

# National Testing Agency

<b>Question Paper Name :</b>	Repair and Maintenance of Buildings 29th August 2021 Shift 1
<b>Subject Name :</b>	Repair and Maintenance of Buildings
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## Repair and Maintenance of Buildings

<b>Group Number :</b>	1
<b>Group Id :</b>	603489281
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	120
<b>Show Attended Group? :</b>	No
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<b>Break time :</b>	0
<b>Group Marks :</b>	100
<b>Is this Group for Examiner? :</b>	No

## Repair and Maintenance of Buildings-1

<b>Section Id :</b>	603489411
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory

<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	100
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	603489740
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 60348919668 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The defect(s) in sanitary fittings which may occur during manufacturing stage is/are

1. Blister
2. Bubble
3. Crazing
4. All of these

**Options :**

60348973985. 1

60348973986. 2

60348973987. 3

60348973988. 4

**Question Number : 2 Question Id : 60348919669 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Defect in sanitary fittings described as "*distortion of original shape during manufacturing process*" is known as

1. Wavy finish
2. Warpage
3. Crazing
4. Speck

**Options :**

60348973989. 1

60348973990. 2

60348973991. 3

60348973992. 4

**Question Number : 3 Question Id : 60348919670 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

If glaze contains Lead, the Lead content shall not exceed ----- of soluble Lead.

1. 1%

2. 5%

3. 8%

4. 12%

**Options :**

60348973993. 1

60348973994. 2

60348973995. 3

60348973996. 4

**Question Number : 4 Question Id : 60348919671 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The minimum depth of water seal required in a water closet is

1. 10 mm

2. 25 mm

3. 50 mm

4. 75 mm

**Options :**

60348973997. 1

60348973998. 2

60348973999. 3

60348974000. 4

**Question Number : 5 Question Id : 60348919672 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The chain of a flushing cistern shall be capable of sustaining ----- dead load without any apparent deformation.

- 1. 5 kg
- 2. 15 kg
- 3. 30 kg
- 4. 50 kg

**Options :**

60348974001. 1

60348974002. 2

60348974003. 3

60348974004. 4

**Question Number : 6 Question Id : 60348919673 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

In a Bowl urinal a minimum number of ---- holes shall be equally distributed in the box of rim to ensure satisfactory flushing.

- 1. 4
- 2. 8
- 3. 12
- 4. 16

**Options :**

60348974005. 1

60348974006. 2

60348974007. 3

60348974008. 4

**Question Number : 7 Question Id : 60348919674 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

At which stage of construction programme defects may occur in a building?

1. Planning
2. Designing
3. Detailing and execution
4. All of these

**Options :**

60348974009. 1

60348974010. 2

60348974011. 3

60348974012. 4

**Question Number : 8 Question Id : 60348919675 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which wood can be used for structural purposes?

1. Hard wood
2. Soft wood
3. Both hard and soft wood
4. None of these

**Options :**

60348974013. 1

60348974014. 2

60348974015. 3

60348974016. 4

**Question Number : 9 Question Id : 60348919676 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Most commonly used natural wood in India is/are

1. Teak
2. Rosewood
3. Cedar
4. All of these

**Options :**

60348974017. 1

60348974018. 2

60348974019. 3

60348974020. 4

**Question Number : 10 Question Id : 60348919677 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Ultrasonic Rot Locator is used to detect the defect in

1. Steel
2. Timber
3. Plastics
4. Glass

**Options :**

60348974021. 1

60348974022. 2

60348974023. 3

60348974024. 4

**Question Number : 11 Question Id : 60348919678 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Properties of various type of steel are governed by the content of ----- in steel.

1. Carbon
2. Hydrogen
3. Calcium
4. Sodium

**Options :**

60348974025. 1

60348974026. 2

60348974027. 3

60348974028. 4

**Question Number : 12 Question Id : 60348919679 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Method(s)/process(es) employed to combat corrosion include

1. Galvanization
2. Nickel plating
3. Chromium plating
4. All of these

**Options :**

60348974029. 1

60348974030. 2

60348974031. 3

60348974032. 4

**Question Number : 13 Question Id : 60348919680 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Fresh concrete is highly ----- with a pH between 12 and 13.

1. Acidic
2. Alkaline
3. Neutral
4. None of these

**Options :**

60348974033. 1

60348974034. 2

60348974035. 3

60348974036. 4

**Question Number : 14 Question Id : 60348919681 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Ill effects of honey-combed concrete may be

1. Loss of strength of concrete
2. Leakage in roofs and tanks
3. Corrosion of reinforcing steel bars
4. All of these

**Options :**

60348974037. 1

60348974038. 2

60348974039. 3

60348974040. 4

**Question Number : 15 Question Id : 60348919682 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**



Fine superficial cracking of concrete is known as

1. Grazing
2. Shredding
3. Crazing
4. Dredging

**Options :**

60348974041. 1

60348974042. 2

60348974043. 3

60348974044. 4

**Question Number : 16 Question Id : 60348919683 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Windsor probe is used for estimation of ----- strength of concrete.

