MADE EASY
Publications

BMC

Q.1 In terms of oxide composition the minimum percentage of ingradient in cement.
(a) Lime
(b) Magnesium oxide
(c) Alumina
(d) Silica

1. **(b)**

Q.2 In terms of oxide composition in a cement which of the following is not correct.
(a) Lime impart strength
(b) Excess silica increases setting time
(c) Alumina cause drying shrinkage
(d) Excess Iron oxide makes clinker hard

2. **(c)**

Q.3 Which of the following bouge's compound responsible of highest heat of hydration
(a) C_2S
(b) C_3S
(c) C_3A
(d) C_4AF

3. **(c)**

Q.4 A cement contain lesser _____ imparts better sulphur attack resistance.
(a) C_2S
(b) C_3S
(c) C_4AF
(d) C_3A

4. **(d)**

Q.5 Consider the following curve and choose correct option.
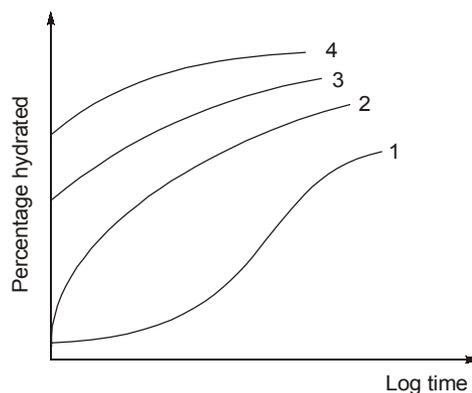
(a) 1- C_4AF 2-C_3A 3-C_2S 4-C_3S
(b) 1- C_2S 2-C_3A 3-C_3S 4-C_4AF
(c) 1- C_3S 2-C_4AF 3-C_2S 4-C_3A
(d) 1- C_2S 2-C_3S 3-C_3A 4-C_4AF

5. **(b)**

Q.6 Which of the following pair is not correct?

Property of cement	Test lappratus required
(a) Presence of free lime	Le-chattlier flask
(b) Fineness test	Nurse blain's test
(c) Initial setting time test	Vicat apparatus
(d) Presence of free lime of Mg	Autoclave test

6. (a)

Q.7 Which of the following cement requires lesser amount of Gypsum than OPC
(a) Rapid hardening cement
(b) High alumina cement
(c) Low heat cement
(d) Quick setting cement

7. (d)

Q.8 Which of the following cement impart impermeable and durable surface after hydration
(a) Rapid hardening cement
(b) Portland Pozzolonic cement
(c) Sulphate resisting cement
(d) All of the above

8. (b)

Q.9 Low heat cement
(a) Contains lesser C_3A and C_3S
(b) Contains higher C_2S
(c) Suitable for hydraulic structure
(d) All of the above

9. (d)

Q.10 High Alumina cement is a
(a) quick setting rapid hardening cement
(b) slow setting slow hardening cement
(c) slow setting rapid hardening cement
(d) quick setting slow hardening cement

10. (c)

Q.11 Which of the following additive required to make cement hydrophobic?
(a) $CaCl_2$ (b) $CaSO_4$
(c) Olice acid   (d) Surkhi

11. (c)

Q.12 Wet process of manufacturing of cement
(a) result in homogeneous initial mix
(b) less fuel consumption
(c) involve preheating of mixed ingredient
(d) Additive added during burning

12. **(a)**

Q.13 Increase in fineness of cement
(a) Increases specific surface area of cement
(b) Increases rate of hydration
(c) Increases rate of setting
(d) All of the above

13. **(d)**

Q.14 Approximate strength achieved by OPC53 in 7 days
(a) 35 N/mm^2 (b) 23 N/mm^2
(c) 44 N/mm^2 (d) 28 N/mm^2

