SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION (16CE107) **Course & Branch**: B.Tech - CE

Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT –I

STONES ,BRICKS AND WOOD

1.	Write short note on classification of rocks.	10M
2.	a) List out all the methods of Quarrying and explain any two methods of quarrying in detail with neat sketches.	7M
	b) What are the precautions to be taken in the process of blasting?	3M
3.	a) Explain characteristics of Good Building Stone in detail.	5M
	b) what are the uses of stone in Engineering works?	5M
4.	a) How the brick earth is prepared?	5M
	b) Explain the method of tempering with neat sketch.	5M
5.	a) What are the constituents of good brick earth?	5M
	b) State the harmful ingredients in brick earth?	5M
6.	a) Describe the method of moulding?	5M
	b) Describe the classifications of bricks?	5M
7.	Explain:	
	a) Intermittent kiln and	5M
	b) Continuous Kiln	5M
8.	a) Explain briefly about classification of trees?	5M
	b) Explain macrostructure of a tree?	5M
9.	Explain the methods of seasoning of timber?	10M
10.	What are the defects in timber? Explain with neat sketches.	10M

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE
Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT – II

CEMENT ,PAINTS AND DISTEMPERS AND MISCELLANEOUS MATERIALS

1.	Explain briefly the manufacturing of cement(i) Dry process (ii) Wet process	10M
2.	a) Explain the basic properties of cement?	5M
	b) write a short note on field tests on cement.	5M
3.	Explain the following a) Normal consistency test b) Initial setting time and final setting time	10M
4.	a) Briefly explain the compression test on cement concrete.	5M
	b) Chemical composition of cement	5M
5.	a) Explain fineness and soundness tests for cement.	5M
	b) What is varnishing and point out the characteristics of ideal varnish?	5M
6.	What are the ingredients of an oil borne paint? Describe briefly each of them.	10M
7.	Give a brief description of the process of painting on different surfaces	
	(i) Wood	3M
	(ii) metal	4M
	(iii) Plastered surface.	3M
8.	a) Mention the characteristics of distempering?	5M
	b) Write a note on the following	
	(i) Whitewash	2(1/2)M
	(ii) colour wash	2(1/2)M
9.	a) Mention the usual defects which are found in the painting work.	5M
	b) what are the factors that affecting physical properties of steel?	5M
10.	Write a short note on	
	(i) Asbestos	2(1/2)M
	(ii) Gypsum	2(1/2)M
	(iii) Bitumen and	2(1/2)M
	(iv) Rubber	2(1/2)M

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE

Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT – III

FOUNDATION AND MASONRY

1.	(a) Discuss various functions served by foundations.	5M
	(b) What are the requirements of a good foundation?	5M
2.	What are the causes of failure of foundation? What remedial measures would you adopt?	10M
3.	Explain, with the help of sketches, various types of shallow foundations.	10M
4.	Explain strip footing and pad footing with the help of sketches	10M
5.	(a) Explain combined footing and continuous footing	5M
	(b) Write a brief note on deep foundations.	5M
6.	Explain with neat sketches, various types of ashlar stone masonry?	10M
7.	Write a short note on the following	
	(i) Flint rubble masonry	3M
	(ii) Polygonal rubble masonry	3M
	(iii) Random rubble masonry	4M
8.	Write a short note on the following	
	(i) Coursed rubble masonry	4M
	(ii) Uncoursed rubble masonry	3M
	(iii) Dry rubble masonry	3M
9.	Compare brick and stone masonry?	10M
10.	With the help of neat sketches explain the Flemish bonds?	10M

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE

Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT – IV

FLOORS, ROOFS, DOORS AND WINDOWS

1. Explain the method of constructing cement concrete flooring. What is the use of non-monolithic Finish and how it made? 10M
2. Explain the procedure of constructing the following types of flooring
   (i) mosaic flooring (ii) tiled flooring 10M
3. Explain the procedure of constructing the following types of flooring
   (i) Marble flooring (ii) timber flooring (iii) rubber flooring 10M
4. (a) State briefly the essential requirements of a good roof. 5M
   (b) What is trussed roof and purlin roof? 5M
5. Explain with neat sketches various basic forms of pitched roofs. 10M
6. (a) Define the following terms
   Ridge, Eaves, Purlins, Battens and Truss. 5M
   (b) Explain the madras terrace roofing. 5M
7. Give sketches of king post truss and queen post truss. Explain? 10M
8. Explain the following with neat sketches
   (i) Lean to roof (ii) couple roof 10M
9. Explain various type of doors? 10M
10. (a) How do you select the location of doors and windows? 5M
    (b) Write a note on flat roof and curved roof? 5M

