

DPC

DAMP PROOFING COURSE



DAMP PROOFING COURSE

A complete layer of material provided to prevent entry of the dampness to the building.

SOURCES OF DAMPNESS

1. Dampness raising through the **foundation walling** . Moisture from wet ground may rise well above ground level by **capillary action**.
2. **Splashing** rain water which rebounds after hitting the **wall surface**.
3. **Penetration** of rain water through unprotected tops of **wall** , **parapet wall**, **compound** walls etc. may cause dampness.
4. In case of sloping roofs rain-water may **percolate** through **defects** **Roof covering** . In **additional faulty** courses and **eaves or valley gutter** may allow the rain water to descend through the top supporting wall.
5. In case of flat, **inadequate roof slopes**, improper **rain water pipe**..

DEFECTS OF DAMPNESS

- 1.It causes efflorescence which may ultimately result is disintegration of bricks, Stones, tiles etc.
- 2.It may result in softening and crumbling of plaster.
- 3.It may cause bleaching and flaking of paints with the formation of Coloured patches.
- 4.It may result in the warping, bulking and rotting of timber.
- 5.It may lead to the Corrossion of metals.
- 6.It may deteriorate electrical fittings.
- 7.It promotes growth of termites.
- 8.It creates unhealthy living condition for the occupants.



EFFLORESCENCE OF BRICK WORK



SOFTENING AND CRUMBLING OF PLASTERING



Following are the materials, which are commonly used for damp proofing.

Hot bitumen. This is a flexible material and is placed on the bedding of concrete or mortar. ...

Mastic asphalt. ...

Bituminous felts. ...

Metal sheets. ...

Combination of sheets and felts. ...

Stone.

