Q1. Consider the following statements:

High alumina cement (HAC)

1. **Has high early compressive strength and heat hydration than OPC – 43 grade**
2. **Is not suitable to be use in clod regions.**

Which of these statements is /are correct?

a. **1 alone**

b. **2 alone**

c. **Both 1 and 2**

d. **Neither 1 nor 2**

Q2. Consider the following statements:

When cement is tested for setting time: on gauging it shown quick setting. This phenomenon known as "flash set" of cement is due to the presence of high

1. **Tricalcium aluminate (C_3A) cement**
2. **Alkalies in cement**
3. **Tricalcium silicate (C_3A) cement**

Which of these statements are correct?

a. **1, 2, and 3**

b. **2 and 3**

c. **1 and 2**

d. **1 and 3**

Q3. For marine works, the best suited cement is

a. **Low heat portland cement**

b. **Rapid hardening cement**

c. **Ordinary portland cement**

d. **Blast furnace slage cement**

Learn More Earn More
www.everexam.org

Q4. Match List – I (Type of cement) with List – II (Characteristics) and select the correct answer using the codes given below the lists:

List – I	List – II
A. Ordinary Portland cement	1. The percentage of C_3S is maximum and is of the order cement of 50%
B. Rapid hardening cement	2. The percentages of C_2S and C_3S are the same and of the order of 40%
C. Low heat cement	3. Reacts with silica during burning and causes particles to unite together and development of strength
D. Sulphate resistant cement	4. Preserves the form of bricks at high temperature and prevents shrinkage.

Codes :

a. A – 2, B – 4, C – 1, D – 3

b. A – 3, B – 1, C – 4, D – 2

c. A – 2, B – 1, C – 4, D – 3

d. A – 3, B – 4, C – 1, D – 2

www.everexam.org

Q5. Match List I with List II and select the correct answer:

List – I	List – II
A. High strength Portland Cement	1. Should not be used with any admixture
B. Super sulphated cement	2.Is extremely resistant to chemical attack
C. High alumina cement	3. Gives a higher rate of heat development during hydration of cement
D. Rapid hardening Portland cement	4. Has a higher content of tricalcium silicate

Codes :

www.everexam.org

a. A – 3, B – 2, C – 1, D – 4

b. A – 4, B – 1, C – 2, D – 3

c. A – 3, B – 1, C – 2, D – 4

d. A – 4, B – 2, C – 1, D – 3

Q6. Four main oxides present in ordinary Portland cement are : CaO, $A1_20_3$, $Si0_2$ and Fe_20_3. Identify the correct ascending order of their proportions in a typical composition of OPC

(a) Al_20_3,Fe_20_3, CaO. $Si0_2$

(b) $A1_20_3$ CaO. Fe_20_3 $Si0_2$

(c) Fe_20_3 $A1_20_3$ SiO~ CaO

(d) Fe_20_3 .$Si0_2$ $A1_20_3$ CaO

Q7. The proper size of mould for testing compressive strength of cement is

(a) 7.05 cm cube

(b) 10.05 cm cube

(c) 15 cm cube

(d) 12.05 cm cube

Q8. The specific gravity of commonly available ordinary portland cement is

(a) 4.92

(b) 3.15

(c) 2.05

(d) 1.83

Q9. A quick-setting cement has an initial setting time' of about

(a) 50 minutes

(b) 40 minutes

(c) 15 minutes

(d) 5 minutes

www.everexam.org

Q10. Consider the following statements:

Low percentage of C_3S and high percentage of C_2S in cement will result in

1. **higher ultimate strength with less heat generation**
2. **rapid - hardening**
3. **better resistance to chemical attack**

Which of the statements given above are correct?