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE

Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT – V

LINTELS & ARCHES,PLASTERING & POINTING AND STAIRS

1. Explain the following	
(a) Timber lintels	5M
(b)Stone lintels	5M
2. Classify the arches according to slope.	10M
3. Explain the following	
(a) Steel lintels	5M
(b) Reinforced concrete lintels	5M
4. Classify the various types of lintels &discuss their relative use?	10M
5. Explain the classification based on material and workmanship?	10M
6. What are the defects in plastering? Explain.	10M
7. Explain the types of mortars for plastering?	10M
8. What is pointing and what are the different methods of pointing?	10M
9. What are the requirements of a good stair?	10M
10.Write a short note on the following	
(a) Straight stairs	3M
(b) Continuous stairs	4M
(c) Metal stairs	3M

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (OBJECTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE
Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT – I
STONES ,BRICKS AND WOOD

1 Which of the following sedimentary rocks changes into quartzite by metamorphic action? [ ]
A) Sand stone B) Lime stone C) Shale D) Gypsum

2 Which of the following represents a metamorphic rock? [ ]
i) slate ii) shale iii) quartzite
A) only (iii) B) both (i) and (iii)
C) both (ii) and (iii) D) all (i), (ii) and (iii)

3 Quartzite is a [ ]
A) Siliceous rock B) Argillaceous rock
C) Calcareous rock D) Aqueous rock

4 Which of the following is a mineral? [ ]
A) Basalt B) Granite C) Quartz D) Syenite

5 Slate is formed by metamorphic action on [ ]
A) Shale B) Lime stone C) Sand stone D) Granite

6 Sandstone is a i) Sedimentary rock ii) Aqueous rock iii) Siliceous rock [ ]
The correct answer is
A) Only (i) B) Both (i) and (ii) C) Both (i) and (iii) D) All (i), (ii) and (iii)

7 Which of the following is a rock? [ ]
A) Quartz B) Mica C) Gypsum D) None of the above

8 Based on the following rocks and minerals, select the correct statement, quartz, shale, basalt, granite, marble, gypsum, mica [ ]
A) Basalt and marble are the only metamorphic rocks
B) There is no sedimentary rock
C) Granite is the only igneous rock
D) Quartz and mica are minerals

9 A heavy stone is suitable for [ ]
A) Arches B) Rubble masonry C) Roads D) Retaining walls

10 Which of the following metamorphic rocks has the most weather resisting characteristics? [ ]
A) Marble B) Quartzite C) Slate D) Lime stone

11 A good building stone should not absorb water more than [ ]
A) 5% B) 10% C) 15% D) 20%

12 Which of the following has more fire resisting characteristics? [ ]
A) Marble B) Lime stone C) Compact sand stone D) Granite

13 Jumper is a tool used for [ ]
A) Testing of stones B) Quarrying of stones
C) Dressing of stones D) None of the above

14 Granite is not suitable for ordinary building purpose because [ ]
A) it cannot be polished B) it is not a fire proof material
C) it is costly D) it has less crushing strength

15 The preparation of surface of stone to obtain plain edges or to obtain stones of required size and shape is known as [ ]
A) Quarrying of stones B) Blasting of stones
C) Seasoning of stones D) Dressing of stones

16 The frog of the brick in a brick masonry is generally kept on [ ]
A) Bottom face B) Top face C) Shorter side D) Longer side

17 Number of bricks required for one cubic metre of brick masonry is [ ]
A) 400 B) 450 C) 500 D) 550

18 Specific gravity for most of the building stones lies between [ ]
A) 1.5 to 2.0 B) 2.0 to 2.5 C) 2.5 to 3.0 D) 3.0 to 3.5

19 Advantage of a clamp compared to a kiln for burning bricks is that [ ]
A) it takes less time for burning
B) it gives more output of first class bricks
C) it has less initial cost
D) it is suitable when bricks are required in large numbers

20 The internal size of mould used in brick preparation is [ ]
A) Equal to the size of a fully burnt brick
B) Smaller than the size of a fully burnt brick
C) Greater than the size of a fully burnt brick
D) None of the above

21 Pug mill is used for [ ]
A) Preparation of clay B) Moulding of clay
C) Drying of bricks D) Burning of bricks

22 The weight of a standard brick should be [ ]
A) 1000g B) 3000g C) 1500g D) 2500g

23 Excess of silica in brick earth results in [ ]
A) Cracking and warping of bricks B) Loss of cohesion
C) Enhancing the impermeability of bricks D) None of the above

24 The bricks are burnt at temperature range of [ ]
A) 500°C -700°C B) 900°C -1700°C C) 900°C -1200°C D) 650°C -900°C

25 Sapwood consists of [ ]
A) Innermost annular rings
B) Portion of timber between heartwood and cambium layer
C) Thin layers below the bark
D) Thin fibre which extends from the pith outwards and holds the annular rings together

