
- D. aluminium and tin

Correct Answer: A

337. The red colour obtained by the brick is due to the process of:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. iron oxide
- B. silica.
- C. lime
- D. manganese

Correct Answer: A

338. In quick setting cement the compound added is:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. calcium aluminate
- B. gypsum
- C. calcium sulphate
- D. aluminium sulphate

Correct Answer: D

Explanation:

- Due to addition of aluminium sulphate cement sets quickly only and its rate of gain of strength is similar to ordinary portland cement.

339. The qualities of good tiles are of:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. uniform colour
- B. free from organic matter
- C. properly burnt
- D. all of the above

Correct Answer: D

340. The shear strength of the soil in the plastic limit is:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. lower than that in the liquid limit
- B. higher than that in the liquid limit
- C. equal to the liquid limit
- D. none of the above

Correct Answer: B

341. What is the common name of calcinated gypsum?

[रा.प. तृतीय, जनरल , २०६८/११/०३]

- A. kankar
- B. lime
- C. plaster of paris
- D. cement

Correct Answer: C

342. White cements as compared to grey cements have:

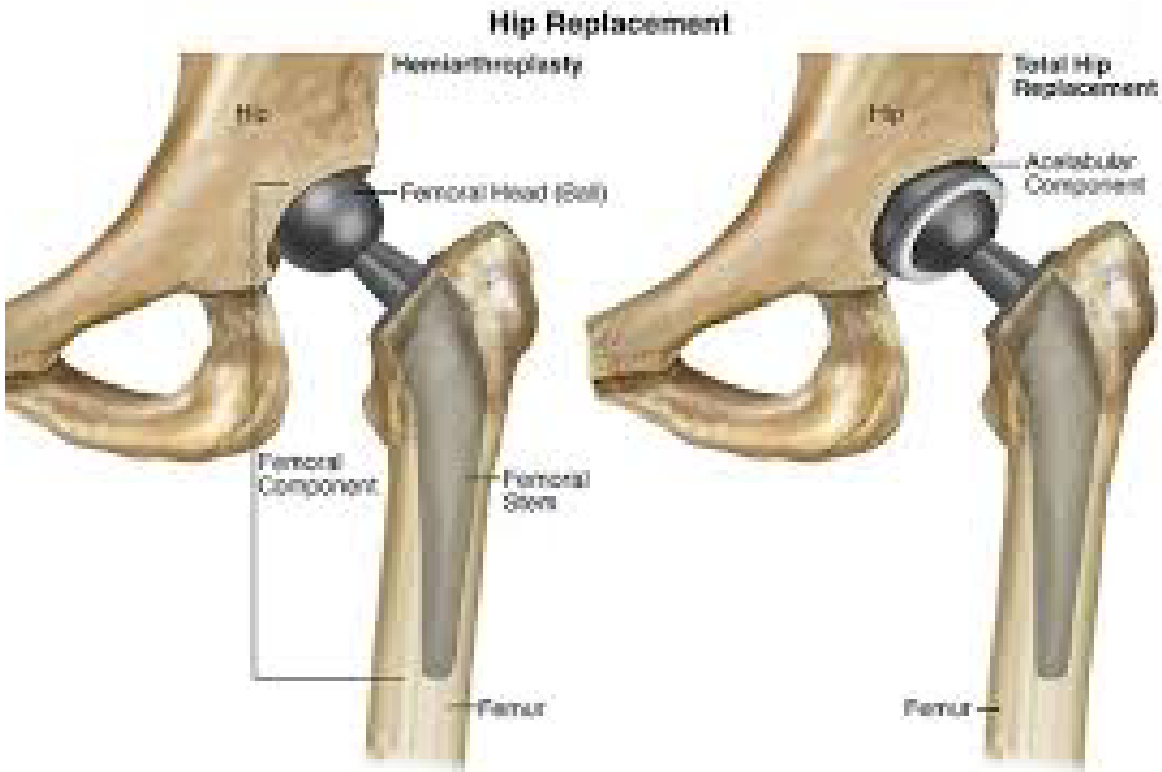
[रा.प. तृतीय, जनरल , २०६८/११/०३]

- A. similar properties
- B. inferior properties
- C. better properties
- D. superior properties

Correct Answer: D

343. Which of the following material is more suitable for hip joint replacement?

[रा.प. तृतीय, जनरल , २०६८/११/०३]



- A. Titanium
- B. high-speed steel
- C. zirconium alloy
- D. brass

Correct Answer: A

Explanation:

- Due to the property of biocompatible, lightweight, high corrosion resistance and strength, titanium and its alloys are widely used for hip implants and are ideal for long term implantation in the body.

344. The timber whose thickness is less than 5 cm and the width exceeds 12 cm is called a:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. Board

- B. Plank
- C. Battens
- D. Log

Correct Answer: A

345. Marble is generally known chemically as

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. calcareous rock.
- B. argillaceous rock
- C. siliceous rock
- D. metamorphic rock

Correct Answer: A

346. The trunk of the tree left after cutting all the branches is known as:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. log
- B. batten
- C. plank
- D. baulk

Correct Answer: A

347. Which of the following pairs gives a correct combination of the useful and harmful constituents respectively of a good brick earth?