14. **(a)**

Q.15 Find out the odd pair
Type of cement   Uses
(a) Sulphate resisting cement   Canal lining
(b) Rapid hardening cement   Cold weather construction
(c) Portland Pozzolonic cement   Marine structure
(d) Quick setting cement   Railway sleeper

15. **(d)**

Q.16 Which of the following lime is pure and suitable for white wash
(a) Fat lime (b) Hydraulic lime
(c) Poor lime (d) All of the above

16. **(a)**

Q.17 Which impurity of lime reduce rate of slacking and impart hydraulicity
(a) Clay (8-30%) (b) Alkali
(c) $MgCO_3$ (<5%) (d) Iron oxide

17. **(a)**

Q.18 Hydrated lime obtained after
(a) calcination (b) slacking
(c) carbonation (d) none of these

18. **(b)**

Q.19 Coarse stuff
(a) is mixture of lime and water
(b) is mixture of lime and sand
(c) is mixture of lime and $CaCl_2$
(d) is mixture of lime and linseed oil

19. **(b)**

Q.20 Calculate number of cement bag required for 4 m^3 cement mortar with volume proportion of 1 : 3.
(a) 29   (b) 32
(c) 57   (d) 36

20. **(b)**

Q.21 Calculate number of cement bag required for 2 m^3 cement mortar prepared with proportion 1 : 3.5 and w/c = 0.5 in order to achieve density of mortar as 1500 kg/m^3.
(a) 15   (b) 12
(c) 18   (d) 9

21. **(d)**

Q.22 Admixture like lithium used for preparing
(a) x-ray shielding mortar   (b) sound absorbing mortar
(c) packing mortar   (d) fire resisting mortar

22. **(a)**

Q.23 Sand used in mortar in order to
(a) Increase volume of mortar
(b) Reduce shrinkage
(c) Make mortar economical
(d) All of the above

23. **(d)**

Q.24 Suitable cement Mortar for stone masonry is
(a) 1 : 2   (b) 1 : 6
(c) 1 : 1.5   (d) 1 : 10

24. **(b)**

Q.25 Lime cement mortar possess
(a) higher workability
(b) higher water retainvity
(c) lesser setting lime
(d) lesser shrinkage
Which of above statement is odd regarding lime cement mortar

25. **(c)**

Q.26 Bulking in sand result into
(a) sand excess mortar
(b) sand deficient mortar
(c) decrement in volume of sand
(d) reduces strength of mortar

26. **(b)**

Q.27 Tensile strength of cement/cement mortar with briquette can be calculated as

(a) $\dfrac{\text{Tensile load}}{645} \text{N/mm}^2$

(b) $\dfrac{\text{Tensile load}}{1860} \text{N/mm}^2$

(c) $\dfrac{\text{Tensile load}}{5000} \text{N/mm}^2$

(d) $\dfrac{\text{Tensile load}}{1980} \text{N/mm}^2$

27. **(a)**

Q.28 Most suitable test of workability of concrete to be used for mass concreting
(a) Vee-Bee consistometer test
(b) Slump test
(c) Compaction factor test
(d) Flow

28. **(a)**

Q.29 A workable concrete is
(a) Consistant
(b) Homogeneous
(c) having free cement paste
(d) all of the above

29. **(d)**

Q.30 The compaction factor test performed for a concrete mix and that results into compaction factor of 0.88. The consistancy of concrete is
(a) Semi fluid
(b) Plastic
(c) Dry
(d) Very dry

30. **(b)**

Q.31 Find best pair for placing and compacting concrete without any defect in concrete:
(a) Low slump concrete without compaction in heavy reinforced section
(b) Very high slump concrete with vibrator in low reinforced section
(c) Low slump concrete with screed vibrator for pavement/roads
(d) Plastic concrete in heavy reinforced section with hand compaction

31. (c)

Q.32 For getting high workable concrete the quality of aggregate required
(a) Angular rough fine aggregates
(b) Angular rough coarse aggregate
(c) Uniformly graded coarse aggregate
(d) Rounded smooth coarse aggregate