(a) 1 and 2

(b) 2 and 3

(c) 1 and 3

(d) 1, 2 and 3

Q11. Match List I (Type of Cement) with List II (Property) and select the correct answer using the codes:

List – I	List – II
A. Blast furnace slag cement	1. High percentage of tricalcium silicate
B. High alumina cement	2. Initial setting approximately three and a half hours
C. Low heat Cement	3. Low percentage of iron oxide

www.everexam.org

D.	White cement	4. Rate of hardening is low

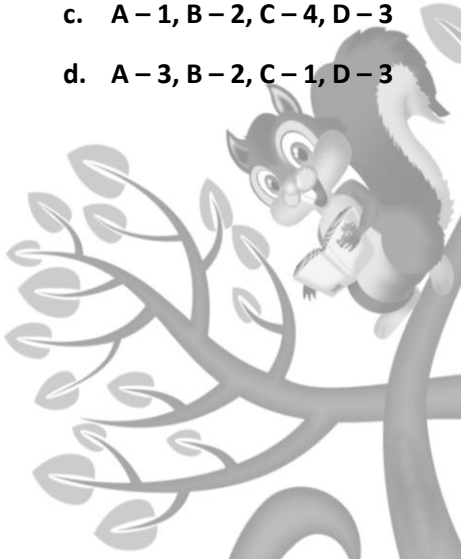
Codes :

a. A – 4, B – 3, C – 1, D – 2

b. A – 1, B – 3, C – 4, D – 2

c. A – 1, B – 2, C – 4, D – 3

d. A – 3, B – 2, C – 1, D – 3



Q12. Match List I (Type of Cement) with List II (Characteristics) and select the correct answer using the code given below the lists

	List – I	List – II
A.	Rapidly hardening cement	1. Lower C_3A content than that in OPC
B.	Low heat Portland cement	2. Contains pulverized fly that is OPC
C.	Portland Pozzolana	3. Higher C_3S and C_3A contents than that in OPC
D.	Sulphate resisting Cement	Lower C_3S and C_3A contents than in

www.everexam.org

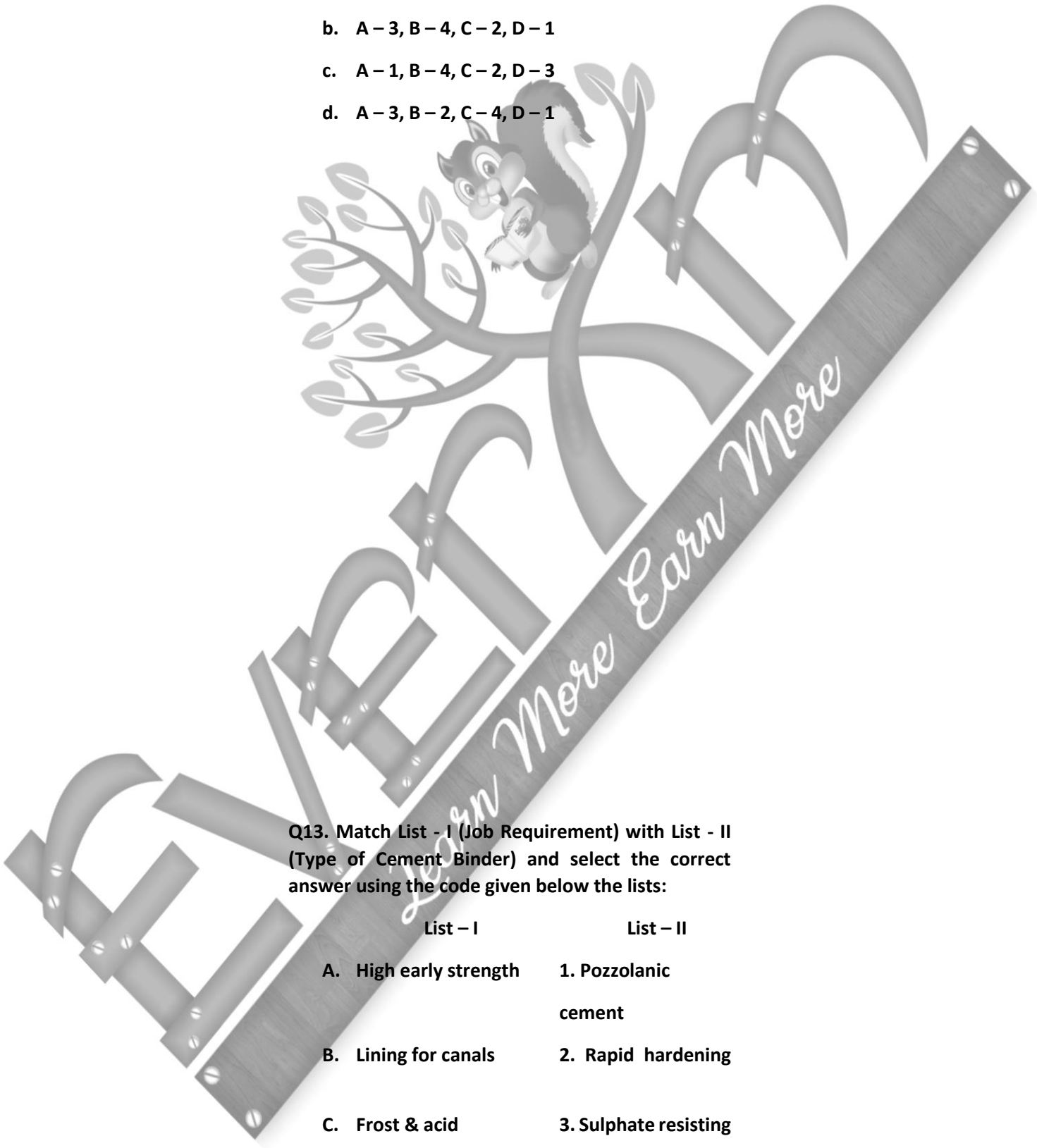
Codes :