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. lime stone and alumina
- B. silica and alkalis
- C. alumina & iron

D. alkalis and magnesiumj

Correct Answer: B

348. Tar is made by the distillation of:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. petrol
- B. coal
- C. asphalt
- D. bitumen

Correct Answer: B

349. Bronze is an alloy of!

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. copper and zinc
- B. copper and nickel
- C. copper and magnesium
- D. copper and tin

Correct Answer: D

350. Quick lime is obtained from:

[रा .प. तृतीय, जनरल , २०६८/११/०३]

- A. hydration of slaked lime with calcium
- B. calcinations of pure lime stone
- C. combination of silica with calcium oxide
- D. calcinations of iron oxide

Correct Answer: B



LOKSEWA
with Ghoksewa

351. Slump test for the concrete is carried out for:

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. workability
- B. durability
- C. strength
- D. ductility

Correct Answer: A

352. The standards size of a brick as per the Nepal Standard (NS) is:

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. 224*108*57 mm³
- B. 18*8*8 cm³
- C. 19*9*9 cm³
- D. 20*10*10 cm³

Correct Answer: A

353. The deformation produced by the repeated cyclic loading over the material is known as:

[रा .प. तृतीय, हाइवे , २०६८/११/२६]

- A. creep
- B. Fatigue
- C. ductility
- D. resilience

Correct Answer: B

354. Quick setting cement is used:

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. to obtain very light strength
- B. for the construction of structures under water
- C. where resistance to acidic water is required
- D. none of the above

Correct Answer: B

355. Specific gravity of a good stone suitable for structural purposes:

[रा.प. तृतीय, हाइड्रोपावर, २०६८/११/१४]

- A. should not less than 1.5
- B. should not less than 2.7
- C. should not be more than 5.0
- D. should be equal to 1.6

Correct Answer: B

356. The size of a machine made brick in Nepal is:

[रा.प. तृतीय, हाइड्रोपावर, २०६८/११/१४]

- A. 225 x 110 x 55 mm
- B. 240 x 120 x 60 mm
- C. 300 x 150 x 75 mm
- D. 300 x 175 x 80 mm

Correct Answer: B

357. In paints, pigment is responsible for:

[रा.प. तृतीय, हाइड्रोपावर, २०६८/११/१४]

- A. fineness
- B. smoothness
- C. consistency

D. colour

Correct Answer: D

358. What should be the ratio of water absorption of a first class brick after 24 hour immersion?

[रा.प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

A. 20%

B. 22%

C. 25%

D. 28%

Correct Answer: A

359. The small recess on the top of a brick surface forming a key for the mortar is called a

[रा.प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

A. cowl

B. frog

C. key

D. extrados

Correct Answer: B

360. The liquid part of the paint is called:

[रा.प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

A. pigment

B. vehicle

C. solvent

D. drier

Correct Answer: B

361. Slate is formed by metamorphic action on :

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. shale
- B. limestone
- C. sandstone
- D. granite

Correct Answer: A

362. The age of a tree can be known by:

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. sapwood
- B. cambium layer
- C. number of branches
- D. number of annual rings

Correct Answer: D

363. The process of mixing clay, water and other ingredients to make brick is known as

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. kneading
- B. moulding
- C. pugging
- D. drying

Correct Answer: A

364. Aluminium is extensively used in aeroplane industries because:.

[रा .प. तृतीय, हाइड्रोपावर , २०६८/११/१४]

- A. its tensile strength is very low
- B. it is a non-magnetic metal
- C. it is a very tough and light metal
- D. none of the above

Correct Answer: C

365. The strength at which steel fails under repeated application of load, is known as:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. impact strength
- B. tensile strength
- C. yield strength
- D. fatigue strength

Correct Answer: D

 LOKSEWA
with Ghoksewa

366. The process of removing stone from its natural bed is known as:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. stratification
- B. layering
- C. quarrying
- D. staking

Correct Answer: C

367. Tar is made by the distillation of:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. bitumen
- B. asphalt
- C. coal
- D. petrol

Correct Answer: C

368. The materials which give the paint its colour is:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. body
- B. thinner
- C. vehicle
- D. pigment

Correct Answer: D

369. Mixture of sand, silt and clay-size particles in nearly equal proportions is called as:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. loam
- B. loess
- C. laterite
- D. mooram

Correct Answer: A

Explanation:

- Loam = Soil of mixture of sand silt and clay.
- loess = a loamy deposits formed by wind, usually yellowish and calcareous .
- Laterite = Soil layer rich n iron oxide and derived from a wide variety of rocks weathering under strongly oxidizing and leaching conditions.

