

CEH302-CONSTRUCTION MATERIALS
PART-A
UNIT-I

1. Which of the following was the earliest building material used by humans?

- A) Steel
- B) Concrete
- C) Stone
- D) Plastic

2. Which material is considered an eco-friendly building material?

- A) Fly ash brick
- B) Burnt clay brick
- C) Asphalt
- D) Bitumen

3. Sustainable building materials mainly help to

- A) Increase pollution
- B) Reduce environmental impact
- C) Increase construction time
- D) Increase dead load

4. Bamboo is considered a

- A) Heavy building material
- B) Sustainable building material
- C) Metallic material
- D) Composite material

5. Density is defined as

- A) Mass per unit volume
- B) Weight per unit area
- C) Volume per unit weight
- D) Force per unit area

6. Specific gravity is the ratio of

- A) Density of material to density of water
- B) Weight to volume
- C) Mass to weight
- D) Density to pressure

7. Which property indicates the percentage of voids present in a material?

- A) Toughness
- B) Porosity
- C) Hardness
- D) Elasticity

8. High porosity generally results in

- A) Higher strength
- B) Lower water absorption
- C) Higher water absorption
- D) Better fire resistance

9. Water absorption mainly affects the

- A) Colour
- B) Durability
- C) Shape
- D) Cost

10. Permeability is the ability of a material to

- A) Conduct electricity
- B) Resist impact
- C) Allow liquids to pass through it
- D) Resist corrosion

11. Thermal conductivity is the property related to

- A) Heat transfer
- B) Electrical resistance
- C) Water absorption
- D) Sound insulation

12. A material having low thermal conductivity is generally a

- A) Good conductor
- B) Good insulator
- C) Heavy material
- D) Brittle material

13. Fire resistance means the ability of a material to

- A) Burn quickly
- B) Resist the action of fire
- C) Absorb water
- D) Conduct heat rapidly

14. Weathering resistance is the ability to withstand

- A) Mechanical load only
- B) Atmospheric conditions
- C) Chemical reactions only
- D) Electrical current

15. Durability of a building material means

- A) Ease of transportation
- B) Ability to last for a long period
- C) Ease of manufacture
- D) Attractive appearance

16. Natural aggregates are obtained from

- A) Industrial waste
- B) Demolished buildings
- C) Natural rock deposits
- D) Plastic waste

17. Crushed stone is an example of

- A) Artificial aggregate
- B) Natural aggregate
- C) Plastic aggregate
- D) Composite aggregate

18. Which of the following is an artificial aggregate?

- A) River gravel
- B) Expanded clay
- C) Sand
- D) Granite

19. Lightweight aggregates are mainly used to

- A) Increase dead load
- B) Reduce dead load
- C) Increase permeability
- D) Increase density

20. Heavyweight aggregates are mainly used for

- A) Radiation shielding
- B) Roofing
- C) Plastering
- D) Flooring tiles

21. Recycled aggregates are produced from

- A) River sand
- B) Demolished concrete structures
- C) Clay
- D) Limestone

22. Water used for concrete should preferably be

- A) Salty
- B) Acidic
- C) Clean and potable
- D) Oily

23. Excess chlorides in concrete mainly cause

- A) Increase in workability
- B) Corrosion of reinforcement
- C) Higher compressive strength
- D) Faster curing

24. Sulphates present in water may lead to

- A) Sulphate attack on concrete
- B) Increase in concrete strength
- C) Better workability
- D) Lower cement consumption

25. Which Indian Standard specifies the quality of water for concrete?

- A) IS 800
- B) IS 456
- C) IS 875
- D) IS 10262

26. Which of the following materials is biodegradable?

- A) Bamboo
- B) Steel
- C) Glass
- D) Plastic

27. Which property of a building material is expressed in kg/m^3 ?

- A) Specific gravity
- B) Density
- C) Porosity
- D) Hardness

28. A material having low porosity generally possesses

- A) High water absorption
- B) Low durability
- C) High durability
- D) Low strength

29. Which property determines the ease with which water enters a material?

- A) Elasticity
- B) Permeability
- C) Toughness
- D) Plasticity

30. Which property helps a material resist repeated exposure to rain, sunlight, and wind?

- A) Toughness
- B) Weathering resistance
- C) Hardness
- D) Ductility

31. Materials having high thermal conductivity are suitable for

- A) Insulation
- B) Heat transfer applications
- C) Waterproofing
- D) Sound insulation

32. Which of the following is a lightweight aggregate?

- A) Basalt
- B) Granite
- C) Expanded shale
- D) Quartzite

33. Which aggregate is commonly used for radiation shielding in hospitals?

- A) Granite
- B) Magnetite
- C) River gravel
- D) Sandstone

34. Artificial aggregates are mainly manufactured to

- A) Increase water absorption
- B) Achieve special engineering properties
- C) Reduce cement content only
- D) Increase permeability