First class Brick , Concrete

METHOD OF DAMP PROOFING

1. Membrane damp-proofing
2. Integral damp-proofing
3. Surface Damp proofing
4. Gunting
5. Cavity wall Construction

MEMBRANCE DAMP-PROOFING

**What is DPC (Damp Proof Course) &
Material Used For DPC.**



INTEGRAL DAMP-PROOFING

Damp-proofing and Waterproofing Admixture for Concrete



SYED KHADRI 1 month ago
Make a video on admixtures
Reply - 1

ADMIXTURES

#9



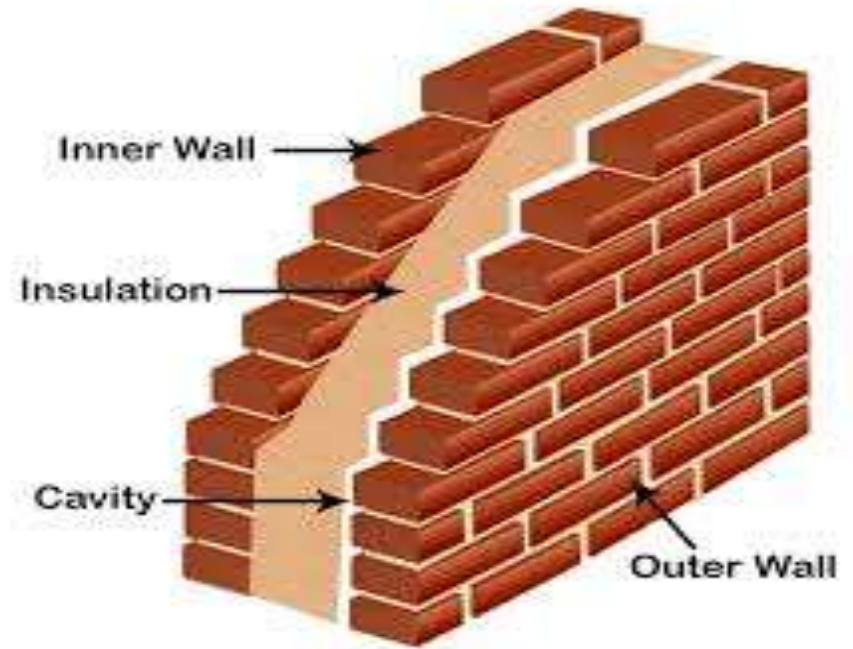
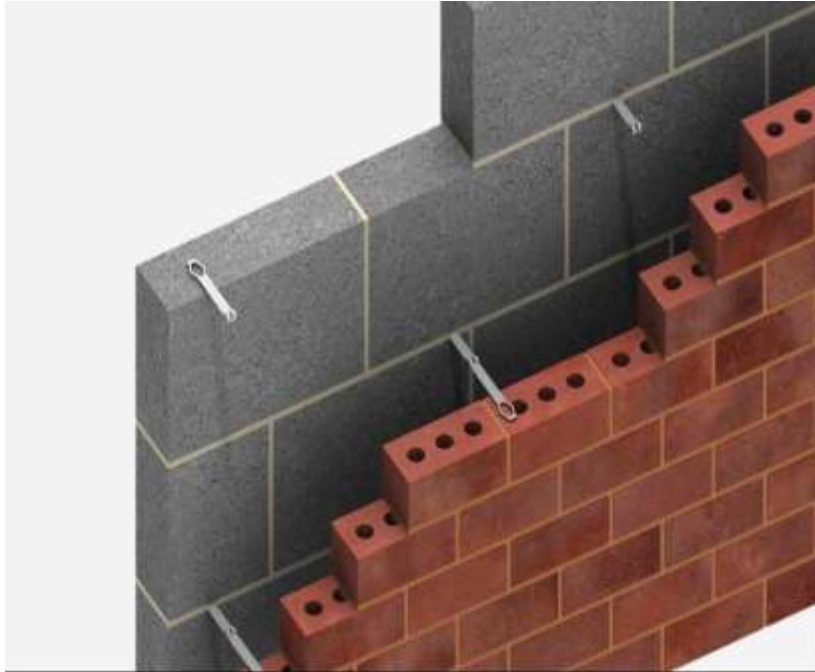
SURFACE TREATMENT