1. Compressive
2. Tensile
3. Shear
4. All of these

**Options :**

60348974045. 1

60348974046. 2

60348974047. 3

60348974048. 4

**Question Number : 17 Question Id : 60348919684 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

To protect concrete structures against Chloride attack and corrosion, impregnation of concrete structures involves spraying concrete surface with a ----- material.

1. Hygroscopic
2. Hydrophobic
3. Both Hygroscopic and Hydrophobic
4. None of these

**Options :**

60348974049. 1

60348974050. 2

60348974051. 3

60348974052. 4

**Question Number : 18 Question Id : 60348919685 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Electrical resistance method is a non destructive method which is used to measure ----- of concrete.

1. Moisture content
2. Compressive strength
3. Tensile Strength
4. Ductility

**Options :**

60348974053. 1

60348974054. 2

60348974055. 3

60348974056. 4

**Question Number : 19 Question Id : 60348919686 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Round timber indicates the timber which is

1. contained in a living tree
2. obtained after felling of tree
3. sawn and cut and into suitable commercial sizes
4. All of these

**Options :**

60348974057. 1

60348974058. 2

60348974059. 3

60348974060. 4

**Question Number : 20 Question Id : 60348919687 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Deciduous trees yield ----- wood.

1. Soft
2. Hard
3. Fibrous
4. All of these

**Options :**

60348974061. 1

60348974062. 2

60348974063. 3

60348974064. 4

**Question Number : 21 Question Id : 60348919688 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Bamboo is an example of ----- tree.

1. Exogenous
2. Endogenous
3. Both Exogenous and Endogenous
4. None of these

**Options :**

60348974065. 1

60348974066. 2

60348974067. 3

60348974068. 4

**Question Number : 22 Question Id : 60348919689 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Inner-most central portion or core of the tree is called

1. Pith
2. Heart wood
3. Sap wood
4. Cambium layer

**Options :**

60348974069. 1

60348974070. 2

60348974071. 3

60348974072. 4

**Question Number : 23 Question Id : 60348919690 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

In timber, chip mark is an example of defects due to

1. Conversion
2. Fungi
3. Insects
4. Seasoning

**Options :**

60348974073. 1

60348974074. 2

60348974075. 3

60348974076. 4

**Question Number : 24 Question Id : 60348919691 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Cast steel is a ----- steel.

1. High carbon
2. Low carbon
3. Medium carbon
4. No carbon

**Options :**

60348974077. 1

60348974078. 2

60348974079. 3

60348974080. 4

**Question Number : 25 Question Id : 60348919692 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The tool used to locate reinforcing steel embedded in concrete is

1. Steel meter
2. Depth meter
3. Locator
4. Cover meter

**Options :**

60348974081. 1

60348974082. 2

60348974083. 3

60348974084. 4

**Question Number : 26 Question Id : 60348919693 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Carbonation occurs when concrete reacts with ----- from the air or water.

1. Oxygen
2. Nitrogen
3. Chlorine
4. Carbon dioxide

**Options :**

60348974085. 1

60348974086. 2

60348974087. 3

60348974088. 4

**Question Number : 27 Question Id : 60348919694 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Stainless steel must have a minimum of ----- percent of chromium to give it freedom from corrosion.

1. 3 to 4
2. 7 to 8
3. 13 to 14
4. 23 to 24

**Options :**

60348974089. 1

60348974090. 2

60348974091. 3

60348974092. 4

**Question Number : 28 Question Id : 60348919695 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

----- is the key element in the wide range of stainless and heat resisting steels.

1. Chromium
2. Nickel
3. Carbon
4. Lead

**Options :**

60348974093. 1

60348974094. 2

60348974095. 3

60348974096. 4

**Question Number : 29 Question Id : 60348919696 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Chloride ion concentration in the concrete cover is measured by

1. Electrical resistance equipment
2. Chloride analysis
3. Delamination detectors
4. Cover meter

**Options :**

60348974097. 1

60348974098. 2

60348974099. 3

60348974100. 4

**Question Number : 30 Question Id : 60348919697 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

At about 600o C , the reduction in proof strength of steel will be about -----.

1. 10 %
2. 20 %
3. 30 %
4. 50 %

**Options :**

60348974101. 1

60348974102. 2

60348974103. 3

60348974104. 4

**Question Number : 31 Question Id : 60348919698 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**



Solignum paints are used for -----

1. painting the walls
2. painting the steel works in the building
3. preservation of timber
4. making the roof damp proof

**Options :**

60348974105. 1

60348974106. 2

60348974107. 3

60348974108. 4

**Question Number : 32 Question Id : 60348919699 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Dry Galvanizing is also known as

1. Sheradising
2. Quenching
3. Annealing
4. Delamination

**Options :**

60348974109. 1

60348974110. 2

60348974111. 3

60348974112. 4

**Question Number : 33 Question Id : 60348919700 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

ASCU was developed by

1. Forest Research Institute, Dehradun
2. I.I.T. Chennai
3. I.I.T. Mumbai
4. I.A.R.I. Pusa

**Options :**

60348974113. 1

60348974114. 2

60348974115. 3

60348974116. 4

**Question Number : 34 Question Id : 60348919701 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Coating of timber surface with hot coal tar with the help of brush is called

1. Painting
2. Charring
3. Tarring
4. Blackening

**Options :**

60348974117. 1

60348974118. 2

60348974119. 3

60348974120. 4

**Question Number : 35 Question Id : 60348919702 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

In Terne plating ----- is used.