35. Which test is commonly carried out to determine aggregate crushing strength?

- A) Slump test
- B) Aggregate Crushing Value test
- C) Soundness test
- D) Vicat test

36. The maximum size of coarse aggregate generally used in RCC is

- A) 10 mm
- B) 20 mm
- C) 50 mm
- D) 75 mm

37. Fine aggregate generally passes through

- A) 20 mm sieve
- B) 10 mm sieve
- C) 4.75 mm sieve
- D) 40 mm sieve

38. Which of the following is a coarse aggregate?

- A) River sand
- B) M-sand
- C) Gravel
- D) Silt

39. M-sand is manufactured by crushing

- A) Limestone
- B) Granite rocks
- C) Clay
- D) Marble

40. The main advantage of M-sand over river sand is

- A) Higher organic content
- B) Uniform grading
- C) High clay content
- D) Higher moisture content

41. Which impurity in water delays the setting of cement?

- A) Sugar
- B) Oxygen
- C) Nitrogen
- D) Hydrogen

42. Sea water is generally not recommended for RCC because it contains

- A) Oxygen
- B) Chlorides
- C) Carbon dioxide
- D) Nitrogen

43. Which of the following water is most suitable for mixing concrete?

- A) Industrial wastewater
- B) Sea water
- C) Potable water
- D) Sewage water

44. Water-cement ratio mainly influences the

- A) Colour of concrete
- B) Strength of concrete
- C) Size of aggregate
- D) Shape of bricks

45. Excess water in concrete generally results in

- A) Higher strength
- B) Lower permeability
- C) Lower strength
- D) Better durability

46. Which property represents the ability of a material to withstand environmental deterioration over time?

- A) Elasticity
- B) Durability
- C) Plasticity
- D) Brittleness

47. Which type of aggregate is produced from demolished concrete?

- A) Heavyweight aggregate
- B) Recycled aggregate
- C) Natural aggregate
- D) Fine aggregate

48. Eco-friendly building materials mainly contribute to

- A) Increased carbon emissions
- B) Sustainable construction
- C) Higher maintenance costs
- D) Increased pollution

49. Which engineering property is most important when selecting materials for water-retaining structures?

- A) Permeability
- B) Colour
- C) Texture
- D) Appearance

50. The primary objective of selecting appropriate building materials is to ensure

- A) Attractive colour only
- B) Low transportation cost only
- C) Strength, durability, economy, and sustainability
- D) Maximum weight

PART-A
UNIT-II

51. The basic raw material used for manufacturing clay bricks is

- A) Cement
- B) Brick earth
- C) Sand
- D) Lime

52. The main constituent of good brick earth is

- A) Alumina
- B) Copper
- C) Iron
- D) Zinc

53. Which constituent gives plasticity to brick earth?

- A) Lime
- B) Alumina
- C) Iron oxide
- D) Magnesite

54. Iron oxide in brick earth imparts

- A) Plasticity
- B) Red colour
- C) Hardness
- D) White colour

55. Excess lime in brick earth causes

- A) Uniform burning
- B) Cracking and disintegration
- C) Better strength
- D) Improved durability

56. The first process in brick manufacturing is

- A) Burning
- B) Moulding
- C) Preparation of brick earth
- D) Drying

57. Drying of bricks before burning is necessary to

- A) Increase weight
- B) Prevent cracking
- C) Increase moisture
- D) Reduce colour

58. Bricks are generally burnt in

- A) Kilns
- B) Furnaces
- C) Boilers
- D) Ovens

59. A good brick should absorb water not more than about

- A) 5%
- B) 10%
- C) 20%
- D) 40%

60. The standard shape of a good brick should be

- A) Circular
- B) Rectangular
- C) Triangular
- D) Oval

61. A good brick should produce a _____ sound when struck together.

- A) Dull
- B) Ringing
- C) Hissing
- D) Soft

62. Efflorescence in bricks is caused by

- A) Organic matter
- B) Soluble salts
- C) Cement
- D) Sand

63. First-class bricks are mainly used for

- A) Temporary structures
- B) Load-bearing masonry
- C) Road filling
- D) Foundation filling

64. Which test determines the strength of bricks?

- A) Slump test
- B) Compressive strength test
- C) Soundness test
- D) Vicat test

65. Fly ash bricks are manufactured using

- A) Clay only
- B) Fly ash, cement and sand
- C) Lime only
- D) Gypsum only

66. Fly ash is obtained from

- A) Cement factories
- B) Thermal power plants
- C) Steel plants
- D) Brick kilns

67. One major advantage of fly ash bricks is

- A) High water absorption
- B) Uniform size and shape
- C) Low strength
- D) High shrinkage

68. AAC stands for

- A) Advanced Aggregate Concrete
- B) Autoclaved Aerated Concrete
- C) Automatic Air Cement
- D) Artificial Aggregate Composite