GUNTING



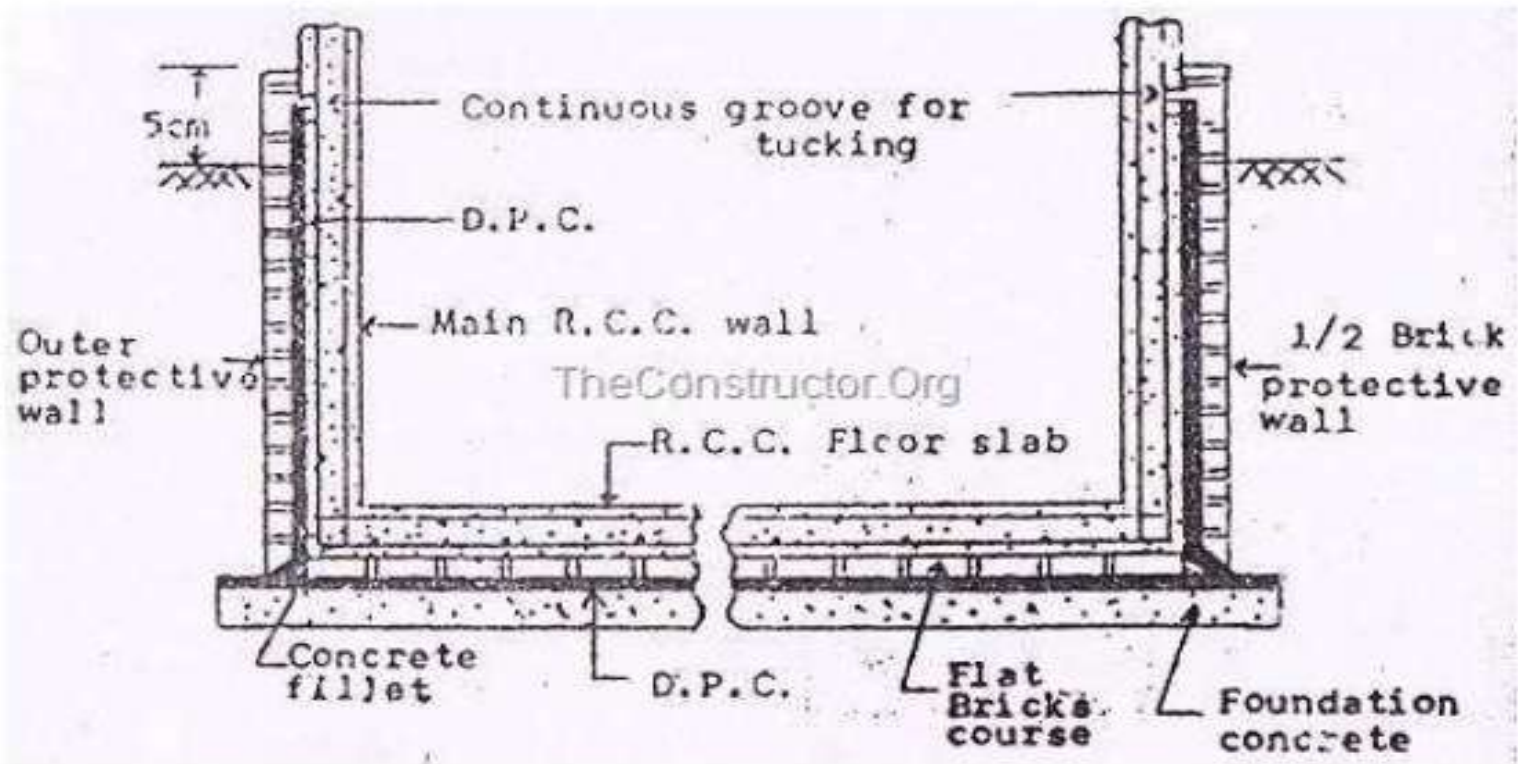
CAVITY WALL CONSTRUCTION



DAMP PROOFING TREATMENT IN BUILDING

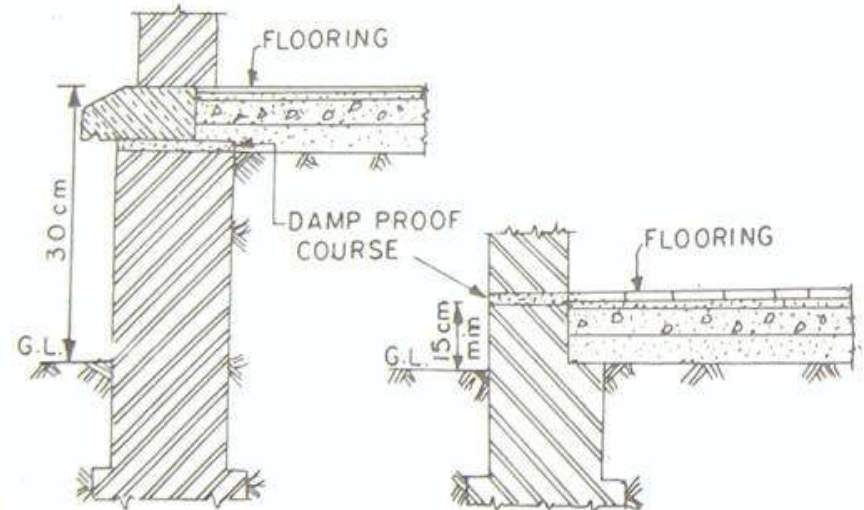
