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Q1) A. Suggest the type flooring for-Fabrication shop, Kitchen otta platform, Vehicle Parking.Also explain the reasons for you selection.

(Ans). Vinyal commercial flooring, one of the most common types of seafly flooring in commeric kitchen is made from vinal.

Ceramic tiles. Ceramic tiles are resistant to stain intense heat and water which makes them an ideal choice for commercial kitchen.

Stone tiles

Brick pavers

- Flexible Mesh rubber mesh material is flexible
- Durable plastic flooring made of durable plastic instand of rubber
- Non skid surface non skid flooring is durable
- Locking tiles. Locking tiles are both strong and creative
- Sheet vinyal. Sheet vinyal is designed especially for garages
- Water board

Cae parking in a garage usually subjected to high pressure due to vehical movement and chemical spills.

Some of the best available garage floor options that you can use for car parking etc.

- Concrete Floor paint
- Epoxy paint
- Concrete sealers
- Interlocking tiles
- Underground and basement car parking is also used mainly in city centres Where 8.1 the steel frame 8.2 concrete floor 8.3 Metal decking 8.4 waterproofing . The type and mix of vehicles likely to use the car park needs to be defined as well. Weld the studs to the beams in the fabrication shop.

Q1) B. Write the Fields Tests performed on bricks for its suitability.

(Ans). Types of Tests On Bricks for Construction Purpose

Following tests are conducted on bricks to determine its suitability for construction work.

- 1) Absorption test
- 2) Crushing strength test
- 3) Hardness test

- 4) Shape and size
- 5) Color test
- 6) Soundness test
- 7) Structure of brick
- 8) Presence of soluble salts (Efflorescence Test)

1) Absorption Test on Bricks

Absorption test is conducted on brick to find out the amount of moisture content absorbed by brick under extreme conditions. In this test, sample dry bricks are taken and weighed. After weighing these bricks are placed in water with full immersing for a period of 24 hours. Then weigh the wet brick and note down its value. The difference between dry and wet brick weights will give the amount of water absorption. For a good quality brick the amount of water absorption should not exceed 20% of weight of dry brick.

2) Crushing Strength or Compressive Strength Test on Bricks

Crushing strength of bricks is determined by placing brick in compression testing machine. After placing the brick in compression testing machine, apply load on it until brick breaks. Note down the value of failure load and find out the crushing strength value of brick. Minimum crushing strength of brick is 3.50N/mm^2 . If it is less than 3.50N/mm^2 , then it is not useful for construction purpose.

3) Hardness Test on Bricks

A good brick should resist scratches against sharp things. So, for this test a sharp tool or finger nail is used to make scratch on brick. If there is no scratch impression on brick then it is said to be hard brick.

4) Shape and Size Test on Bricks

Shape and size of bricks are very important consideration. All bricks used for construction should be of same size. The shape of bricks should be purely rectangular with sharp edges. Standard brick size consists length x breadth x height as $19\text{cm} \times 9\text{cm} \times 9\text{cm}$.

To perform this test, select 20 bricks randomly from brick group and stack them along its length, breadth and height and compare. So, if all bricks similar size then they are qualified for construction work.

5) Color Test of Bricks

A good brick should possess bright and uniform color throughout its body.

6) Soundness Test of Bricks

Soundness test of bricks shows the nature of bricks against sudden impact. In this test, 2 bricks are chosen randomly and struck with one another. Then sound produced should be clear bell ringing sound and brick should not break. Then it is said to be good brick.

7) Structure of Bricks

To know the structure of brick, pick one brick randomly from the group and break it. Observe the inner portion of brick clearly. It should be free from lumps and homogeneous.

8) Efflorescence Test on Bricks

A good quality brick should not contain any soluble salts in it. If soluble salts are there, then it will cause efflorescence on brick surfaces.

Q2) A. Which grade of concrete is generally applied in your home town? (write the name of your home town as well) and what alternations do you suggest to improve its quality and durability?

(Ans). Normally we used 1:2:4 grade of concrete in over home town. My home town is Nowshera PirPai.

do you suggest to improve its quality and durability

I suggest to improve its quality and durability

- 1) Use of admixtures.
- 2) Curing with 100% relative humidity if possible.
- 3) Proper grading of aggregate.
- 4) Systematic and efficient way to mix ingredients.
- 5) Use of Weigh batching rather than volume batching.
- 6) Reduce water cement ratio. Leads to lower slump.
- 7) Proper vibration techniques.
- 8) Shape of aggregates.

Q2) B. Suggest the types of glass to be used for the following;

- a) Making Partition wall.
- b) Laboratory apparatus.
- c) Sky Lights of roofs.
- d) Jewellery store.

(Ans).

Making Partition wall

It has to do with zoning, partitioned walls are common in NYC, however for zoning purposes it's classified as a studio. Renters like to throw up partition walls to rent out extra rooms to make the ungodly high rent! Illegal as hell, but is fairly common.

Laboratory apparatus

Borosilicate Glasses

Borosilicate glass is a type of glass with silica and boron trioxide as the main glass-forming constituents. Borosilicate glasses are known for having very low coefficients of thermal expansion ($\approx 3 \times 10^{-6} \text{ K}^{-1}$ at 20 °C), making them more resistant to thermal shock than any other common glass.

This is among the most common type of glass found in laboratories and is used in beakers, vials, test tubes, flasks etc

Sky Lights of roofs

All glass used for skylights must be made of "safety glazing," a generic term for both tempered and laminated glass. Tempered glass is the most impact resistant. Laminated glass is fabricated with a thin layer of plastic embedded near the center of the glass.

Jewelley store

Engraved Glass

Laminated, toughened, and engraved glasses are the best types to use for jewelry glass-cases. Wire mesh glass, on the other hand, is more suitable for fireproofing the cases

Q3) A) Can varnishes be used in place of painting? Explain with suggestions. Also discuss the remedial measures you have to take if the paint starts peeling off, makes blisters, or makes wrinkles.(Explain)

(Ans).

Matt varnishes avoid reflections but the colours appear duller. All Winsor & Newton varnishes can be used on oil, alkyd, Artisan or acrylic paintings, however, all are designed with specific types of colour in mind. Dammar Varnish: the oldest liquid varnish, this gives a very high gloss. Many problems can occur after painting. Sometimes, they occur simultaneously during painting. Understanding the causes of some of these defects can make the paint job easier. As an architect I have described some common painting defects and their solutions under the following headings so that you have an idea:

Causes. A **blister** may form when the skin has been damaged by friction or rubbing, heat, cold or chemical exposure. Fluid collects between the upper layers of skin (the epidermis) and the layers below (the dermis). This fluid cushions the tissue underneath, protecting it from further damage and allowing it to heal.

Wrinkles are caused by a combination of factors — some you can control, others you can't:

Age. As you get older, your skin naturally becomes less elastic and more fragile. ...

Exposure to ultraviolet (UV) light. ...

Smoking. ...

Repeated facial expressions

Thankyou