26 Which of the following trees yields hard wood? [ ]
A) Deodar B) Chir C) Shishum D) Pine

27 The radial splits which are wider on the outside of the log and narrower towards the pith is known as [ ]
A) Heart shakes B) Cup shakes C) Star shakes D) Rind-galls

28 In which of the following pairs both trees yield soft wood? [ ]
A) Deodar and Shishum B) Chir and Sal
C) Sal and Teak D) Chir and Deodar

29 Which of the following timbers is suitable for making sports goods? [ ]
A) Mulberry B) Mahogany C) Sal D) Deodar

30 Assertion A : Shishum is used for decorative woodwork. [ ]
Reason R : Shishum can be polished to an excellent finish.
Select your answer according to the coding system given below:
A) Both A and R are true and R is the correct explanation of A
B) Both A and R are true but R is not the correct explanation of A
C) A is true but R is false
D) A is false but R is true

31 The disease of dry rot in timber is caused by [ ]
A) lack of ventilation B) alternate wet and dry conditions
C) complete submergence in water D) none of the above

32 Plywood has the advantage of' [ ]
A) greater tensile strength in longer direction
B) greater tensile strength in shorter direction
C) same tensile strength in all directions
D) none of the above

33 In which of the following directions, the strength of timber is maximum? [ ]
A) parallel to grains B) 45° to grains
C) perpendicular to grains D) same in all directions

34 The moisture content in a well-seasoned timber is [ ]
A) 4% to 6% B) 10% to 12% C) 15% to 20% D) 100%

35 The trunk of tree left after cutting all the branches is known as [ ]
A) log B) batten C) plank D) baulk

36 The age of a tree can be known by examining [ ]
A) Cambium layer B) Annular rings C) Medullary rays D) Heart wood

37 Plywood is made by bonding together thin layers of wood in such a way that the angle between grains of any layer to grains of adjacent layers is [ ]
A) 0° B) 30° C) 45° D) 90°

38 The plywood [ ]
A) has good strength along the panel only
B) can be spilt in the plane of the panel
C) has greater impact resistance to blows than ordinary wood
D) cannot be bent more easily than ordinary wood of same thickness

39 The practical limit of moisture content achieved in air drying of timber is [ ]
A) 5% B) 15% C) 25% D) 35%

40 First class timber has an average life of [ ]
A) less than one year B) 1 to 5 years C) 5 to 10 years D) more than 10 years.

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (OBJECTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE
Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT – II

CEMENT ,PAINTS AND DISTEMPERS AND MISCELLANEOU MATERIALS

1 The main ingredients of Portland cement are [ ]
A) Lime and Silica B) Lime and Alumina
C) Silica and Alumina D) Lime and Iron

2 The constituent of cement which is responsible for all the undesirable properties of cement is [ ]
A) Dicalcium Silicate B) Tricalcium Silicate
C) Tricalcium Aluminate D) Tetra Calcium Alumino Ferrite

3 Le Chatelier's device is used for determining the [ ]
A) Setting time of cement B) Soundness of cement
C) Tensile strength of cement D) Compressive strength of cement

4 The main constituent of cement which is responsible for initial setting of cement is [ ]
A) Dicalcium Silicate B) Tricalcium Silicate
C) Tricalcium Aluminate D) All of the above

5 The initial setting time for ordinary Portland cement as per IS specifications should not be less than [ ]
A) 10 minutes B) 30 minutes C) 60 minutes D) 600 minutes

6 As per IS specifications, the maximum final setting time for ordinary Portland cement should be [ ]
A) 30 minutes B) 1-hour C) 6 hours D) 10 hours

7 For testing compressive strength of cement, the size of cube used is [ ]
A) 50 mm B) 70.6 mm C) 100 mm D) 150 mm

8 The normal consistency of ordinary Portland cement is about [ ]
A) 10% B) 20% C) 30% D) 40%

9 Early attainment of strength in rapid hardening cement is mainly due to [ ]
A) Gypsum B) Finer grinding
C) Tricalcium Silicate D) Tricalcium Aluminate

10 After storage, the strength of cement [ ]
A) Decreases B) Increases C) Remains same D) May increase or decrease

11 According to IS specifications, the compressive strength of ordinary Portland cement after three days should not be less than [ ]
A) 7 MPa B) 11.5 MPa C) 16 MPa D) 21 MPa

12 Addition of pozzolana to ordinary Portland cement increases [ ]
A) Bleeding B) Shrinkage C) Permeability D) Heat of hydration

