

Set Code : **T2**

Booklet Code : **A**

116. Button test is used to determine

- |                |                          |
|----------------|--------------------------|
| (1) MOR        | (2) Compressive strength |
| (3) Fusibility | (4) Porosity             |

117. Monoporossa is a

- |                             |                             |
|-----------------------------|-----------------------------|
| (1) Single fired floor tile | (2) Double fired floor tile |
| (3) Single fired wall tile  | (4) Double fired wall tile  |

118. Glass content of porcelain bodies is in the range of

- |            |            |
|------------|------------|
| (1) 20-40% | (2) 50-80% |
| (3) 80-90% | (4) 10-20% |

119. Floor tile is a class of

- |                    |                    |
|--------------------|--------------------|
| (1) Earthen ware   | (2) Stone ware     |
| (3) Hard Porcelain | (4) Soft Porcelain |

120. The addition of which Oxide in glaze composition creates a matt surface?

- |         |             |             |         |
|---------|-------------|-------------|---------|
| (1) ZnO | (2) $ZrO_2$ | (3) $SnO_2$ | (4) PbO |
|---------|-------------|-------------|---------|

121. Stoneware is a

- (1) Crude salt glazed Porcelain made from cheaper grade raw material
- (2) Thoroughly vitrified translucent ware with hard glaze
- (3) Porous semi vitreous ware with soft glaze
- (4) Vitrified translucent ware with soft glaze

122. Soft porcelain is fired below

- |            |            |            |            |
|------------|------------|------------|------------|
| (1) 1000°C | (2) 1250°C | (3) 1100°C | (4) 1350°C |
|------------|------------|------------|------------|

123. Filter press is mainly used in the manufacture of
- (1) Ceramic Insulator Manufacture
  - (2) Cement Manufacture
  - (3) Glass Manufacture
  - (4) Refractory Manufacture
124. Which of the following is the dunting of whiteware bodies?
- (1) Deformation after firing
  - (2) Cracking due to thermally induced stress
  - (3) Rolling out of glaze after firing
  - (4) None of the above
125. While making powder for the manufacture of ceramic tiles by spray drying process, which of the following is used as deflocculant for slip preparation?
- (1) Sodium Silicate
  - (2) Sodium Tannate
  - (3) Tri-Sodium Phosphate
  - (4) All of the above
126. Which of the following is an advantage for Lead compounds in Glaze:
- (1) It gives higher brilliance due to higher refractive index
  - (2) It lowers the coefficient of expansion as compared to alkalies
  - (3) It lowers the modulus of elasticity
  - (4) All of the above
127. Consistometer is used
- (1) To determine specific gravity of slip
  - (2) To determine viscosity of slip
  - (3) To determine flow of slip per minute
  - (4) None of the above

128. The kiln furniture to fire HT Porcelain insulators is made of  
(1) Mullite (2) Alumina-SiC  
(3) Clay bonded SiC (4) Cordierite
129. Which of the following is a glaze defect  
(1) Hanging in higher altitude furnace vertically  
(2) Laying down on a longer furnace horizontally  
(3) In a normal chamber furnace by a burner  
(4) None of the above
130. For coloured glazes, which of the following factor affect the color:  
(1) Colouring Agent (2) Kiln Atmosphere  
(3) Firing temperature (4) All the above
131. In order to keep the glaze in suspension a small portion ranging from 4 to 12% which is added to the ball mill  
(1) Borax (2)  $\text{CaCO}_3$   
(3) Alum (4) Clay
132. Of the following, which is not used as a raw material in Engobe?  
(1) China Clay (2) Quartz  
(3) Rutile (4) Feldspar
133. Percentage of Silica in a Silica brick is  
(1) 85-90% (2) 90-92% (3) 93-98% (4) 80-85%
134. Maximum temperature attainable for continuous heating for SiC heating element is  
(1)  $1200^\circ\text{C}$  (2)  $1450^\circ\text{C}$  (3)  $1600^\circ\text{C}$  (4)  $1700^\circ\text{C}$