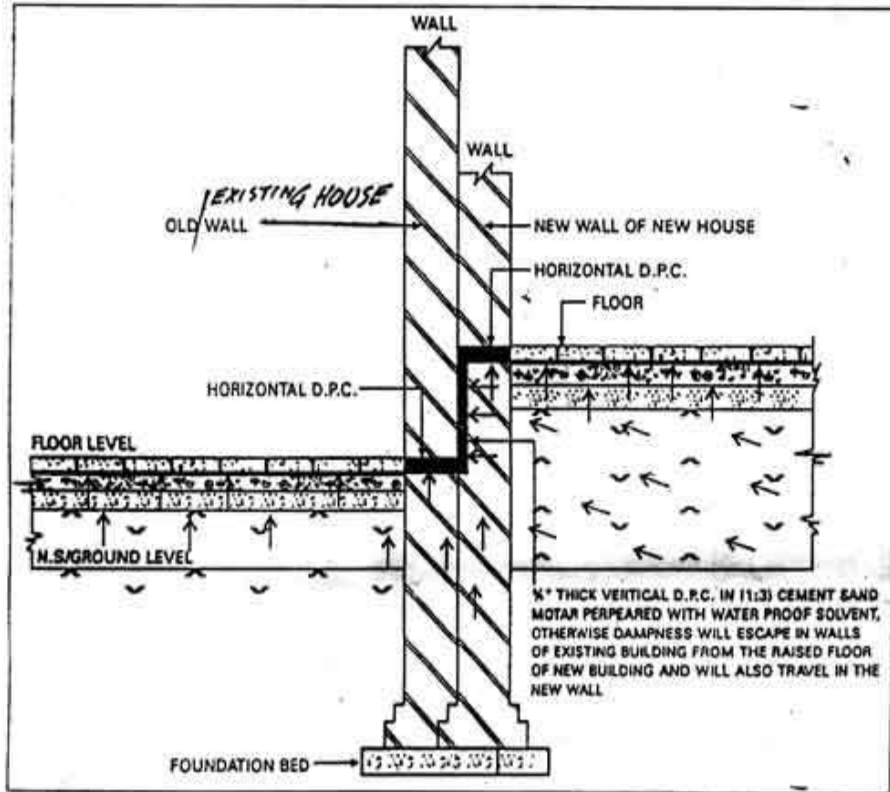
1. Treatment to Foundation
2. Treatment in Floors
3. Treatment to walls
4. Treatment to Flat roof
5. Treatment to Parapet wall
6. Treatment to Pitched roof