13 Gypsum consists of
A) H_2S and $C0_2$ B) $CaS0_4$ and H_20 C) Lime and H_20 D) $C0_2$ and Calcium

14 For testing compressive and tensile strength of cement, the cement mortar is made by mixing cement and standard sand in the proportions of [ ]
A) 1:2 B) 1:3 C) 1:4 D) 1:6

15 The quantity of drier in paints is limited to [ ]
A) 2% B) 4% C) 6% D) 8%

16 Which of the following is not a vehicle in paints? [ ]
A) Linseed oil B) Poppy oil C) Turpentine oil D) Tung oil

17 Which of the following is not a defect in paints? [ ]
A) Blistering B) Stopping C) Crocodiling D) Foxiness

18 Varnish is a homogeneous solution of resin in [ ]
A) Kerosene oil B) Alcohol C) Naptha D) Linseed oil

19 In plastic paint thinner used is [ ]
A) Oil B) Spirit C) Water D) Naptha

20 The function of base in paint is [ ]
A) to provide a film on surface
B) to hide imperfection of surface
C) to reduce shrinkage cracks in paint film
D) to bring down the overall cost

21 Which of the following is not a binder? [ ]
A) Linseed oil B) Turpentine oil C) Nut oil D) Poppy oil

22 Blistering in paints is [ ]
A) Mild cracking of paint film
B) Swelling of paint film
C) Detachment of paint film
D) Separation of paint film in layers

23 Casein paints are used over [ ]
A) New plastered surfaces B) Wood members
C) Mild steel surfaces D) Aluminium sections

24 Which of the following is not a drier? [ ]
A) Letharge B) Lead acetate C) Lithophone D) White lead

25 In fire proof paints, the main constituent is [ ]
A) Aluminium powder B) Red lead C) Copper powder D) Asbestos fibres

26 Distemper is used to coat [ ]
A) External concrete surfaces
B) Interior surfaces not exposed to weather
C) Wood work
D) Compound walls

27 Which of the following increases by adding extruders in paints? [ ]
A) Wash ability B) Adhesion
C) Durability D) Pigment volume concentration

28 Traditional stone finish can be achieved by using which type of paint? [ ]
A) Aluminium paint B) Cellulose paint C) Texture paint D) Cement paint

29 Putty is made up of [ ]
A) White lead and turpentine
B) Powdered chalk and raw linseed oil
C) Red lead and linseed oil
D) Zinc oxide and boiled linseed oil

30 Consider the following statements: [ ]
Casein glue is
1.obtained from milk
2. obtained from the blood of animals
3.used in painting of metals
4.used in the plywood industry
5.white in colour
6.red in colour
Of these statements:
A) 1,3 and 5 are correct B) 1,4 and 5 are correct
C) 2,3 and 6 are correct D) 2,4 and 6 are correct

31 Wrought Iron contains carbon up to [ ]
A) 0.25% B) 1% C) 0.5% D) 2%

32 Which of the following parameters is/are false for steel? [ ]
A) High carbon content B) High melting point
C) Low damping capacity D) None of the above

33 Elastomers can extend up to [ ]
A) five times their original dimensions B) seven times their original dimensions
C) ten times their original dimensions D) three times their original dimensions.

34 The variety of pig iron used for manufacture of wrought iron, is [ ]
A) Bessemer pig B) Grey or foundry pig C) White forge pig D) Mottled pig

35 Bitumen felt [ ]
A) is used as water proofing material
B) is used as damp proofing material
C) is made from bitumen and hessian fibres
D) all the above

36 Depending on the chemical composition and mechanical properties, iron may be classified as [ ]
A) Cast Iron B) Wrought iron C) Steel D) All the above

37 Bitumen in [ ]
A) solid state, is called asphalt B) semi fluid state, is called mineral tar
C) fluid state, is called petroleum D) all the above

38 The vulcanizing agent used in rubber is [ ]
A) Wax B) Rosin oil C) Zinc D) Sulphur

39 Which of the following is a natural polymer? [ ]
A) Timber B) Resin C) Plastic D) Synthetic rubber

40 The material recommended for roofing is [ ]
A) Linoleum B) Asbestos C) Thermocole D) Geosynthetic

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (OBJECTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE
Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT-III

FOUNDATION AND MASONRY

1 In brick masonry the bond produced by laying alternate headers and stretchers in each course is known as [ ]
A) English bond B) Double Flemish bond C) Zigzag bond D) Single Flemish bond

2 The stretcher bond in brick masonry can be used only when the thickness of wall is [ ]
A) 90 mm B) 180 mm C) 190 mm D) 280 mm

3 The pressure acting on the stones in stone masonry construction should be [ ]
A) along the direction of bedding planes
B) at 45° to the direction of bedding planes
C) at 60° to the direction of bedding planes
D) perpendicular to the direction of bedding planes