135. The Aluminous Fire brick contains  
(1) 30-35% of  $\text{Al}_2\text{O}_3$  (2) 38-45% of  $\text{Al}_2\text{O}_3$   
(3) 45-50% of  $\text{Al}_2\text{O}_3$  (4) 50-60% of  $\text{Al}_2\text{O}_3$
136. Melting point of Corundum is  
(1)  $1723^\circ\text{C}$  (2)  $2050^\circ\text{C}$  (3)  $2300^\circ\text{C}$  (4)  $1810^\circ\text{C}$
137. Silica bricks show good thermal shock resistance above  
(1)  $600^\circ\text{C}$  (2)  $800^\circ\text{C}$  (3)  $400^\circ\text{C}$  (4)  $900^\circ\text{C}$
138. The breaking or cracking of refractory brick in service, to such an extent that pieces are separated, leaving new surfaces of the bricks exposed. This definition applies to  
(1) Erosion (2) Abrasion (3) Corrosion (4) Spalling
139. The GROG is a  
(1) Pre-Calcined raw material (2) Rejected raw material  
(3) Rejected alumina brick (4) Rejected Magnesite brick
140. A course brick having an inclined face from which an arc is sprung. This definition applies to  
(1) Key brick (2) Soldier course  
(3) Skew Brick (4) Skull
141. Which of the following Refractory Oxides volatilizes in presence of water?  
(1)  $\text{BaO}$  (2)  $\text{BeO}$  (3)  $\text{Cr}_2\text{O}_3$  (4)  $\text{ThO}_2$
142. For dry ramming masses for lining of Induction Furnaces, the bonding agent is  
(1) Ceramic bonding (2) Plastic bonding  
(3) Both Ceramic and Plastic bonding (4) None of the above

Set Code : **T2**

Booklet Code : **A**

143. A good quality Mullite brick should contain, Mullite on an average  
(1) 85% (2) 80% (3) 60% (4) 70%
144. Plumbago crucible is  
(1) Lead crucible (2) Alumina crucible  
(3) Silicon Carbide crucible (4) Graphite crucible
145. Which of the following is not a neutral refractory?  
(1) Chrome refractory (2) Carbon refractory  
(3) Silicon carbide refractory (4) Zircon refractory
146. Which type of refractory do you recommend for Refractory lining of 'Coke oven'?  
(1) 55% fire clay bricks (2) Magnesite bricks  
(3) Silica Bricks (4) Carbon blocks
147. Which one of the following do you use as a binder (2%) in Silica brick manufacture  
(1) Titania (2) Zirconia  
(3) Lime (4) Magnesite
148. Blast furnace hearth is made of  
(1) Fire Clay bricks (40% alumina) (2) Carbon bricks  
(3) Zircon bricks (4) Vermiculite bricks
149. Dead Burning of Magnesite is achieved at (°C) temperature  
(1) 1200-1350 (2) 800-950 (3) 1600-1750 (4) 1300-1450
150. A bridge wall is observed in  
(1) Blast furnace (2) Glass Tank furnace  
(3) Annealing Furnace (4) Reheating furnace

151. Which of the following is not a common type of De-vitrification stone?

- |                   |                  |
|-------------------|------------------|
| (1) Tridymite     | (2) Quartz       |
| (3) Cristoballite | (4) Wallastonite |

152. Chalcogenide glasses are used as:

- |                            |                             |
|----------------------------|-----------------------------|
| (1) Radiation shield glass | (2) I.R. Transmitting Glass |
| (3) Photo chromatic Glass  | (4) Laser Glass             |

153. Which of the following is not used in photosensitive glasses?

- |        |        |        |        |
|--------|--------|--------|--------|
| (1) Cu | (2) Pb | (3) Ag | (4) Au |
|--------|--------|--------|--------|

154. Which of the following oxide is not a glass former?

- |              |             |             |               |
|--------------|-------------|-------------|---------------|
| (1) $B_2O_3$ | (2) $SiO_2$ | (3) $GeO_2$ | (4) $Cr_2O_3$ |
|--------------|-------------|-------------|---------------|

155. Which of the following is a nucleating agent in a Glass system?

- |             |             |             |                 |
|-------------|-------------|-------------|-----------------|
| (1) $TiO_2$ | (2) $CaF_2$ | (3) $ZrO_2$ | (4) All of them |
|-------------|-------------|-------------|-----------------|

156. Pyrex Glass contain

- |                    |                     |
|--------------------|---------------------|
| (1) Boron Trioxide | (2) Aluminium oxide |
| (3) Lead oxide     | (4) Zinc oxide      |

157. Gold-Ruby and Copper-Ruby glasses are

- |                             |                             |
|-----------------------------|-----------------------------|
| (1) Colloidal color glasses | (2) Photo sensitive Glasses |
| (3) Photochromic Glasses    | (4) None of these           |

158. Which of the following system is called Crystal Glass?

- |                      |                       |
|----------------------|-----------------------|
| (1) $K_2O-PbO-SiO_2$ | (2) $Na_2O-PbO-SiO_2$ |
| (3) $K_2O-BaO-SiO_2$ | (4) $Na_2O-CaO-SiO_2$ |