a. **A – 1, B – 2, C – 4, D – 3**

b. **A – 3, B – 4, C – 2, D – 1**

c. **A – 1, B – 4, C – 2, D – 3**

d. **A – 3, B – 2, C – 4, D – 1**



Q13. Match List - I (Job Requirement) with List - II (Type of Cement Binder) and select the correct answer using the code given below the lists:

List – I	List – II
A. High early strength	1. Pozzolanic cement
B. Lining for canals	2. Rapid hardening
C. Frost & acid resistance	3. Sulphate resisting
D. Marine structure	4. High Alumina

www.everexam.org

Codes :

a. **A – 1, B – 4, C – 3, D – 2**

b. **A – 2, B – 3, C – 4, D – 1**

c. **A – 1, B – 3, C – 3, D – 2**

d. **A – 2, B – 4, C – 4, D – 1**

Q14. As per specifications, the initial setting time of ordinary Portland cement should not be less than

(a) 10 minutes

(b) 20 minutes

(c) 30 minutes

(d) 60 minutes

Q15. In cements, generally the increase in strength during a period of 14 days to 28 days is primarily due to

a. **C_3 A**

b. **C_2 S**

c. **C_3 S**

d. **C_4 AF**

Q16. Consider the following type of cement:

1. **Portland pulverized fuel ash cement**
2. **High alumina cement**
3. **Ordinary Portland cement**
4. **Rapid hardening cement**

www.everexam.org

Which one of the following is the correct sequence of the

above cements in terms of their increasing rate of strength

gain?

(a) 2-3-4-1

(b) 1-3-4-2

(c) 2-1-3-4

(d) 3-1-2-4

Q17.Match List I (Composition of raw material used in manufacture of cement) with List II (Component of raw material) and select the correct answer using the code given below the lists:

List – I	List – II
A. 25 %	1. Silica
B. 65 %	2. Calcium oxide
C. 5 %	3. Aluminium oxide
D. 5 %	4. Ferrous and magnesium oxide

Codes:

a. **A – 1, B – 2, C – 3, D – 4**

b. **A – 4, B – 3, C – 2, D – 1**

c. **A – 1, B – 3, C – 2, D – 4**

d. **A – 4, B – 2, C – 3, D – 1**

www.everexam.org

Q18. Match List I (Compound) with List II (Proportion) and select the correct answer using the code given below the lists List I

List – I	List – II
A. Tricalcium silicate	1. 25 to 30%
B. Dicalcium silicate	2. 50 to 60%
C. Tricalcium aluminate	3. 6 to 8%
D. Tetra calcium aluminoferrite	4. 8 to 12%

Codes:

a. A – 2, B – 3, C – 4, D – 1

b. A – 4, B – 1, C – 2, D – 3

c. A – 2, B – 1, C – 4, D – 3

d. A – 4, B – 3, C – 2, D – 1

Q19. Match List I (Equipment) with List II (Property) and select the correct answer using the code given below the lists :

List – I	List – II
A. Briquette testing machine	1. Compressive strength
B. Le Chatelier apparatus	2. Consistency
C. Vicat apparatus	3. Soundness
	4. Tensile strength