4 Which of the following should be used for hearting of thicker walls? [ ]
A) Headers B) Stretchers C) Brick bats D) Queen closer

5 A queen closer is a [ ]
A) brick laid with its length parallel to the face or direction of wall
B) brick laid with its breadth parallel to the face or direction of wall
C) brick having the same length and depth as the other bricks but half the breadth
D) brick with half the width at one end and full width at the other

6 Minimum thickness of wall where single Flemish bond can be used is [ ]
A) half brick thick B) one brick thick
C) one and a half bricks thick D) two bricks thick

7 The most important tool in brick laying for lifting and spreading mortar and for forming joints is [ ]
A) trowel B) square C) bolster D) scutch

8 Expansion Joints in masonry walls are provided in wall lengths greater than [ ]
A) 10 m B) 20 m C) 30 m D) 40 m

9 The type of bond provided in brick masonry for carrying heavy loads is [ ]

A) English bond B) Double Flemish bond C) Zigzag bond D) Single Flemish bond

10 A mortar joint in masonry which is normal to the face of wall is known as [ ]
A) Bed joint B) Wall joint C) Cross joint D) Bonded joint

11 The slenderness ratio for masonry walls should not be more than [ ]
A) 10 B) 20 C) 30 D) 40

12 The proportions of lime and sand in the mortar normally used in brick construction are [ ]
A) 1:2 B) 1:4 C) 1:6 D) 1:8

13 Number of vertical joints in a stretcher course is x times the number of joints in the header course, where x is equal to [ ]
A) ½ B) 1 C) 2 D) 1/4

14 As compared to stretcher course, the thickness of joints in header course should be [ ]
A) less B) more C) equal D) equal or more

15 As compared to English bond, double flemish bond is [ ]
A) stronger B) more compact C) costly D) none of the above

16 Single flemish bond consists of [ ]
A) Double Flemish bond facing and English bond backing in each course
B) English bond facing and double Flemish bond backing in each course
C) Stretcher bond facing and double Flemish bond backing in each course
D) Double Flemish bond facing and header bond backing in each course

17 The differential settlement in case of foundations on sandy soils should not exceed [ ]
A) 25 mm B) 40 mm C) 65 mm D) 100 mm

18 In case of foundations on black cotton soils, the most suitable method to increase the bearing capacity of soils is to [ ]
A) increase the depth of foundation B) drain the soil
C) compact the soil D) replace the poor soil

19 The type of footing which is used to transmit heavy loads through steel columns is [ ]
A) raft foundation B) grillage foundation
C) well foundation D) isolated footing

20 The maximum total settlement for isolated foundations on clayey soils should be limited to [ ]
A) 25 mm B) 40 mm C) 65 mm D) 100 mm

21 The type of pile which is driven at an inclination to resist inclined forces is known as [ ]
A) friction pile B) sheet pile C) batter pile D) anchor pile

22 The minimum depth of foundation in clayey soils is [ ]
A) 0.5 m B) 0.7 m C) 0.9 m D) 1.2 m

23 The maximum total settlement for raft foundation on clayey soils should be [ ]

limited to

A) 25 mm B) 25 to 40 mm C) 40 to 65 mm D) 65 to 100 mm

24 The bearing capacity of a water-logged soil can be improved by [ ]

A) compacting the soil B) draining the soil

C) increasing the depth of foundation D) grouting

25 A layer of stones or bricks is known as [ ]

A) cornice B) corbel C) course D) coping

26 Name the bond in which alternate courses consists of stretchers and headers [ ]

A) Flemish bond B) English bond C) both A and B D) none of the above

27 What is efflorescence? [ ]

A) formation of white patches on the brick surface due to insoluble salts in the brick clay

B) swelling of brick due to presence of carbonaceous matter and grass

C) deformation of brick due to exposure to rain

D) impurities in the brick clay which show after burning

28 If L is the length and B the width of the brick and t the thickness of mortar, the relation between these is [ ]

A) L= 2B B) L= B+t C) L=B+2t D) L=2B+t

29 Lap means [ ]

A) the vertical joints separating the bricks in either length or cross directions

B) the horizontal distance between the vertical joints in successive courses

C) the horizontal distance between the vertical joints in alternate courses

D) none of the above

30 Which of the following is a brick masonry? [ ]

A) Random rubble masonry B) Ashlar chamfered masonry

C) Double Flemish bond D) none

31 Which of the following is/are wrong statement(s)? [ ]

A: stone work is less water tight than brick work

B: stone work is weaker than brick work

A) only A

B) neither A nor B

C) only B

D) both A and B

32 For stones Mohs scale is used to determine [ ]

A) Toughness B) Flakiness index C) Hardness D) Durability

33 Which of the following is not a function of foundation? [ ]

A) appearance to the structure

B) support the structure

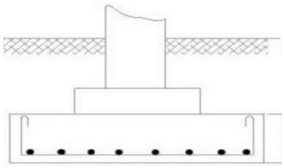
C) provide the structural safety against undermining or scouring due to animals, flood water