32. (d)

Q.33 An aggregate mix resulting in fineness modulus of 4. The mean size of aggregate in mix is
(a) 4.75 mm (b) 1.18 mm
(c) 10 mm (d) 600 μ

33. (b)

Q.34 Range of fineness modulus for coarse sand is
(a) 2.2 – 2.6 (b) 2.6 – 2.9
(c) 2.9 – 3.2 (d) None of the above

34. (c)

Q.35 Excess water in concrete can cause
(a) shrinkage (b) bleeding
(c) honey combing (d) all of them

35. (d)

Q.36 Permissible amount of chloride in water to be used in RCC
(a) 2000 mg/lit (b) 500 mg/lit
(c) 200 mg/lit (d) 3000 mg/lit

36. (b)

Q.37 An aggregate mix of FM = 2 is mixed with another aggregate mix of FM = 6 in order to achieve new aggregate mix of FM = 3. The proportion of coarse aggregate mix to be taken
(a) 50% (b) 25%
(c) 33.33% (d) 66.66%

37. (b)

Q.38 Standard consistancy of a cement sample found as 28%. The amount of water required to perform compressive strength test of cement is
(a) 84 ml (b) 80 ml
(c) 112 ml (d) 40 ml

38. (b)

38. (d)

Q.39 Plasticizer is
(a) water reducer (b) retarder
(c) deflocculator (d) all of the above

39. (d)

Q.40 Which of the following is not a property of air entraining admixture-
(a) It resist frost action
(b) It increases strength
(c) It increases workability and allow the mix to remain homogeneous
(d) It reduces density of concrete

40. (b)

Q.41 Which of the following is not a retarder?
(a) Cellulose (b) Sstarch
(c) Calcium sulphate (d) Potassium sulphate

41. (d)

Q.42 Match List-1 with List-2 with given code below.

List-1 (Types of admixture)	List-2(Example)
A. Accelerator	1. Aluminium powder
B. Plasticizer	2. Polyether polycarboxylate
C. Superplasticizer	3. Triethloamine
D. Air entraing admixture	4. Lignosulphate

	A	B	C	D
(a)	3	4	2	1
(b)	1	4	2	3
(c)	3	2	4	1
(d)	1	2	4	3

42. (a)

Q.43 If cement slurry comes out at top surface of concrete with excess water, known as
(a) Bleeding (b) Latiance
(c) Sand streaking (d) Segregation

43. (b)

Q.44 If a sample of concrete hydrated for 28 day at 18°C it attains its full maturity of _____°C hour.
(a) 20400
(b) 12100
(c) 19800
(d) 6700

44. (c)

Q.45 Which of the following is correct?

(a) — Compressive strength vs w/c ratio (decreasing curve)

(b) — Compressive strength vs w/c ratio (increasing line)

(c) — Compressive strength vs c/w ratio (decreasing curve)

(d) — Compressive strength vs c/w ratio (increasing line)
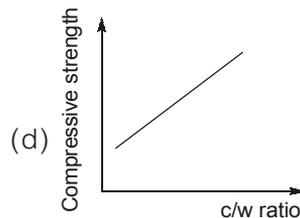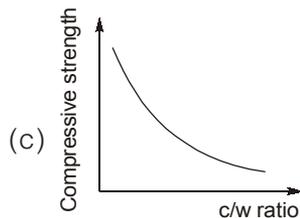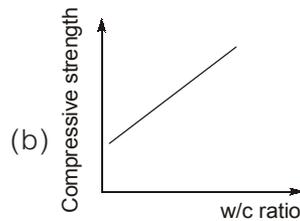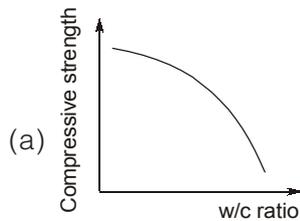
45. (d)