370. The good clay for making bricks is:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. unweathered clay
- B. silted soil
- C. black cotton soil
- D. weathered clay

Correct Answer: D

371. The percentage of absorption to its weight of water after one day's of immersion in a good building stone should not be more than:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. 5%
- B. 10%
- C. 15%
- D. 25%

Correct Answer: A



372. Hysteresis loss in a magnetic material proportional to:

[रा .प. तृतीय, हाइड्रोपावोर , २०६८/११/२६]

- A. $1/f$
- B. $1/f^2$
- C. f^2
- D. f

Correct Answer: D

373. Crushing strength for most of the building stone should be more than:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. 500 kg/cm²
- B. 1000 kg/cm²
- C. 1500 kg/cm²
- D. 2000 kg/cm²

Correct Answer: B

374. Timber can be made reasonably fire resistant:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. by soaking it in ammonium sulphate
- B. by applying tar paint
- C. by pumping creosote oil into timber under high pressure
- D. none of the above

Correct Answer: A

375. The paint highly resistant to fire is:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. enamel paint
- B. asbestos paint
- C. aluminium paint
- D. cement paint

Correct Answer: B

376. Bitumen is used for:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. water proofing



- B. damp proofing
- C. joint filler
- D. all of the above

Correct Answer: D

377. Marble is an example of:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. aqueous rock
- B. metamorphic rock
- C. sedimentary rock
- D. igneous rock

Correct Answer: B

378. Granite is an example of:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. igneous rock
- B. metamorphic rock
- C. sedimentary rock
- D. aqueous rock

Correct Answer: A

379. Sand stone consists of:

[रा .प. तृतीय, स्यानिटरी , २०६८/११/०९]

- A. quartz and lime
- B. quartz and silica
- C. quartz, lime and silica
- D. silica, lime and alumina

Correct Answer: C

Explanation:

- Sand stone consists primarily of mostly quartz, lime and silica.

380. For the construction of R.C.C. slabs, columns, beams, walls, etc. the nominal mix of concrete to be used is:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. 1:3:6
- B. 1:1 ½ :3
- C. 1:2:4
- D. 1:1:2

Correct Answer: B

381. The concrete not used for structure is:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. M10
- B. M15
- C. M20
- D. M25

Correct Answer: A

382. The main purpose of seasoning is

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. to make timber fire resistant
- B. to remove the moisture from the timber at uniform rate
- C. to make the timber water proof
- D. none of the above

Correct Answer: B

383. Which of the following wood (trade name of timber) have all grades modulus of elasticity ?

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. mango
- B. eucalyptus
- C. sal
- D. kala-siris

Correct Answer: D

384. Seasoning of timber is.....

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. painting
- B. tarring
- C. watering
- D. removing sap

Correct Answer: D



385. On the laboratory thread test of a fine grain soil is carried out to determine:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. liquid limit
- B. plastic limit
- C. plasticity index
- D. dry strength

Correct Answer: B

386. The lime used for plastering and white washing is:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. fat lime
- B. quick lime
- C. hydraulic lime
- D. none of the above

Correct Answer: A

387. The arrangement, size and shape of the constituent mineral grains of a stone gives the information about its:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. texture
- B. toughness
- C. lusture
- D. all of the above

Correct Answer: A



LOKSEWA
with Ghoksewa

388. A good quality stone absorbs water less than

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. 20%
- B. 15%
- C. 10%
- D. 5%

Correct Answer: D

Explanation:

- Stone which absorbs more than 10% water is rejected.

389. Stones used for ornamental work must be:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. hard
- B. soft
- C. light
- D. heavy

Correct Answer: B

390. Durability of building stone is affected by its:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. chemical composition
- B. texture
- C. resistance to atmosphere
- D. all the above

Correct Answer: D

391. Bitumen felt is used for

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. water proofing
- B. damp proofing
- C. both of the above.
- D. none of the above

Correct Answer: C

392. All burnt bricks should be soaked in water for at least..... hours to be used with cement mortar.

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. 1/4
- B. 1/2
- C. 3/4
- D. 1

Correct Answer: D

393. Initial setting time of ordinary Portland cement is....

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. 10 minutes
- B. 20 minutes
- C. 30 minutes
- D. 40 minutes

Correct Answer: C

394. The property by which the metals deforms continuously at a slow rate without further increase in stress is called:

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. creep
- B. fatigue
- C. resilience
- D. plasticity

Correct Answer: A

395. Which method is quickest to find the water content of soils?

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. oven dry method
- B. alcohol method

- C. calcium carbide method
- D. sand bath method

Correct Answer: C

396. Concreting should be stopped when temperature falls below.....

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. 20° C
- B. 15° C
- C. 10° C
- D. 4.5° C

Correct Answer: D

397. Humidity causes.... of cement in bag.

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. setting
- B. strengthening
- C. disintegration
- D. decaying

Correct Answer: A

Explanation:

- On the presence of humidity i.e. moisture hydration takes place.

398. The purpose of reinforcement in prestressed concrete is

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. to provide adequate bond stress

- B. to resist tensile stress
- C. to impart initial compressive stress in concrete
- D. all of the above

Correct Answer: C

399. Plaster of Paris is obtained by calcination of.....

[रा .प. तृतीय, हाइवे , २०६७/१२/१०]

- A. lime stone
- B. bauxite
- C. gypsum
- D. marble

Correct Answer: C