1. Tin
2. Copper
3. Zinc
4. Alloy of lead and tin

**Options :**

60348974121. 1

60348974122. 2

60348974123. 3

60348974124. 4

**Question Number : 36 Question Id : 60348919703 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which material is used in threaded portion of GI pipes to make joints water tight?

1. White Lead
2. Mica
3. Mineral wool
4. Cork

**Options :**

60348974125. 1

60348974126. 2

60348974127. 3

60348974128. 4

**Question Number : 37 Question Id : 60348919704 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Choice of the type of pipe for a building's sanitary system depends on

1. Cost of pipe and fittings
2. Ease of installation
3. Availability
4. All of these

**Options :**

60348974129. 1

60348974130. 2

60348974131. 3

60348974132. 4

**Question Number : 38 Question Id : 60348919705 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Cleaning of clogged water supply pipes may be done by

1. Hammering the pipe
2. Using flexible sewer rod
3. Using Scrappers
4. Flushing the pipe with water flowing at high velocity

**Options :**

60348974133. 1

60348974134. 2

60348974135. 3

60348974136. 4

**Question Number : 39 Question Id : 60348919706 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

----- is generally referred to as " the Plumber's Friend"

1. Rubber force cup
2. Pipe tongs
3. Pipe wrench
4. Pipe vice

**Options :**

60348974137. 1

60348974138. 2

60348974139. 3

60348974140. 4

**Question Number : 40 Question Id : 60348919707 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Encrustation in metallic pipes is mainly caused by

1. Soft water
2. Hard water
3. Water flowing at high velocity
4. Water flowing at low velocity

**Options :**

60348974141. 1

60348974142. 2

60348974143. 3

60348974144. 4

**Question Number : 41 Question Id : 60348919708 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Chemical resistant flooring is generally provided in

1. Residential buildings
2. Office buildings
3. Recreational buildings
4. Laboratories

**Options :**

60348974145. 1

60348974146. 2

60348974147. 3

60348974148. 4

**Question Number : 42 Question Id : 60348919709 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which one is an example of cast-in situ type of floor finish?

1. Wooden floors
2. Acid proof tiles
3. Carpets
4. Terrazo

**Options :**

60348974149. 1

60348974150. 2

60348974151. 3

60348974152. 4

**Question Number : 43 Question Id : 60348919710 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which material should not be used for cleaning of Rubber flooring?

1. Soap
2. Water
3. Synthetic detergent derived from sulphonated hydrocarbons
4. Steel wool pad

**Options :**

60348974153. 1

60348974154. 2

60348974155. 3

60348974156. 4

**Question Number : 44 Question Id : 60348919711 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Lifting and arching of concrete floors may be caused by

1. Sulphate attack
2. Rise in water table
3. Poor compaction of concrete
4. Use of large size aggregate

**Options :**

60348974157. 1

60348974158. 2

60348974159. 3

60348974160. 4

**Question Number : 45 Question Id : 60348919712 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Vertical cracks in the masonry wall may be caused by

1. Poor quality of mortar
2. Large thickness of wall
3. Differential settlement of foundation
4. Large size of parapet wall

**Options :**

60348974161. 1

60348974162. 2

60348974163. 3

60348974164. 4

**Question Number : 46 Question Id : 60348919713 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Based on the source of defects, the defects in stone and brick masonry buildings may be classified into ----- major categories.

1. 4

2. 6

3. 8

4. 2

**Options :**

60348974165. 1

60348974166. 2

60348974167. 3

60348974168. 4

**Question Number : 47 Question Id : 60348919714 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**



Crack in plaster may be contributed by

1. Difference in thermal expansion of brick and the plaster
2. Use of very fine sand in the plaster
3. Lack of adequate cement content in the plaster
4. All of these

**Options :**

60348974169. 1

60348974170. 2

60348974171. 3

60348974172. 4

**Question Number : 48 Question Id : 60348919715 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

For quality stone masonry construction, the percentage water absorption of the stone should not generally exceed -----

1. 2%
2. 5%
3. 7.5%
4. 10%

**Options :**

60348974173. 1

60348974174. 2

60348974175. 3

60348974176. 4

**Question Number : 49 Question Id : 60348919716 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Causes of dampness in buildings may include

1. Condensation
2. Rain penetration
3. Built-in water
4. All of these

**Options :**

60348974177. 1

60348974178. 2

60348974179. 3

60348974180. 4

**Question Number : 50 Question Id : 60348919717 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Copings to parapets may be an effective intervention for -----

1. Preventing penetration of rain water through the wall
2. Increasing the aesthetic view of the building
3. Decreasing the cost of masonry
4. Discouraging the birds from sitting on the parapets

**Options :**

60348974181. 1

60348974182. 2

60348974183. 3

60348974184. 4