TREATMENT TO BASEMENT FLOOR

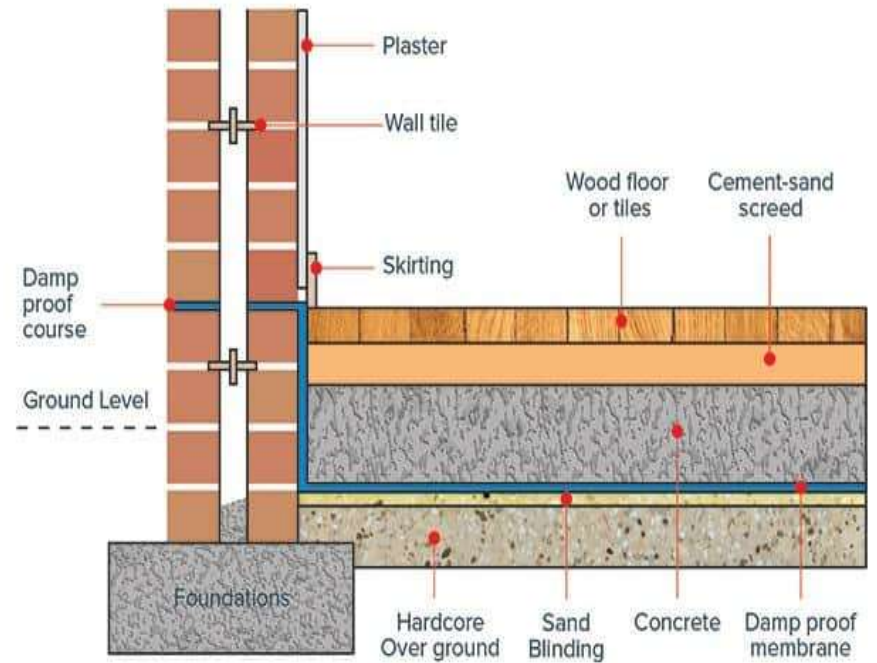
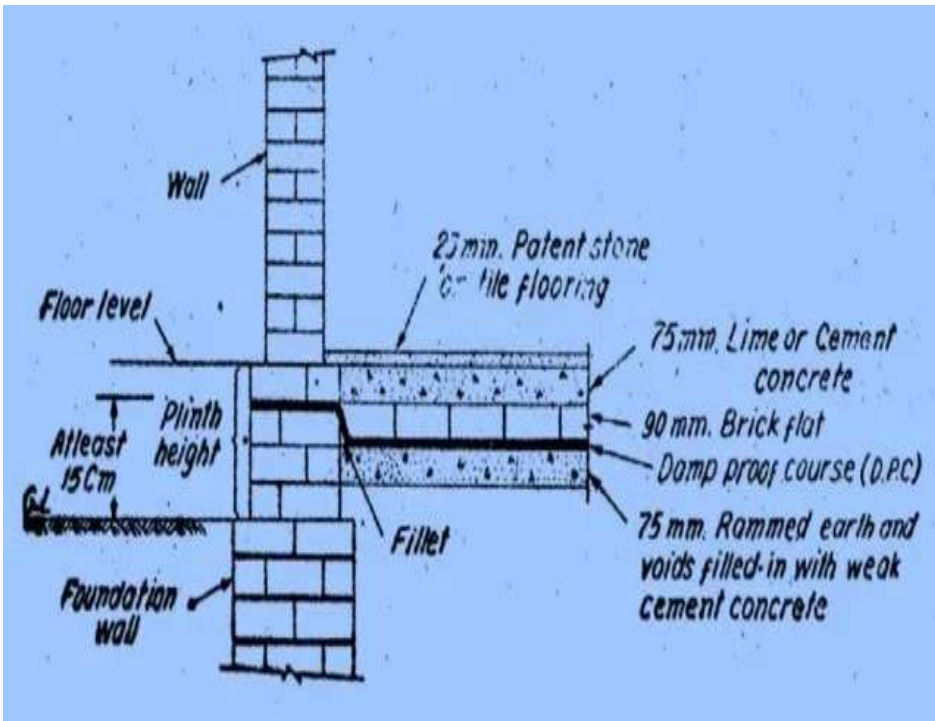