Q.46 Segregation in concrete can be reduced by
(a) using Pozzolanic material
(b) by using higher size of MSA
(c) by using rounded aggregate
(d) using excess water to make concrete workable

46. (a)

Q.47 Minimum mixing time for tilting mixer and pan mixer is
(a) 40s and 30s
(b) 20s and 40s
(c) 30s and 30s
(d) 40s and 20s

47. (a)

Q.48 Rebound hammer test
(a) is a non-destructive test
(b) determine strength and uniformity of concrete
(c) adversely affected by moisture content and roughness at surface
(d) all of the above

48. **(d)**

Q.49 Best method of placing concrete for pavement is
(a) Pan
(b) Bucket tower
(c) Pumping
(d) Slip form pover

49. **(d)**

Q.50 If concrete transported by pumping/pipes
(a) Adversly affect workability
(b) High w/c ratio is most suitable
(c) doesn't affected by size of aggregate
(d) none of these

50. **(a)**

Q.51 Consider the following and choose the correct option
S_1 = Compressive strength of 150 mm cube of concrete
S_2 = Compressive strength of 150 mm dia. and 300 mm height cylinder
S_3 = Compressive strength of 100 mm cube of concrete
(a) $S_1 > S_2 > S_3$
(b) $S_3 > S_1 > S_2$
(c) $S_2 > S_3 > S_1$
(d) $S_3 > S_2 > S_3$

51. **(b)**

Q.52 Match List-1 with List-2 with given code below.

List-1 (Type of test)	List-2 (Loading rate)
A. Compressive strength test of concrete	1. 14 N/mm²/min
B. Splitting cylinder test of concrete	2. 2 N/mm²/min
C. Tensile strength of cement	3. 3.5 N/mm²/min
D. Flexure strength of concrete	4. 0.7 N/mm²/min

Code:

	A	B	C	D
(a)	4	3	2	1
(b)	1	2	3	4
(c)	2	3	1	4
(d)	4	1	3	2

52. **(b)**

Q.53 For compaction of concrete in sewer pipes which compaction method will be suitable
(a) Needle vibrator
(b) Screed board vibrator
(c) Spinning/ centrifugation
(d) Form vibrator

53. **(c)**

Q.54 Which of the following statement is not correct regarding compaction?

(a) It increases density

(b) deficiency of compaction affect durability

(c) excess of compaction cause bleeding

(d) it increases setting time

54. **(d)**

Q.55 Match List-1 with List-2 with given code below.

List-1	List-2
A. Water curing	1. Increase rate of hydration
B. steam curing	2. Compensate loss of water
C. membrane curing	3. Reduce rate of evapouration

Code:

	A	B	C
(a)	1	2	3
(b)	2	3	1
(c)	3	2	1
(d)	2	1	3

55. **(b)**

Q.56 Self compacted concrete has

1. Higher powder content.

2. Lower w/c ratio.

(a) only 1   (b) only 2

(c) both 1 and 2   (d) neither 1 nor 2

56. **(c)**

Q.57 Cement mortar/concrete mix prepared by using steel wire mesh which is most suitable for liquid retaining structure is

(a) Fiber reinforcement concrete   (b) Polymer concrete

(c) Roller compacted concrete   (d) Ferro cement

57. **(d)**

Q.58 Autoclaved areated concrete block is

(a) Prepared by using gas forming agent

(b) Strong, porous, and non-toxic

(c) impart thermal insulation and sound proofing

(d) all of the above

58. **(d)**

Q.59 Correct nominal proportion of M20 is
(a) 1 : 3 : 6   (b) 1 : 1.5 : 3
(c) 1 : 2 : 4   (d) 1 : 1 : 2

59. **(b)**

Q.60 Maximum percentage of entrapped air voids permissible in concrete as per IS10262 is
(a) 0%   (b) 1.5%
(c) 1%   (d) 0.8%

60. **(b)**

Q.61 Volume of mortar required to prepare 1 m^3 brick masonry with modular brick
(a) 0.23 m^3 (b) 0.77 m^3
(c) 0.58 m^3 (d) 0.32 m^3

61. **(a)**

Q.62 Which of the following is undesirable component in clay for bricks?
(a) Silica   (b) Alumina
(c) Sulphur   (d) Iron oxide

62. **(c)**

Q.63 Minimum number of bricks required for performing test for warpage of brick
(a) 5   (b) 10
(c) 20   (d) 3

63. **(b)**

Q.64 Water absorption for Class 25 brick.