159. Optical Glass containing no Lead oxide is called  
(1) Flint Glass (2) Opal Glass  
(3) Crown Glass (4) Crystal Glass
160. To remove green tint in the molten glass is due to the presence of  
(1)  $\text{MnO}_2$  (2) Chromic Oxide  
(3) Ferric Oxide (4)  $\text{CoO}$
161. A criteria for Glass formation is  
(1) A low nucleation rate  
(2) High Viscosity at or near the melting point  
(3) The absence of nucleating heterogeneities that can act as nucleating agents  
(4) All of the above
162. Which of the following is not a refining agent?  
(1)  $\text{As}_2\text{O}_3$  (2)  $\text{Sb}_2\text{O}_3$  (3)  $\text{NaNO}_3$  (4)  $\text{TiO}_2$
163. Which of the following do you use to impart yellow color in Glass?  
(1)  $\text{CdS}$  (2)  $\text{FeS}$  (3)  $\text{CuS}$  (4)  $\text{ZnS}$
164. Which glass in the list below given is not made by pressing?  
(1) Dishes (2) Tumblers (3) Lamp shell (4) T.V. Picture tube
165. The E-Glass, S-Glass and Z-Glass are  
(1) Fibre Glass (2) Optical Glass (3) Sheet Glass (4) Toughened Glass
166. The average temperature that is maintained in a Glass Tank Furnace is  
(1)  $1500-1550^\circ\text{C}$  (2)  $1400-1450^\circ\text{C}$  (3)  $1300-1350^\circ\text{C}$  (4)  $1600-1650^\circ\text{C}$

Set Code : **T2**

Booklet Code : **A**

167. Which of the following is not used in refining of Glass?

- |                             |                              |
|-----------------------------|------------------------------|
| (1) $\text{KNO}_3$          | (2) $\text{Na}_2\text{SO}_4$ |
| (3) $\text{As}_2\text{O}_3$ | (4) $\text{Bi}_2\text{O}_3$  |

168. Which of the following is used to control the setting of the cement?

- |                     |            |
|---------------------|------------|
| (1) Lime            | (2) Gypsum |
| (3) Sodium Chloride | (4) Silica |

169. The soundness of cement is measured by

- |                         |                       |
|-------------------------|-----------------------|
| (1) Vicat Apparatus     | (2) Blain's apparatus |
| (3) Autoclave expansion | (4) None of these     |

170. Which of the following phase occurs in maximum amount in Portland cement?

- |                          |                          |                          |                           |
|--------------------------|--------------------------|--------------------------|---------------------------|
| (1) $\text{C}_3\text{S}$ | (2) $\text{C}_2\text{S}$ | (3) $\text{C}_3\text{A}$ | (4) $\text{C}_4\text{AF}$ |
|--------------------------|--------------------------|--------------------------|---------------------------|

171. Which of the following is Pozzolona?

- |                   |                      |
|-------------------|----------------------|
| (1) Calcined Clay | (2) Rice Husk        |
| (3) Fly Ash       | (4) All of the above |

172. What is the % of CaO in Portland cement?

- |            |            |            |            |
|------------|------------|------------|------------|
| (1) 40-45% | (2) 60-65% | (3) 50-55% | (4) 70-75% |
|------------|------------|------------|------------|

173. How much quantity of Gypsum is added to the clinker during grinding as a set additive as percentage of clinker?

- |            |          |          |            |
|------------|----------|----------|------------|
| (1) 10-12% | (2) 4-6% | (3) 1-2% | (4) 15-20% |
|------------|----------|----------|------------|

174. What is the percent of water of consistency of Portland cement?

- |         |         |         |         |
|---------|---------|---------|---------|
| (1) 40% | (2) 44% | (3) 30% | (4) 34% |
|---------|---------|---------|---------|