69. AAC blocks are cured using

- A) Steam under pressure
- B) Sunlight
- C) Water curing
- D) Air drying

70. AAC blocks are mainly preferred because of their

- A) High density
- B) Light weight
- C) High water absorption
- D) Dark colour

71. Hollow concrete blocks are mainly used to

- A) Increase dead load
- B) Reduce dead load
- C) Increase water absorption
- D) Increase cement consumption

72. Solid concrete blocks are manufactured using

- A) Cement, sand and aggregates
- B) Clay only
- C) Lime only
- D) Gypsum only

73. Which masonry unit provides better thermal insulation?

- A) Clay brick
- B) AAC block
- C) Solid concrete block
- D) Granite block

74. Ceramic materials are manufactured by

- A) Melting metals
- B) Burning clay at high temperature
- C) Mixing cement
- D) Crushing rocks

75. Which ceramic product is commonly used for sanitary ware?

- A) Earthenware
- B) Porcelain
- C) Terracotta
- D) Stoneware

76. Stoneware is mainly used for

- A) Sewer pipes
- B) Reinforcement
- C) Roofing sheets
- D) Windows

77. Terracotta is widely used for

- A) Decorative works
- B) Reinforcement
- C) Cement manufacture
- D) Aggregates

78. Glazed ceramic tiles are preferred because they are

- A) Water resistant
- B) Conductive
- C) Flexible
- D) Magnetic

79. Roof tiles are mainly used for

- A) Flooring
- B) Roofing
- C) Foundations
- D) Plastering

80. Thermal care tiles are mainly used to

- A) Increase roof temperature
- B) Reduce heat gain
- C) Increase dead load
- D) Improve conductivity

81. Glass is manufactured mainly from

- A) Clay
- B) Sand
- C) Cement
- D) Lime

82. The main constituent of glass is

- A) Silica
- B) Alumina
- C) Iron oxide
- D) Gypsum

83. Float glass is mainly used for

- A) Decorative flooring
- B) Windows and doors
- C) Road construction
- D) Foundations

84. Tempered glass is produced by

- A) Slow cooling
- B) Heat treatment
- C) Water curing
- D) Chemical coating

85. Tempered glass is approximately _____ stronger than ordinary glass.

- A) 2 times
- B) 4–5 times
- C) 10 times
- D) 20 times

86. Laminated glass is mainly used for

- A) Safety applications
- B) Brick manufacture
- C) Roofing tiles
- D) Concrete mixing

87. Frosted glass is mainly used where

- A) Privacy is required
- B) High strength is required
- C) Structural members are needed
- D) Waterproofing is required

88. Tinted glass helps in

- A) Increasing heat gain
- B) Reducing solar heat
- C) Increasing transparency
- D) Increasing weight

89. Wired glass is mainly used for

- A) Fire-resistant applications
- B) Plumbing
- C) Masonry
- D) Roofing

90. Double-glazed glass mainly provides

- A) Better thermal insulation
- B) Higher density
- C) Higher water absorption
- D) Lower strength

91. Which brick is manufactured without burning?

- A) Clay brick
- B) Fly ash brick
- C) Fire brick
- D) Engineering brick

92. AAC blocks reduce

- A) Dead load on the structure
- B) Compressive strength
- C) Durability
- D) Fire resistance

93. Hollow concrete blocks are widely used because they

- A) Increase building weight
- B) Improve thermal insulation
- C) Absorb more water
- D) Are expensive

94. Which material is most suitable for partition walls?

- A) AAC blocks
- B) Granite blocks
- C) Steel plates
- D) Stone slabs

95. Ceramic tiles are generally used for

- A) Flooring and wall finishing
- B) Reinforcement
- C) Formwork
- D) Foundations

96. The main advantage of porcelain is its

- A) High water absorption
- B) Low strength
- C) High strength and smooth finish
- D) Low durability

97. Which glass is commonly used in modern curtain wall systems?

- A) Tempered glass
- B) Float glass
- C) Wired glass
- D) Frosted glass

98. Which building material provides the best thermal insulation among the following?

- A) Clay brick
- B) AAC block
- C) Solid concrete block
- D) Granite

99. Ceramic products are generally

- A) Non-combustible
- B) Flammable
- C) Corrosive
- D) Flexible

100. AAC blocks are widely used in modern buildings because they are

- A) Heavy and expensive
- B) Lightweight, fire-resistant, and energy-efficient
- C) Highly conductive
- D) Easily corroded

PART-A
UNIT-III

101. OPC stands for

- A) Ordinary Portland Cement
- B) Ordinary Plastic Cement
- C) Original Portland Cement
- D) Ordinary Pozzolana Cement

102. PPC stands for

- A) Portland Plastic Cement
- B) Portland Pozzolana Cement
- C) Portland Pipe Cement
- D) Portland Premium Cement