D) distribute the load from structure to soil

34 A spread is given under the base of a wall or common is known as [ ]

A) Piles B) Pier C) Footing D) Plinth

35 Identify the given type of foundation below [ ]



A) single footing

B) stepped footing

C) sloped footing

D) shallow foundation

36 The _____ foundations are useful for public buildings, office buildings, School buildings, residential quarters, etc. [ ]

A) raft B) grillage C) inverted arch D) concentrated

37 A _____ foundation is a special type of isolated footing, generally provided for heavy loaded steel structure specially in those location where bearing of soil is poor. [ ]

A) raft B) grillage C) inverted arch D) combine

38 If the wall or column under construction is near some other property, it will not be possible to spread the footing to both the sides of Wall or column. In such case which footing is used? [ ]

A) simple pad footing B) eccentric footing

C) isolated footing D) reinforced footing

39 The shape of combined footing is mostly _____ [ ]

A) rectangle B) square C) circular D) trapezoidal

40 A spread footing for a single column is known as the _____ [ ]

A) simple pad footing B) eccentric footing

C) isolated footing D) combined footing

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (OBJECTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE

Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT-IV
FLOORS, ROOFS, DOORS AND WINDOWS

1 The type of flooring suitable for use in churches, theatres, public libraries and other places where noiseless floor covering is desired is [ ]
A) cork flooring B) glass flooring C) wooden flooring D) linoleum flooring

2 The exposed term surfaces of floors are termed as the [ ]
A) roofs B) floors C) flooring D) roofing

3 The other floors of each storey about the ground level are known as the [ ]
A) roofing B) upper floor C) lower floor D) roof

4 In auditoriums, to carry out dances or dramas, _____ are constructed on the ground floor [ ]
A) composite floors B) jack arch floors C) RCC floors D) basement timber floors

5 _____ floors consist of single joist which are paced below the floor boards [ ]
A) single joist timber floor B) single joint timber floor
C) single timber floor D) joist floor

6 In _____ floors, the intermediate supports, known as the binders, provide for the bridging joists. [ ]
A) single joist timber floors B) double joist timber floors
C) bridging joists D) triple joist timber floor

7 In _____ floors, the steel bars and concrete are used to form the floor.
A) hollow block B) precast concrete C) RCC D) jack arch

8 _____ flooring material is a mixture of raw rubber, fillers such as fibre, cork, etc. and pigments [ ]
A) plastic B) rubber C) stone D) mud

9 A _____ is defined at the upper most part of the building which is constructed in the form of a framework to give protection to the building against rain, heat, snow, wind, etc. [ ]

A) roof B) chajja C) lintels D) truss

10 When two roof surface meets together and form an internal angle, a _____ is formed.
A) Rafter B) Valley Barge C) Gable D) pitch

11 The type of joint commonly used at the junction of a principal rafter and tie beam in timber trusses is [ ]
A) mortise and tennon joint B) oblique mortise and tennon joint
C) butt joint D) mitred joint

12 The type of roof suitable in plains where rainfall is meagre and temperature is high is [ ]
A) pitched and sloping roof B) flat roof
C) shell roof D) none of the above

13 Pitched and sloping roofs are suitable for [ ]
A) coastal regions B) plain regions C) covering large areas D) all of the above

14 The type of roof which slopes in two directions with a break in the slope on each side is known as [ ]
A) gable roof B) hip roof C) gambrel roof D) mansard roof

15 Mansard roof is a roof which slopes in [ ]
A) two directions without break in the slope on each side
B) two directions with break in the slope on each side
C) four directions without break in the slope on each side
D) four directions with break in the slope on each side

16 The horizontal timber piece provided at the apex of a roof truss which supports the common rafter is called [ ]
A) ridge board B) hip rafter C) eaves board D) valley rafter

17 The lower edge of the pitched roof, from where the rain water of the roof surface drops down, is known as [ ]
A) hip B) gable C) ridge D) eaves

18 Higher pitch of the roof [ ]
i) results in stronger roof
ii) results in weaker roof
iii) requires more covering material
iv) requires less covering material
The correct answer is
A) (i) and (iii) B) (i) and (iv) C) (ii) and (iii) D) (ii) and (iv)