175. Which of the following phases is the cause for Flash set of cement?  
(1)  $C_3S$                       (2)  $C_2S$                       (3)  $C_3A$                       (4)  $C_4AF$
176. Major phase in high Alumina cement is  
(1) Calcium Aluminate                      (2) Tri Calcium Aluminate  
(3) Tetra Calcium Alumino Ferrite                      (4) None of these
177. Which Electrical ceramics has a high coefficient of thermal expansion?  
(1) Zircon Porcelain                      (2) Cordierite  
(3) Low Loss Steatite                      (4) Magnesium Titanate
178. The Fullerene can be used as  
(1) Semi conductor                      (2) Bio-Ceramics  
(3) Super conductor                      (4) Optical ceramics
179. Where is availability of Fullerene discovered in A.P.?  
(1) Kadapa Dist                      (2) Mahaboobnagar Dist  
(3) Nellore Dist                      (4) Prakasam Dist
180. Which of the following material can be used as a Varistor?  
(1)  $Si_3N_4$                       (2)  $SiC$                       (3)  $BN$                       (4)  $TiC$
181. The cubic Zircon has  
(1) Flourite structure                      (2) Perovskite structure  
(3) Wurtzite structure                      (4) Ilmenite structure
182. Which of the following carbide has the highest melting point?  
(1)  $WC$                       (2)  $ZrC$                       (3)  $HfC$                       (4)  $TiC$

183. Which of the following is not a Low Loss ceramic:

- (1) Steatite      (2) Forsterite      (3) Wallastonite      (4) Rutile

184. Which of the following is not a type of ceramic - Metal seal:

- (1) Compression seal      (2) Butt seal  
(3) Pin seal      (4) Rod seal

185. Which of the following material is known as ceramic steel?

- (1)  $ZrO_2$       (2)  $Al_2O_3$   
(3)  $MgO$       (4)  $Cr_2O_3$

186. Which of the following Ferrite is a permanent magnet?

- (1) Ni-Zn Ferrite      (2) Mg-Mn Ferrite  
(3) Barium Hexa Ferrite      (4) Co-Zn Ferrite

187. The Pyrometric cones actually does

- (1) Pyrometric means measurement of heat in the kiln  
(2) do really measure the amount of heat  
(3) measure how much heat-energy the ceramic materials in the kiln have absorbed  
(4) none is right

188. Feldspar is used extensively in enamels as:

- (1) An Opacifier      (2) A colorant  
(3) A raw material      (4) An agent which increases refractive index

189. The ground coat enamel for steel are melted at a temperature ranges of

- (1)  $500-550^\circ C$       (2)  $700-750^\circ C$   
(3)  $900-950^\circ C$       (4)  $1200-1250^\circ C$

190. The adhesion of fired enamel to metal base is tested by
- (1) Scratch test
  - (2) Tensile test
  - (3) Impact test
  - (4) Compression test
191. The enameling iron is
- (1) Low carbon steel
  - (2) Cold rolled steel
  - (3) Both (a and b)
  - (4) None of ( a and b)
192. Which of the following is used as an Opacifier for Silicate Glass Media?
- (1)  $\text{SnO}_2$
  - (2)  $\text{ZrSiO}_4$
  - (3)  $\text{TiO}_2$
  - (4) All of these
193. Acid resistance of enamel is tested with
- (1) Hydrochloric acid
  - (2) Citric acid
  - (3) Sulfuric acid
  - (4) Tartaric acid
194. Which is not adopted to improve the chemical resistance of enamel:
- (1)  $\text{SiO}_2$  content is increased
  - (2)  $\text{TiO}_2$  content is decreased
  - (3)  $\text{ZrO}_2$  is introduced
  - (4)  $\text{B}_2\text{O}_3$  content is increased
195. The pouring of molten enamel in to water to disintegrate in to smaller particles is known as
- (1) Quenching
  - (2) Fritting
  - (3) Granulation
  - (4) None of these
196. Cobalt Oxide is used in ground coat of enamel, because
- (1) gives Blue color
  - (2) adherence to metal is excellent
  - (3) a and b are wrong
  - (4) a and b are right

Set Code : **T2**

Booklet Code : **A**

197. The calories or thermal units contained in one unit of a substance and released when the substance is burnt is

- |                           |                     |
|---------------------------|---------------------|
| (1) Thermal unit          | (2) Calorific Value |
| (3) Gross calorific value | (4) None of these   |

198. Which pyrometer do you use to measure a temperature of 1200°C

- |                       |                         |
|-----------------------|-------------------------|
| (1) Optical Pyrometer | (2) Radiation Pyrometer |
| (3) Thermo couple     | (4) Buller's rings      |

199. Where do we have largest deposits of lignite in India?

- |                                |                        |
|--------------------------------|------------------------|
| (1) Ranigunj, Jharkhand        | (2) Neyveli, Tamilnadu |
| (3) Ramagundam, Andhra Pradesh | (4) None is right      |

200. Which kiln do you use to fire floor tiles in fast firing technology?

- |                  |                   |
|------------------|-------------------|
| (1) Tank furnace | (2) Roller Kiln   |
| (3) Rotary Kiln  | (4) Blast furnace |