103. The main raw material used for manufacturing cement is

- A) Limestone
- B) Granite
- C) Sandstone
- D) Clay brick

104. Which of the following is the major constituent of cement?

- A) Lime
- B) Gypsum
- C) Silica
- D) Alumina

105. Gypsum is added to cement to

- A) Increase strength
- B) Accelerate setting
- C) Control setting time
- D) Improve colour

106. The reaction between cement and water is called

- A) Carbonation
- B) Hydration
- C) Calcination
- D) Oxidation

107. The initial setting time of Ordinary Portland Cement should not be less than

- A) 15 minutes
- B) 30 minutes
- C) 60 minutes
- D) 90 minutes

108. The final setting time of OPC should not exceed

- A) 5 hours
- B) 8 hours
- C) 10 hours
- D) 12 hours

109. The compound responsible for early strength of cement is

- A) C_3S
- B) C_2S
- C) C_3A
- D) C_4AF

110. The compound responsible for long-term strength is

- A) C_3S
- B) C_2S
- C) C_3A
- D) C_4AF

111. The compound that reacts rapidly with water is

- A) C_3A
- B) C_2S
- C) C_4AF
- D) Gypsum

112. Which Bogue compound contributes least to strength?

- A) C_3S
- B) C_2S
- C) C_4AF
- D) C_3A

113. Which cement is most commonly used for general construction?

- A) White cement
- B) OPC
- C) Rapid hardening cement
- D) Sulphate resisting cement

114. PPC contains

- A) Fly ash
- B) Sand
- C) Lime only
- D) Bitumen

115. PPC generally provides

- A) Lower durability
- B) Better durability
- C) Higher shrinkage
- D) Lower workability

116. Which cement is suitable for marine structures?

- A) PPC
- B) White cement
- C) Masonry cement
- D) Quick-setting cement

117. The grade of cement indicates its

- A) Colour
- B) Compressive strength
- C) Weight
- D) Density

118. Which grade of OPC is commonly used in RCC works?

- A) 33 Grade
- B) 43 Grade
- C) 53 Grade
- D) Both 43 and 53 Grade

119. A lower water-cement ratio generally produces

- A) Higher strength
- B) Lower strength
- C) Higher permeability
- D) Lower durability

120. Excess water in concrete causes

- A) Higher strength
- B) Lower strength
- C) Faster hydration only
- D) Higher density

121. Fly ash is obtained from

- A) Steel plants
- B) Thermal power plants
- C) Cement plants
- D) Brick kilns

122. Fly ash is classified as a

- A) Fine aggregate
- B) Pozzolanic material
- C) Coarse aggregate
- D) Binder

123. GGBS stands for

- A) Ground Granulated Blast Furnace Slag
- B) Ground Gravel Base Slurry
- C) Granulated Gypsum Binding Sand
- D) General Grade Building Slag

124. GGBS is obtained from

- A) Cement kiln
- B) Blast furnace
- C) Lime kiln
- D) Brick kiln

125. Silica fume is mainly used to improve

- A) Colour
- B) Strength and durability
- C) Density only
- D) Workability only

126. Silica fume is a by-product of

- A) Iron industry
- B) Silicon alloy industry
- C) Cement industry
- D) Lime industry

127. Natural pozzolana includes

- A) Volcanic ash
- B) Gypsum
- C) Limestone
- D) Granite

128. Supplementary cementitious materials mainly improve

- A) Sustainability
- B) Water absorption
- C) Colour
- D) Density only

129. Lime is obtained by burning

- A) Granite
- B) Limestone
- C) Sandstone
- D) Clay

130. Quicklime is chemically known as

- A) Calcium carbonate
- B) Calcium oxide
- C) Calcium hydroxide
- D) Calcium sulphate

131. Slaked lime is chemically known as

- A) Calcium carbonate
- B) Calcium oxide
- C) Calcium hydroxide
- D) Calcium chloride

132. The process of adding water to quicklime is called

- A) Calcination
- B) Hydration
- C) Slaking
- D) Carbonation

133. Lime putty is prepared by

- A) Burning limestone
- B) Slaking quicklime
- C) Grinding cement
- D) Heating gypsum

134. Fat lime is mainly used for

- A) Whitewashing
- B) Road construction
- C) Concrete production
- D) Reinforcement

135. Hydraulic lime sets

- A) Only in air
- B) Under water
- C) Only in sunlight
- D) Only at high temperature

136. Lime mortar is mainly used for

- A) Masonry work
- B) Reinforcement
- C) Roofing sheets
- D) Steel fabrication

137. Bitumen is obtained from

- A) Petroleum
- B) Limestone
- C) Clay
- D) Gypsum

138. Bitumen is mainly used for

- A) Brick making
- B) Road construction
- C) Steel fabrication
- D) Timber preservation

139. Which material is widely used as a waterproofing binder?

- A) Lime
- B) Cement
- C) Bitumen
- D) Sand

140. Asphalt is a mixture of

- A) Cement and sand
- B) Bitumen and aggregates
- C) Lime and clay
- D) Gypsum and sand