DPC TREATMENT FOR BASEMENT IN DAMP SOIL

TREATMENT TO PLINTH LEVEL

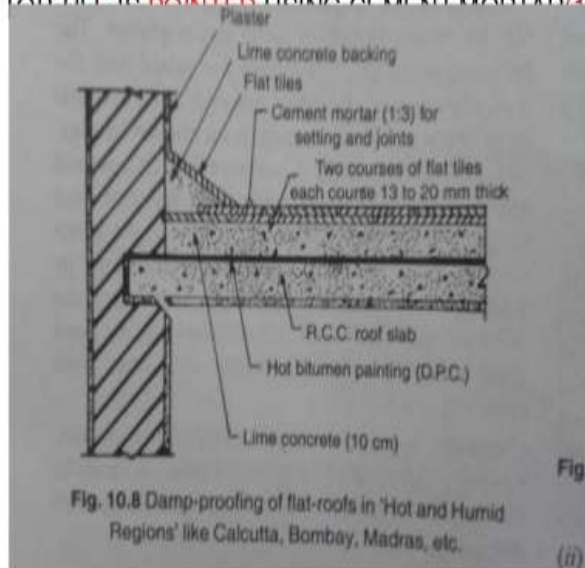


TREATMENT TO FLOOR LEVEL



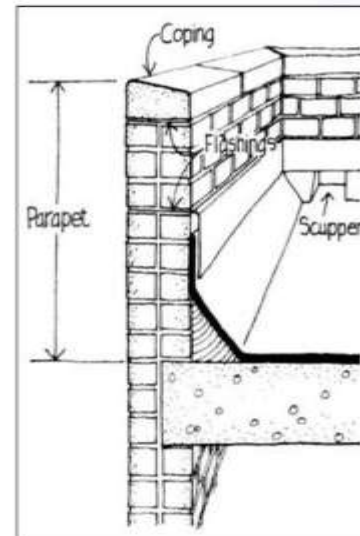
TREATMENT TO FLAT ROOF

- THE PROCESS OF LAYING DPC IS DONE IN VARIOUS STEPS:-
 - LAYING DPC OF **HOT BITUMEN AT 1.7KG/M.SQ** OF ROOF SURFACE.
 - SPREADING OVER **HOT BITUMEN**
 - A LAYER OF **COARSE SAND AT 0.6M.SQ OF SAND PER 100M.SQ** OF ROOF SURFACE
 - LAYING **LIME CONCRETE AT PROPER SLOPE** IN AVERAGE THICKNESS OF 10CM
 - LAYING **2 COURSES OF FLAT TILES** IN CEMENT MORTAR
 - JOINTS OF TOP TILE IS **POINTED** USING CEMENT MORTAR (1:3)



Finishing off a flat reinforced concrete roof

Parapet roof



Building Construction I

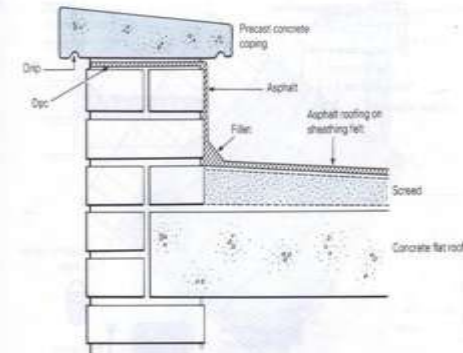
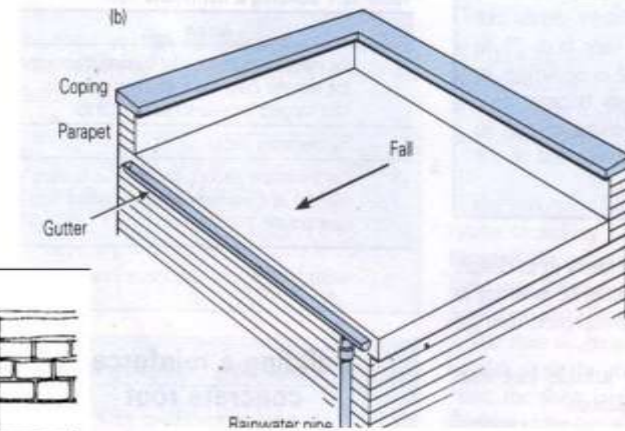
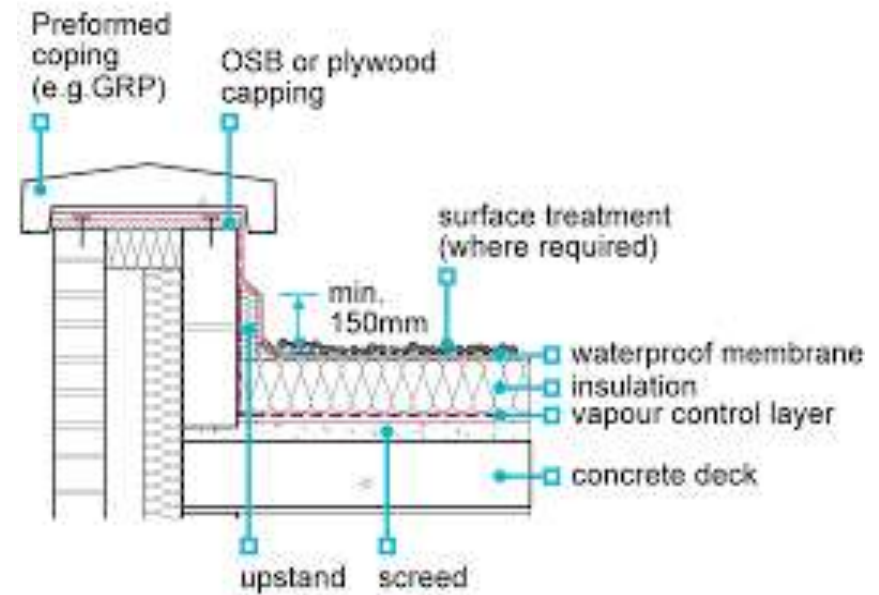