Codes:

a. A – 1, B – 2, C – 3,

b. A – 1, B – 3, C – 2,

c. A – 4, B – 2, C – 3,

D. A – 4, B – 3, C – 2,

EVEREXAM Learn More Earn More
www.everexam.org

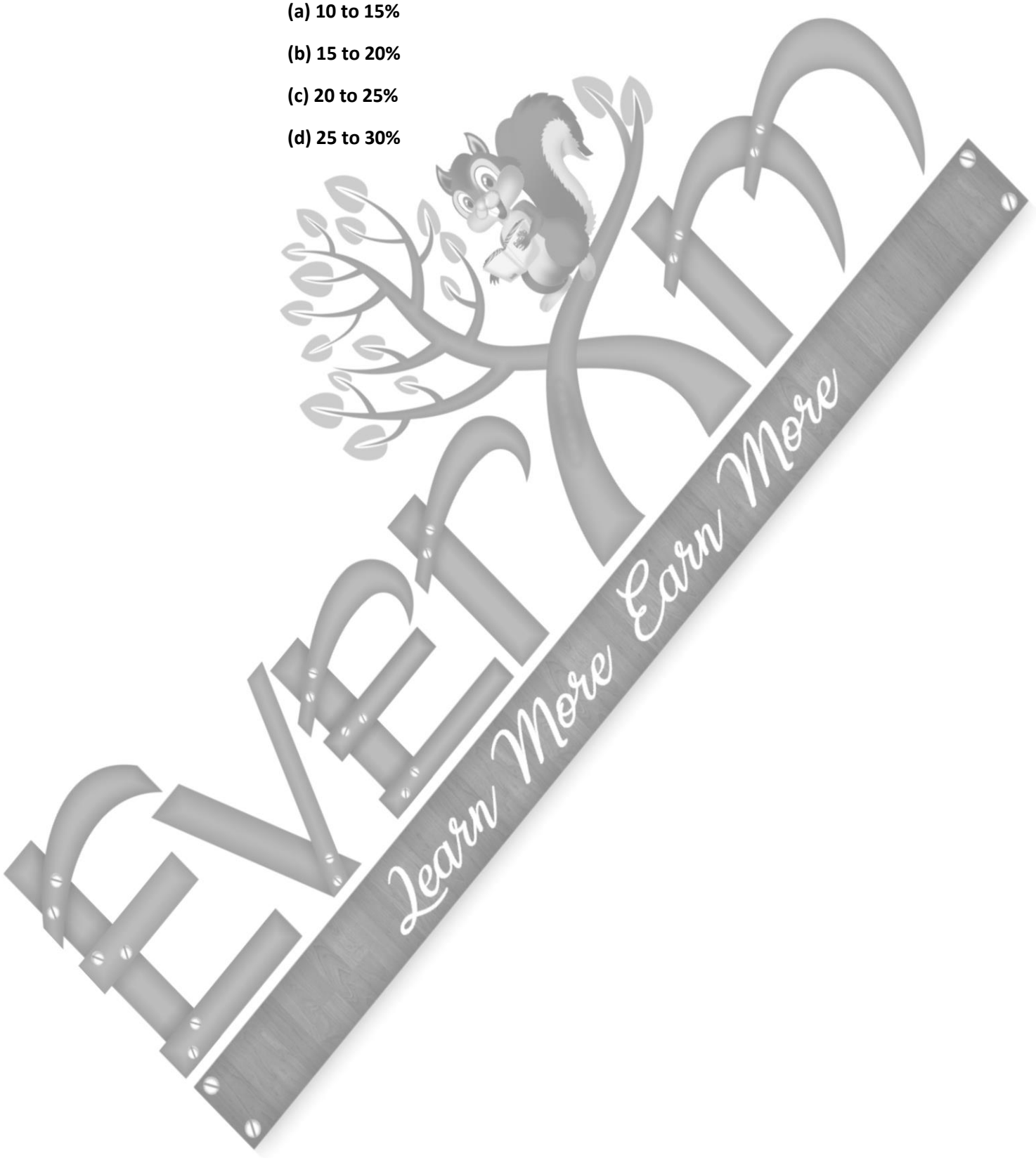
Q20. What is the requirement of water (expressed as % of cement w/w) for the completion of chemical reactions in the process of hydration of OPC?

(a) 10 to 15%

(b) 15 to 20%

(c) 20 to 25%

(d) 25 to 30%



www.everexam.org

www.everexam.org