141. Tar is mainly obtained from

- A) Coal
- B) Limestone
- C) Granite
- D) Cement

142. Which material has largely replaced tar in road construction?

- A) Lime
- B) Bitumen
- C) Gypsum
- D) Clay

143. White cement is mainly used for

- A) Decorative works
- B) Road construction
- C) Foundations
- D) Mass concreting

144. Rapid hardening cement is used where

- A) Early strength is required
- B) Decorative work is required
- C) Waterproofing is required
- D) White finishing is required

145. Sulphate resisting cement is suitable for

- A) Marine structures
- B) Decorative flooring
- C) Whitewashing
- D) Timber work

146. Cement should be stored in

- A) Damp place
- B) Dry and moisture-free place
- C) Open yard
- D) Under direct sunlight

147. Which test is used to determine the fineness of cement?

- A) Slump test
- B) Sieve test
- C) Rebound hammer test
- D) Impact test

148. The consistency of cement is determined using

- A) Vicat apparatus
- B) Compression testing machine
- C) Los Angeles machine
- D) Slump cone

149. The soundness test of cement is carried out using

- A) Le Chatelier apparatus
- B) Vicat apparatus
- C) Slump cone
- D) Flow table

150. The primary purpose of supplementary cementitious materials is to

- A) Reduce durability
- B) Improve performance and sustainability of concrete
- C) Increase water absorption
- D) Reduce workability

PART-A
UNIT-IV

151. Timber obtained from deciduous trees is known as

- A) Softwood
- B) Hardwood
- C) Bamboo
- D) Engineered wood

152. Timber obtained from coniferous trees is called

- A) Hardwood
- B) Softwood
- C) Laminated wood
- D) Veneer

153. The process of reducing the moisture content in timber is called

- A) Slaking
- B) Seasoning
- C) Burning
- D) Polishing

154. Which method is a natural method of seasoning timber?

- A) Kiln seasoning
- B) Air seasoning
- C) Chemical seasoning
- D) Electrical seasoning

155. Artificial seasoning of timber is commonly carried out by

- A) Air drying
- B) Kiln seasoning
- C) Water seasoning
- D) Steam curing

156. The main purpose of seasoning timber is to

- A) Increase moisture
- B) Reduce moisture content
- C) Increase weight
- D) Change colour

157. Which of the following is a natural defect in timber?

- A) Honeycombing
- B) Knot
- C) Bleeding
- D) Segregation

158. Preservation of timber is mainly done to protect it from

- A) Fire only
- B) Termites and fungi
- C) Rain only
- D) Sunlight only

159. Which preservative is commonly used for timber?

- A) Coal tar creosote
- B) Cement
- C) Gypsum
- D) Lime

160. Plywood is manufactured by

- A) Compressing sawdust
- B) Gluing thin veneers together
- C) Mixing cement and timber
- D) Casting wood fibres

161. Mortar is mainly used for

- A) Reinforcing concrete
- B) Binding masonry units
- C) Roofing
- D) Flooring

162. Cement mortar consists of

- A) Cement and sand
- B) Lime and sand
- C) Clay and sand
- D) Cement and gravel

163. Lime mortar is mainly used for

- A) Heavy RCC work
- B) Brick masonry and plastering
- C) Road construction
- D) Steel structures

164. Which mortar is commonly used for plastering?

- A) Cement mortar
- B) Mud mortar
- C) Gypsum mortar
- D) Bitumen mortar

165. The usual proportion of cement mortar for brick masonry is

- A) 1:3
- B) 1:6
- C) 1:10
- D) 1:12

166. Guniting is the process of

- A) Hand plastering
- B) Spraying mortar under pressure
- C) Mixing concrete
- D) Brick laying

167. Grouting is the process of

- A) Filling cracks and voids with grout
- B) Painting walls
- C) Waterproofing roofs
- D) Seasoning timber

168. Concrete is a mixture of

- A) Cement, sand, coarse aggregate and water
- B) Cement and sand only
- C) Lime and sand
- D) Clay and gravel

169. The main binding material in concrete is

- A) Sand
- B) Cement
- C) Aggregate
- D) Lime

170. The workability of concrete is determined by

- A) Compression test
- B) Slump test
- C) Tensile test
- D) Impact test

171. Which test measures the compressive strength of concrete?

- A) Cube test
- B) Slump test
- C) Flow table test
- D) Soundness test

172. Curing of concrete is essential to

- A) Increase evaporation
- B) Improve strength and durability
- C) Reduce cement content
- D) Change colour

173. The standard curing period for OPC concrete is

- A) 3 days
- B) 7 days
- C) 14 days
- D) 28 days

174. Ready Mix Concrete (RMC) is produced in

- A) Construction site
- B) Batching plant
- C) Laboratory only
- D) Brick kiln

175. One advantage of Ready Mix Concrete is

- A) Lower quality control
- B) Uniform quality
- C) Higher water absorption
- D) Lower strength