Figure 12.20 A detail of a coping on a parapet roof.

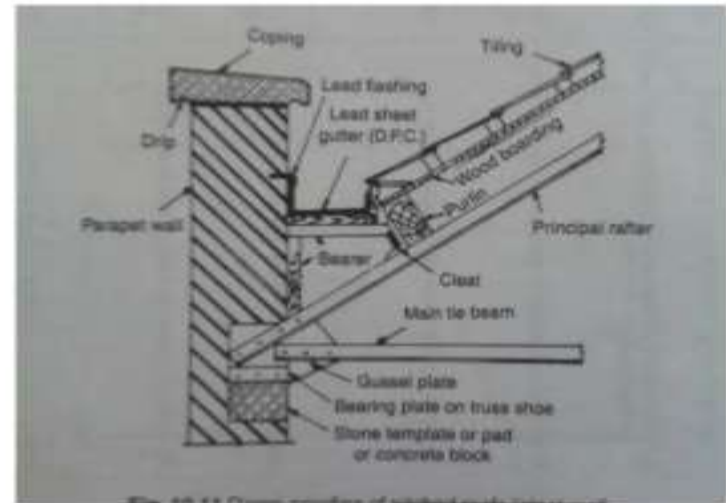
TREATMENT TO PARAPET WALL



TREATMENT TO PITCHED ROOF

TREATMENT OF PITCHED ROOFS

- DESIGN AND CONSTRUCTION OF ROOF TILES AND ROOFINGS SHEETS MUST BE TAKEN CARE.
- ROOF SLOPES MUST BE SUFFICIENT FOR A PARTICULAR BUILDING
- RAIN WATER GUTTERS MUST BE OF SUFFICIENT CAPACITY, WATER TIGHT AND CAPABLE OF ACCOMODATING VARIATIONS DUE TO TEMPERATURE CHANGES WITHOUT LEAKAGES.
- TILES SHOULD BE PROJECTED BEYOND EDGE OF GUTTER
- LEAD FLASHING(D.P.C.) PROVIDED IN GUTTER SHOULD BE EXTENDED UP SURFACE OF PARAPET WALL AND PARTLY INSIDE BODY OF WALL.
- PARAPET WALL MUST BE PROTECTED BY COPINGS OF STONE OR WELL BURNT BRICKS WITH DPC UNDERNEATH.



DAMP PROOFING COURSE - OBJECTIVE QUESTIONS

1. Which material is used for vertical DPC in membrane?

- A) Cement paint B) Varnish C) Stone powder D) PCC

2. What is the purpose of damp proofing?

- A) To bear the load of the super structure
B) To make the concrete strong
C) To prevent the entry of damp into the building
D) To allow rain water penetration

3. Which design elements also provides the purpose for water drainage in roofs?

- A) Chimney B) Coping C) Cornice D) Rain water spouts.

4. Which damp proofing material is available in roofs?

- A) Bituminous felt B) Hot bitumen C) Mortar D) Cement Concrete