(a) $\not> 10\%$ (b) $\not> 15\%$
(c) $\not> 20\%$ (d) $\not> 25\%$

64. **(b)**

Q.65 Basic refectory bricks contains higher content of
(a) Chromite   (b) Silicate
(c) Flyash   (d) Magnesite

65. **(d)**

Q.66 Choose the correct sequence of operation occuring during burning of bricks.
(a) Dehydration → Oxidation → Vitrification
(b) Oxidation → Dehydration → Vitrification
(c) Vitrification → Oxidation → Dehydration
(d) Oxidation → Vitrification → Dehydration

66. **(a)**

Q.67   Overburnt brick are
(a) Pale brick   (b) Fourth class brick
(c) Soft   (d) None of these

67. **(b)**

Q.68   Choose the wrong pair
(a) Paving brick → higher iron oxide
(b) Flyash lime brick → No requirement of burning
(c) Hollow brick → Volume of holes is more than 25% of total volume of brick
(d) Updraught kiln → continuous kiln

68. **(d)**

Q.69   The thickness of wall will be minimum $1\frac{1}{2}$ brick thick, if it is made by

(a) Header bond   (b) English bond
(c) Stretcher bond   (d) Single Flemish bond

69. **(d)**

Q.70   Minimum overlap allowed in brick masonry is
(a) 1/4 brick length   (b) 1/2 brick length
(c) 1/2 brick length   (d) 1/4 brick length

70. **(a)**

Q.71   Alternate courses of stretcher and header exist in
(a) Header bond   (b) English bond
(c) Stretcher bond   (d) Double flemish bond

71. **(b)**

Q.72   King closer is
(a) Brick cut longitudinally from center
(b) Equivalent to 7/8 brick
(c) Brick cut from center of header to corner of strecher longitudinally
(d) Half brick cut laterally

72. **(b)**

Q.73   In order to avoid vertical joint in same line, in english bond queen closer is provided
(a) Next to quoin header in alternate course
(b) next to quoin strecher in alternate course
(c) at the quoin in alternate course
(d) next to quoin 3/4 Bat

73. (a)

Q.74 Minimum compressive strength of brick is

(a) 10 N/mm^2 (b) 35 N/mm^2

(c) 3.5 N/mm^2 (d) 7.5 N/mm^2

74. (c)

Q.75 Excess of silica in brick

(a) Cause efflorescence   (b) Cause brittleness during burning

(c) Cause swelling   (d) Cause shrinkage during drying

75. (b)

Q.76 Which of the following part of cross section of tree is light in colour and responsible for present growth?

(a) Pith/medulla   (b) Sapwood/Alburnum

(c) Heartwood   (d) Cambium layer

76. (b)

Q.77 Which of the following is not an example of exogenous tree

(a) Teak   (b) Mapple

(c) Sheesham   (d) Deodar

77. (d)

Q.78 Seasoning of timber results into

(a) increase strength and durability

(b) makes the timber easily burnable

(c) reduction in transportation cost

(d) all of these

78. (d)

Q.79 Seasoning of timber

1. Results into reduction in moisture content upto equilibinum moisture contnet (EMC)
2. EMC depending on relative humidity and temperature.

(a) only 1   (b) only 2

(c) both 1 and 2   (d) neither 1 nor 2

79. (c)

Q.80 Which of the following sawing technique results into strongest piece of timber?