176. Honeycombing in concrete occurs due to

- A) Poor compaction
- B) Excess curing
- C) Good workmanship
- D) Low cement content only

177. Segregation in concrete means

- A) Uniform mixing
- B) Separation of aggregates from mortar
- C) Increase in strength
- D) Better workability

178. Bleeding in concrete refers to

- A) Escape of excess water to the surface
- B) Cracking
- C) Colour change
- D) Cement hydration

179. Which factor greatly influences the durability of concrete?

- A) Water-cement ratio
- B) Colour of cement
- C) Shape of mould
- D) Temperature of aggregate only

180. Which of the following is a Non-Destructive Test (NDT)?

- A) Cube compression test
- B) Rebound Hammer Test
- C) Split tensile test
- D) Flexural test

181. Ultrasonic Pulse Velocity Test is used to

- A) Determine concrete quality
- B) Measure slump
- C) Measure cement fineness
- D) Determine aggregate size

182. NDT is mainly used to

- A) Damage structures
- B) Assess concrete without causing damage
- C) Increase cement content
- D) Measure brick strength

183. Damp-proof course (DPC) is provided to prevent

- A) Fire
- B) Moisture penetration
- C) Termite attack
- D) Corrosion

184. A commonly used damp-proofing material is

- A) Bitumen
- B) Clay
- C) Sand
- D) Lime

185. Waterproofing is mainly carried out to

- A) Increase weight
- B) Prevent water leakage
- C) Reduce strength
- D) Increase temperature

186. Which material is commonly used for waterproofing terraces?

- A) Bituminous membrane
- B) River sand
- C) Lime mortar
- D) Gypsum

187. Termite proofing is mainly required for

- A) Steel structures
- B) Timber structures
- C) RCC slabs
- D) Stone masonry

188. Which chemical is commonly used for termite control?

- A) Chlorpyrifos
- B) Gypsum
- C) Cement
- D) Fly ash

189. Glass wool is mainly used for

- A) Waterproofing
- B) Thermal insulation
- C) Reinforcement
- D) Flooring

190. Rock wool is mainly used for

- A) Heat insulation
- B) Brick making
- C) Reinforcement
- D) Painting

191. Thermocol is commonly used as

- A) Structural material
- B) Thermal insulation material
- C) Reinforcement
- D) Mortar

192. Which material is commonly used for sound insulation?

- A) Glass wool
- B) Cement
- C) Brick
- D) Granite

193. Acoustic boards are mainly used in

- A) Auditoriums
- B) Foundations
- C) Bridges
- D) Retaining walls

194. Fire-resistant coatings are applied to

- A) Improve appearance only
- B) Increase fire resistance
- C) Reduce strength
- D) Increase weight

195. The main objective of protective coatings is to

- A) Increase corrosion resistance
- B) Increase moisture content
- C) Reduce durability
- D) Increase shrinkage

196. Which timber product is manufactured by bonding wood particles with resin?

- A) Veneer
- B) Particle board
- C) Plywood
- D) Timber plank

197. Which timber product is manufactured from wood fibres?

- A) MDF
- B) Plywood
- C) Veneer
- D) Bamboo board

198. Which factor mainly affects the workability of concrete?

- A) Water content
- B) Colour of cement
- C) Shape of bricks
- D) Timber quality

199. The main purpose of curing is to

- A) Prevent hydration
- B) Maintain moisture for hydration
- C) Increase evaporation
- D) Reduce strength

200. Which of the following improves the durability of concrete?

- A) Proper mix design, compaction, and curing
- B) Excess water
- C) Poor compaction
- D) Early removal of formwork

PART-A
UNIT-V

201. Which metal is most commonly used as reinforcement in RCC structures?

- A) Aluminium
- B) Copper
- C) Steel
- D) Zinc

202. Mild steel is mainly used because of its

- A) Brittleness
- B) High ductility
- C) Low strength
- D) High corrosion

203. Stainless steel is highly resistant to

- A) Fire
- B) Corrosion
- C) Heat
- D) Electricity

204. Galvanized iron (GI) sheets are coated with

- A) Copper
- B) Tin
- C) Zinc
- D) Aluminium

205. The main purpose of galvanizing steel is to

- A) Increase weight
- B) Prevent corrosion
- C) Improve conductivity
- D) Increase brittleness

206. Structural steel sections are commonly used in

- A) Building frames
- B) Flooring tiles

- C) Plastering
- D) Brick masonry

207. Which structural steel section has the shape of the English letter 'T'?

- A) Channel section
- B) Angle section
- C) I-section
- D) Tee section

208. Angle sections are commonly used for

- A) Trusses
- B) Plastering
- C) Flooring
- D) Painting

209. Steel is preferred in high-rise buildings because of its

- A) Low strength
- B) High strength-to-weight ratio
- C) High water absorption
- D) Brittleness

