



**Chettinad**

College of Engineering & Technology

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

**Department of Civil Engineering**

**CE8404-CONCRETE TECHNOLOGY**

**UNIT I MCQ**

1. Which chemical composition has highest content in OPC?

- a) Alumina
- b) Silica
- c) Lime**
- d) Iron Oxide

Ans c) Lime

2. Excess in lime causes \_\_\_\_\_

- a) The cement to shrink and integrate
- b) The cement to shrink and disintegrate
- c) The cement to expand and integrate
- d) The cement to expand and disintegrate**

Ans d) The cement to expand and disintegrate

3. Silica in excess causes \_\_\_\_\_

- a) The cement to set slowly**
- b) The cement to set quickly
- c) The cement to expand
- d) The cement to disintegrate

Ans a) The cement to set slowly

4. Alumina in excess causes \_\_\_\_\_

- a) Reduces the strength of the cement**
- b) Increases the strength of the cement
- c) No change
- d) Sometimes increase or decrease the strength of the cement

Ans a) Reduces the strength of the cement

5. Which compound gives the colour to the cement?

- a) Lime
- b) Silica
- c) Iron Oxide**
- d) Alumina

Ans c) Iron Oxide

6. Which cement contains high percentage of  $C_3S$  and less percentage of  $C_2S$ ?

- a) Rapid Hardening Cement**
- b) Ordinary Portland Cement
- c) Quick Setting Cement
- d) Low Heat Cement

Ans a) Rapid Hardening Cement

7. When concrete is to be laid under water \_\_\_\_\_ is to used.

- a) Rapid Hardening Cement
- b) Ordinary Portland Cement
- c) Quick Setting Cement**
- d) Low Heat Cement

Ans c) Quick Setting Cement

8. Which of the following is correct for Low Heat Cement?

- a) Suitable for use in cold weather areas
- b) Heat of hydration is reduced by tri calcium aluminate content**
- c) This cement requires longer period of curing
- d) This cement contains high aluminate % age usually between 35-55%.

Ans b) Heat of hydration is reduced by tri calcium aluminate content

9. Which cement is used for artificial marble?

- a) Rapid Hardening Cement
- b) Sulphate Resisting Cement
- c) Coloured Cement**
- d) Quick Setting Cement

Ans c) Coloured Cement

10. Which cement is used to store for longer duration in wet climatic conditions?

- a) Expansive Cement
- b) Ordinary Portland cement
- c) Hydrophobic Cement**
- d) Quick Setting Cement

Ans c) Hydrophobic Cement

11. \_\_\_\_ cement is used for formwork that can be removed earlier and reused in other areas which save the cost of formwork.

- a) Rapid Hardening Cement**
- b) Colored Cement
- c) High Alumina Cement
- d) Low Heat Cement

Ans a) Rapid Hardening Cement

12. Which cement is mainly used for interior and exterior decorative works?

- a) Rapid Hardening Cement
- b) Colored Cement**
- c) High Alumina Cement
- d) Low Heat Cement

Ans b) Colored Cement

13. Which cement is used for works economic where considerations is predominant? Reservoirs, retaining walls, swimming pools, dams, bridges, piers etc.

- a) Waterproof Portland Cement
- b) Colored Cement
- c) High Alumina Cement
- d) Blast Furnace Slag Cement**

Ans d) Blast Furnace Slag Cement

14. According to size, aggregates is/are classified into \_\_\_\_\_ types.

- a) 1
- b) 2
- c) 3
- d) 4**

Ans d) 4

15. What is the total percentage of aggregates in concrete by volume?

- a) 50-60%
- b) 60-75%**
- c) 85%
- d) 50%

Ans b) 60-75%

16. What is the size of coarse aggregates?

- 4.75mm
- b) < 4.75mm
- c) > 4.75mm**
- d) 12mm

Ans c) > 4.75mm

17. Crushed stone, gravel and ordinary sand are examples of \_\_\_\_\_

Lightweight aggregate

- b) Normal-weight aggregate**
- c) Heavy-weight aggregate
- d) Both Normal-weight aggregate and Heavy-weight aggregate

Ans b) Normal-weight aggregate

18. How many layers of concrete are placed to fill a slump cone?

- a) 5 layers
- b) 3 equal layers by volume**
- c) 3 equal layers by height
- d) 5 layers by volume

Ans b) 3 equal layers by volume

19. To determine the fineness of cement \_\_\_\_\_

- a) Grain size is smaller than specified mesh size
- b) Grain size is larger than specified mesh size**
- c) Grain size is equal to specified mesh size
- d) Grain size is 1mm

Ans b) Grain size is larger than specified mesh size

20. Which apparatus is generally used to measure the soundness of the cement?

- a) Vicat Apparatus
- b) Le-Chatelier apparatus**
- c) Soundness meter
- d) Duff Abrams apparatus

Ans b) Le-Chatelier apparatus

21. Which of the following statement is incorrect?

- a) Water is the most important and least expensive ingredient of concrete
- b) Excess of water forms scum
- c) Less amount of water may cause honeycombing**
- d) Mixing of water is used in the hydration of cement and provides lubrication between fine and coarse aggregates.

Ans c) Less amount of water may cause honeycombing

22. What is hydration of cement?

- a) Chemical reaction of cement with acid
- b) Chemical reaction of cement with water**
- c) Chemical reaction of cement with base
- d) Chemical reaction of cement with salt, and acid

Ans b) Chemical reaction of cement with water

23. In order to prevent this rapid reaction \_\_\_\_\_ is added to the clinker

- a)  $C_4AF$
- b) Gypsum**
- c) Water
- d) Extra cement

Ans b) Gypsum

24. Which compound is liberates lower heat?

- a)  $C_2S$**
- b)  $C_3S$
- c)  $C_3A$
- d)  $C_4AF$

Ans a)  $C_2S$

25. The development of first 28 days strength is on account of the hydration of \_\_\_\_\_

- a)  $C_2S$
- b)  $C_3S$**
- c)  $C_3A$
- d)  $C_4AF$

Ans b)  $C_3S$

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