(a) ordinary sawing   (b) Radial sawing

(c) Tangential sawing   (d) Quarter sawing

80. (b)

Q.81 Sir Able's Process is used for imparting resistance against _____ in timber.

(a) Fire   (b) moisture

(c) Termite   (d) white ant

81. (a)

Q.82 Least effective process for application of preventive is
(a) Dipping
(b) Injection
(c) Brushing
(d) Spraying

82. (d)

Q.83 Match List-1 and List-2 with given code below.

List-1 (Type of test)	List-2 (Loading rate)
A. Oil type preventive	1. Soligum paint, carboliminium
B. Water type preventive	2. DDT, BHC
C. Organic solvent type preventive	3. Borax, sodium fluoride

Code:

	A	B	C
(a)	1	2	3
(b)	1	3	2
(c)	2	3	1
(d)	3	2	1

83. (b)

Q.84 Maximum permissible deflection in cantilever timber beam

(a) $\dfrac{\text{Span}}{240}$

(b) $\dfrac{\text{Span}}{180}$

(c) $\dfrac{\text{Span}}{360}$

(d) $\dfrac{\text{Span}}{120}$

84. (b)

Q.85 Modulus of elasticity for class B timber is
(a) > 12.6 GPa
(b) 5.6 – 9.8 GPa
(c) 9.8 – 12.6 GPa
(d) 4.3 – 5.6 GPa

85. (c)

Q.86 Which of the following pair is not correct?
(a) Wane : defect due to sawing
(b) Knot : defect due to natural attack
(c) Cup : defect due to fungi attack
(d) Dry rot : defect due to improper seasoning

86. (d)

Q.87 If occurance of crack is wider outside and sharper torwards inside known as
(a) cup shake
(b) star shake
(c) heart shake
(d) ring shake

87. **(b)**

Q.88 Cross-grained industrial wood is
(a) Fiber board   (b) Chip board
(c) Block board   (d) Plywood

88. **(d)**

Q.89 Hardness number for rock like quartz is _____ as per Mohr's scale.
(a) 5   (b) 2
(c) 8   (d) 7

89. **(d)**

Q.90 Which of the following is volcanic or effusive rock?
(a) Trap   (b) Dolerite
(c) Granite   (d) Gabroo

90. **(a)**

Q.91 Metamorphic version of dolomite is
(a) Schist   (b) Marble
(c) Slate   (d) Gneiss

91. **(b)**

Q.92 Which of he following rock is highly porous:
(a) Laterite   (b) Granite
(c) Slate   (d) Basalt

92. **(a)**

Q.93 Which of the following explosive is smokeless?
(a) Gun powder   (b) Dynamite
(c) Cordite   (d) Gun cotton

93. **(c)**

Q.94 Glauber's salt/Barad test is done for
(a) Frost resistance   (b) Weather resistance
(c) Mineral content   (d) all of these

94. **(a)**

Q.95 Garlic stone is combination of
(a) Granite + soda silicate   (b) Iron slag + OPC
(c) Soda silicate + OPC   (d) Gypsum and sand

95. (b)

Q.96 Best stone to use for roof covering
(a) Laterite　　　　　　　　(b) Mooram
(c) Marble　　　　　　　　(d) Slate

96. (d)

Q.97 Which of the following is unstratified rock?
(a) Sand stone　　　　　　(b) Granite
(c) Slate　　　　　　　　(d) Marble

97. (b)

Q.98 "Streak" is rock forming property used to determine
(a) colour of mineral　　　　(b) shine on surface
(c) colour of mineral in powder form　(d) none of these

98. (c)

Q.99 Argillaceous rocks
(a) contain clay　　　　　　(b) are hard
(c) are brittle　　　　　　　(d) all of these

99. ()

Q.100 Gabroo is
(a) sedimentary rock　　　　(b) hypabyssed rock
(c) acidic in nature　　　　(d) none of these

100. (d)

■■■■