210. Aluminium is preferred in building construction because it is

- A) Heavy
- B) Corrosion resistant
- C) Brittle
- D) Expensive to maintain

211. Aluminium is commonly used for

- A) Window frames
- B) Brick masonry
- C) Foundations
- D) Cement production

212. Copper is mainly used for

- A) Electrical wiring
- B) Roofing tiles
- C) Aggregates
- D) Mortar

213. Brass is an alloy of

- A) Copper and Zinc
- B) Copper and Iron
- C) Copper and Tin
- D) Iron and Zinc

214. Bronze is an alloy of

- A) Copper and Zinc
- B) Copper and Tin
- C) Aluminium and Copper
- D) Iron and Carbon

215. PVC stands for

- A) Poly Vinyl Chloride
- B) Poly Vinyl Composite
- C) Plastic Vinyl Cement
- D) Poly Void Compound

216. PVC pipes are mainly used for

- A) Water supply and drainage
- B) Reinforcement
- C) Flooring
- D) Roofing

217. UPVC stands for

- A) Unplasticized Poly Vinyl Chloride
- B) Universal Plastic Vinyl Compound
- C) Ultra Polymer Vinyl Composite
- D) Uniform Poly Vinyl Cement

218. UPVC pipes are mainly used for

- A) Hot water supply
- B) Cold water supply
- C) Reinforcement
- D) Road construction

219. CPVC pipes are suitable for

- A) Hot water supply
- B) Electrical wiring
- C) Reinforcement
- D) Masonry

220. HDPE stands for

- A) High Density Polyethylene
- B) High Density Polymer Epoxy
- C) Heavy Duty Plastic Equipment
- D) High Durable Plastic Element

221. HDPE pipes are widely used for

- A) Water distribution
- B) Brick laying
- C) Plastering
- D) Roofing

222. Which plastic material is commonly used for water storage tanks?

- A) PVC
- B) Polyethylene
- C) Glass
- D) Clay

223. Plastic materials generally have

- A) High corrosion resistance
- B) High electrical conductivity
- C) High density
- D) High brittleness

224. Which property makes plastics suitable for electrical insulation?

- A) High conductivity
- B) Low electrical conductivity
- C) High density
- D) High thermal conductivity

225. FRP stands for

- A) Fibre Reinforced Plastic
- B) Fibre Reinforced Portland
- C) Flexible Reinforced Panel
- D) Fibre Reinforced Pipe

226. FRP is mainly used because of its

- A) High weight
- B) High corrosion resistance
- C) Low strength
- D) High water absorption

227. Composite materials are formed by

- A) Combining two or more materials
- B) Heating metals only
- C) Mixing cement and sand
- D) Burning clay

228. Which of the following is a composite material?

- A) FRP
- B) Steel
- C) Copper
- D) Aluminium

229. Fibre cement boards are mainly used for

- A) Partitions and cladding
- B) Reinforcement
- C) Foundations
- D) Concrete mixing

230. Fibre cement boards are manufactured using

- A) Cement and reinforcing fibres
- B) Clay only
- C) Lime only
- D) Sand only

231. Gypsum boards are commonly used for

- A) False ceilings
- B) Road construction
- C) Reinforcement
- D) Foundations

232. False ceilings are mainly provided to

- A) Increase dead load
- B) Improve thermal and acoustic insulation
- C) Increase wall thickness
- D) Reduce strength

233. ACP stands for

- A) Aluminium Composite Panel
- B) Aluminium Concrete Plate
- C) Advanced Composite Pipe
- D) Aluminium Cement Product

234. ACP panels are mainly used for

- A) Building facades
- B) Concrete mixing
- C) Brick making
- D) Road construction

235. Galvalume sheets are coated with

- A) Zinc only
- B) Aluminium and Zinc
- C) Copper
- D) Tin

236. Galvalume sheets are mainly used for

- A) Roofing
- B) Foundations
- C) Flooring
- D) Plastering

237. Which roofing material has excellent corrosion resistance?

- A) GI sheet
- B) Galvalume sheet
- C) Clay tile
- D) Cement tile

238. Which material is commonly used for modular partition systems?

- A) Gypsum board
- B) Granite
- C) Clay brick
- D) Sandstone

239. Sandwich panels are mainly used because they provide

- A) Thermal insulation
- B) High water absorption
- C) High density
- D) Low strength

240. Composite materials generally possess

- A) Improved mechanical properties
- B) Low durability
- C) High corrosion
- D) Low strength

241. Which of the following is an advantage of steel?

- A) High tensile strength
- B) High water absorption
- C) Low durability
- D) Poor weldability

242. Which material is commonly used for rainwater downpipes?

- A) UPVC
- B) Timber
- C) Brick
- D) Granite

243. Aluminium doors and windows are preferred because they are

- A) Heavy
- B) Lightweight and corrosion resistant
- C) Highly combustible
- D) Brittle