19 Couple close roof is suitable for maximum span of [ ]
A) 2.5 m B) 3.5 m C) 4.5 m D) 5.5 m

20 In a collar beam roof [ ]
A) there is no horizontal tie beam

B) there is a horizontal tie at the feet of rafters only
C) there is a horizontal tie at almost the middle of rafters only
D) there are two horizontal ties, one at the feet and other at the middle of the rafters

21 The function of king post in a king post roof truss is [ ]
A) to support the frame work of the roof
B) to receive the ends of principal rafter
C) to prevent the walls from spreading outward
D) to prevent the tie beam from sagging at its centre

22 The function of cleats in a roof truss is [ ]
A) to support the common rafter B) to support purlins
C) to prevent the purlins from tilting D) all of the above

23 _____ truss differs from King Post Truss in having two vertical members. [ ]
A) composite truss B) mansard truss C) truncated truss D) queen post truss

24 When the span exceeds 4.8 M and when there is no inside supporting walls for Purlins, the frame structures adopted, known as the _____ [ ]
A) Single roofs B) purlin roofs C) double roofs D) trussed roofs

25 In _____ roofs, the common Rafter are provided to itself without any intermediate support. [ ]
A) single B) double C) purlin D) trussed

26 _____ are the wooden planks or boards which are fixed on the gable end of a roof. [ ]
A) cleats B) battens C) barge boards D) eaves

27 The wooden piece which are placed horizontally on a principal rafter to carry the common rafters are known as the _____ [ ]
A) ridge B) rafter C) purlin D) jack rafters

28 The edge of a Gable, running between the Eaves and ridge is known as _____ [ ]
A) verge B) ridge C) eave D) pitch

29 The horizontal distance between the internal faces of walls or support is known as [ ]
A) span B) truss C) verge D) wall plates

30 _____ are the inclined members of a Truss. [ ]
A) Principle rafters B) Cleats C) dragon beam D) gable

31 _____ consists of a group of members which form a support for a door or Window. [ ]
A) sill B) head C) frame D) style

32 The top or uppermost horizontal part of a frame is known as the _____ [ ]
A) panel B) hold fast C) horn D) head

33 The entire assembly of styles, panels and rails is known as the _____ [ ]
A) putty B) horn C) sash D) shutter

34 ____ is a vertical member which is employed to subdivided a window or door opening vertically. [ ]
A) transom B) jamb C) mullion D) rebate

35 A _____ door is formed from the vertical boards, known as the battens, which are secured by horizontal supports, known as ledges. [ ]
A) Ledged, framed and braced B) Ledged and braced
C) Ledged and framed D) Ledged

36 _____ is the most usual variety of door and consist of a framework in which panels are fitted. [ ]
A) framed and panelled B) glazed C) flush D) collapsible

37 _____ are the windows, the shutters of which open the doors. [ ]
A) double hung windows B) casement windows
C) pivoted windows D) sliding windows

38 _____ are nowadays widely used, especially for public buildings.
A) circular windows B) gable windows C) dormer windows D) metal windows

39 _____ are fully glazed casement windows. [ ]
A) casement windows B) metal windows
C) sash windows D) corner windows

40 _____ are the windows which are provided on the sloping surface of a pitched roof. [ ]
A) sky light B) bay windows C) lantern windows D) clerestory windows

Prepared by: P.TEJASRI

SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (OBJECTIVE)

Subject with Code: BUILDING MATERIALS AND CONSTRUCTION(16CE107) **Course & Branch**: B.Tech - CE
Year & Sem: II-B. Tech & I-Sem **Regulation:** R16

UNIT-V
LINTELS & ARCHES,PLASTERING & POINTING AND STAIRS

1 The vertical distance between the springing line and highest point of the inner curve of an arch is known as [ ]
A) intrados B) rise C) spandrel D) extrados

2 Depth or height of the arch is the [ ]
A) perpendicular distance between intra-dos and extrados
B) vertical distance between springing line and intrados
C) perpendicular distance between springing line and extrados
D) none of the above

3 The triangular space formed between the extrados and the horizontal line drawn through the crown of an arch is known as [ ]
A) haunch B) spandrel C) voussoirs D) skewbacks

4 The lintels are preferred to arches because [ ]
A) arches require more headroom to span the openings like doors, windows etc.
B) arches require strong abutments to withstand arch thrust
C) arches are difficult in construction
D) all of the above

5 In the construction of arches, sand box method is used for [ ]
A) centring B) actual laying of arch work
C) striking of centring D) none of the above

6 The type of arch generally constructed over a wooden lintel or over a flat arch for the purpose of carrying the load of the wall above is [ ]
A) segmental arch B) pointed arch C) relieving arch D) flat arch

7 The term string is used for [ ]
A) the underside of a stair
B) outer projecting edge of a tread
C) a sloping member which supports the steps in a stair
D) a vertical member between two treads