244. The major disadvantage of plastics is

- A) Corrosion
- B) Low heat resistance
- C) High density
- D) Poor appearance

245. Which material is most suitable for chemical storage tanks?

- A) HDPE
- B) Brick
- C) Wood
- D) Clay tile

246. Fibre Reinforced Plastic is widely used because it is

- A) Lightweight and strong
- B) Heavy and brittle
- C) Highly conductive
- D) Water soluble

247. ACP panels improve

- A) Building aesthetics
- B) Water absorption
- C) Concrete strength
- D) Brick density

248. Which of the following is a sustainable construction material?

- A) Fibre cement board
- B) Plastic waste
- C) Clay only
- D) Coal tar

249. Which material provides both thermal and sound insulation in buildings?

- A) Sandwich panel
- B) Steel plate
- C) Aluminium sheet
- D) GI pipe

250. Modern composite materials are preferred because they offer

- A) High strength, durability, and corrosion resistance
- B) High water absorption
- C) Low strength and high weight
- D) Poor weather resistance

PART-B

UNIT I

1. Explain the history and development of building materials. Discuss the importance of sustainable and eco-friendly construction materials in modern construction?
 2. Explain the various engineering properties of construction materials?
 3. Explain Classification of aggregates?
 4. Explain the requirements of water used for concrete production. Discuss the effects of impurities such as chlorides, sulphates, and organic matter on concrete?
 5. Describe the characteristics of sustainable building materials and explain their advantages in green building construction with suitable examples?
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UNIT II

6. Discuss the properties, tests, and uses of good quality bricks?
 7. Describe the properties, advantages, disadvantages, and applications of fly ash bricks?
 8. Explain the properties, advantages, and applications of hollow concrete blocks
 9. Discuss the classification, properties and applications of ceramic products?
 10. Explain the properties, types and applications of glass?
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UNIT III

11. Discuss the composition, properties and applications of cement?
 12. Describe the properties, applications of Silica Fume and natural pozzolanas?
 13. Describe the properties, applications of supplementary cementitious materials such as Fly Ash and GGBS?
 14. Explain the properties, classification and applications of lime?
 15. Explain the properties and Engineering applications of bituminous materials used in highway and waterproofing works?
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UNIT IV

16. Discuss the various methods of seasoning and uses of timber in construction?
 17. Describe the properties and applications of mortar?
 18. Explain the ingredients, properties, production of concrete?
 19. Explain the Non-Destructive Testing (NDT) methods used to assess the quality of concrete.
 20. Explain the methods of damp-proofing and waterproofing?
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UNIT V

21. Explain the properties, advantages, disadvantages and applications of structural steel in building construction?
22. Describe the properties advantages, disadvantages, and applications of plastic materials?
23. Explain the properties advantages, and applications of Fibre Reinforced Plastic (FRP) and other composite materials used in construction?
24. Describe the properties, advantages and applications of gypsum boards and Aluminium Composite Panels (ACP)?
25. Explain the properties, advantages, and applications of modern composite building materials?
26. Discuss their role in sustainable and energy-efficient construction?

PART-C
UNIT I

1. Define sustainable building materials?
 2. What is meant by density of a construction material?
 3. Define specific gravity.
 4. What is porosity? State its importance.
 5. Define permeability.
 6. What is thermal conductivity?
 7. Define fire resistance of a building material.
 8. What is meant by durability?
 9. Classify aggregates based on size.
 10. State any two requirements of water used for concrete.
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UNIT II

11. Define brick earth.
 12. List any four constituents of good brick earth.
 13. What is efflorescence in bricks?
 14. State any two qualities of a good brick.
 15. What are fly ash bricks?
 16. Define AAC block.
 17. What is a hollow concrete block?
 18. State any two uses of ceramic tiles.
 19. What is tempered glass?
 20. Mention any two applications of laminated glass.
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UNIT III

21. Define Ordinary Portland Cement (OPC).
 22. What is Portland Pozzolana Cement (PPC)?
 23. What is the function of gypsum in cement?
 24. Define hydration of cement.
 25. What is fly ash?
 26. Expand the term GGBS.
 27. What is silica fume?
 28. Define quicklime.
 29. What is slaked lime?
 30. State any two uses of bitumen.
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UNIT IV

31. Define seasoning of timber.
32. What is timber preservation?
33. What is plywood?
34. Define mortar.
35. What is cement mortar?
36. Define Ready Mix Concrete (RMC).
37. What is curing of concrete?
38. What is honeycombing in concrete?
39. Define damp-proofing.
40. What is waterproofing?

UNIT V

41. Define galvanization.
 42. What is stainless steel?
 43. Expand the term PVC.
 44. Expand the term UPVC.
 45. What is HDPE?
 46. Define Fibre Reinforced Plastic (FRP).
 47. What is a composite material?
 48. What is a gypsum board?
 49. Expand the term ACP.
 50. State any two advantages of composite materials.
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