8 The vertical posts placed at the top and bottom ends of a flight supporting the hand rail is known as [ ]
A) balusters B) newal posts C) balustrades D) railings

9 The maximum number of steps in a flight should generally be restricted to [ ]
A) 10 B) 12 C) 15 D) no limit

10 The number of steps in a flight generally should not be less than [ ]
A) 2 B) 3 C) 5 D) no limit

11 Sum of tread and rise must lie between [ ]
A) 300 to 350 mm B) 400 to 450 mm C) 500 to 550 mm D) 600 to 650 mm

12 Minimum width of landing should be [ ]
A) equal to width of stairs B) half the width of stairs
C) twice the width of stairs D) one fourth the width of stairs

13 In any good staircase, the maximum and minimum pitch respectively should be [ ]
A) 90° and 0° B) 75° and 30° C) 60° and 10° I D) 40° and 25°

14 A _____ is a horizontal member which is placed across an opening to support the position of the structure above it. [ ]
A) door B) window C) lintel D) sill

15 At present, the lentils of _____ are widely used to span the openings for doors, Windows, etc. in a structure. [ ]
A) timber B) wood C) rcc D) stone

16 The usual concrete mix for RCC lintel is _____ (cement:sand:aggregate). [ ]
A) 1:2:3 B) 1:2:4 C) 1:1.5:3 D) 1:3:6

17 A ____ is define as a sequence of steps and it is provided to afford the means of Ascent and Descent between the floors or landings. [ ]
A) stair B) beam C) roof D) sidewalk

18 _____ is the vertical member which is fixed between string and handrail to give support to the handrail. [ ]
A) baluster B) balustrade C) flight D) barrister

19 _____ is the horizontal distance between the faces of two consecutive Risers. [ ]
A) riser B) flight C) going D) newel post

20 The protecting part of the tread beyond the face of Riser is known as a _____ [ ]
A) pitch B) rise C) riser D) nosing

21 The vertical or Front member of the step, which is connected to the treads, is known as a _____ [ ]
A) rise B) run C) riser D) pitch

22 The total length of a Stair in a horizontal plane is known as the _____ [ ]
A) run B) soffit C) scotia D) step

23 A combination of tread and riser is known as _____ [ ]
A) soffit B) string C) waist D) step

24 The incline rail over the string is known as a _____ [ ]
A) head room B) landing C) handrail D) heading

25 A Stair turning through three right angles is known as a _____ stair. [ ]
A) Three Quarter Turn B) One Quarter Turn
C) Two Quarter Turn D) Four Quarter Turn

26 The _____ stairs are useful where the space available is limited and where the traffic is less. [ ]
A) straight B) turning C) helical D) geometrical

27 The stairs which are kept in motion by a revolving drum is known as a _____ [ ]
A) escalator B) revolving stairs C) lift D) elevator

28 A Stair turning through two right angles is known as a _____ stair. [ ]
A) straight B) dog-legged C) helical D) geometrical

29 A _____ is a sloping surface and it is adopted as a substitute for stair for easy connection between the floors [ ]
A) pitch B) rise C) ramp D) string

30 _____ stairs are now commonly used in all types of construction and in case of a frame structure of reinforced concrete. [ ]
A) rcc B) brick C) stone D) metal

31 _____ stairs are now not frequently used. [ ]
A) rcc B) brick C) stone D) metal

32 The flat, segmental, semi-circular, horse-shoe and Stilted arches are _____ [ ]
A) two-centred B) three - centred C) one-centred D) four-centred

33 Plastering is also called: [ ]
A) pre-casting B) pargeting C) polishing D) porting

34 Before plastering, the surface has to be: [ ]
A) rough B) smooth C) watered D) cemented

35 Wood surface requires _____ coats of plastering. [ ]
A) 1 B) 2 C) 3 D) none

36 In plastering, the 1st coat is called _____ and its thickness should be _____ mm. [ ]
A) under coat, 6-9 B) under coat, 10-15 C) floating, 6-9 D) floating, 10-15

37 Which of the below is not a plaster type based on material? [ ]
A) cement B) pozzolana C) lime D) gypsum

38 Which IS code gives specifications about cement plaster? [ ]
A) IS 1500 B) IS 1221 C) IS 1400 D) 1661

39 _____ arches can be constructed in rubble masonry or ashlar masonry. [ ]

A) stone arches B) wooden arches C) brick arches D) concrete arches

40 ___ arches can be constructed of the precast cement concrete blocks or Monolithic concrete. [ ]

A) cement concrete arches B) cement arches

C) concrete arches D) rubble arches

Prepared by: P.TEJASRI