



SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code :Concrete Technology (13A01503)Course & Branch: B.Tech - CE Year & Sem:III-B.Tech & I-Sem Regulation: R13

UNIT –II

FRESH CONCRETE AND HARDENED CONCRETE

1. Explain in detail the slump test with the help of a neat sketch. Discuss its merits and limitations.
10M
2. a. What do you understand by the term “Workability”? 5M
b. Discuss the various factors affecting the workability of concrete. 5M
3. Explain the following with reference to the properties of fresh concrete. 10M
a. Segregation b. Bleeding.
4. Explain about different methods to measure workability of concrete? 10M
5. Briefly explain manufacturing procedure of concrete. 10M
6. a. Explain the phenomenon of gain of strength of concrete with age. 5M
b. Calculate the Gel/space ratio and the theoretical strength of a sample of concrete made with 500
gms of cement and 0.6 w/c ratio, on Full hydration and 70% hydration. 5M
7. Explain the various affecting strength of hardened concrete. 10M
8. a. Explain the Maturity concept for strength development of concrete. 5M
b. Explain the relation between compression strength and tensile strength of concrete. 5M
9. a. Explain different methods of placing concrete. 5M
b. Explain different methods of curing procedure. 5M
10. a. Define bleeding. 2M
b. Define Segregation. 2M
c. Define workability. 2M
d. List the different factors affecting workability. 2M
e. Write different mechanical properties of concrete. 2M

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QUESTION BANK (OBJECTIVE)

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UNIT- II

1. In rich mixes; use of ___size aggregate gives better results. []
 - A. Larger B. Medium C. Smaller D. None
2. For given water content, workability decreases if the concrete aggregates contain an excess of []
 - A. thin particles B. elongated particles C. flaky particles D. all the above
3. For ensuring quality of concrete, use []
 - A. single sized aggregates B. two sized aggregate
 - C. graded aggregates D. coarse aggregates
4. The standard sand now a days used in India, is obtained from []
 - A. Jaipur B. Jullundur C. Hyderabad D. Ennore
5. The maximum amount of dust which may be permitted in aggregates is
 - A. 5% of the total aggregates for low workability with a coarse grading
 - B. 10% of the total aggregates for low workability with a fine grading
 - C. 20% of the total aggregates for a mix having high workability with fine grading
 - D. all the above.
6. The bulk density of aggregates does not depend upon: []
 - A. size and shape of aggregates B. specific gravity of aggregates
 - C. grading of aggregates D. size and shape of the container
7. An aggregate is said to be flaky if its least dimension is less than []
 - A. 1/5th of mean dimension B. 2/5th of mean dimension
 - C. 3/5th of mean dimension D. 4/5th of mean dimension
8. To ensure constant moisture content in aggregates []
 - A. height of each aggregate pile should not exceed 1.50 m
 - B. aggregate pile should be left for 24 hours before aggregates are used
 - C. conical heaps of aggregates should be avoided to prevent moisture variation
 - D. all the above
9. For the construction of cement concrete floor, the maximum permissible size of fine aggregate, is []
 - A. 4.75 mm B. 6.23 mm C. 8.12 mm D. 10.50 mm
10. The process of proper and accurate measurement of concrete ingredients for uniformity of proportion, is known []
 - A. grading B. Curing C. Mixing D. Batching

11. Pick up the correct statement from the following: []
 A. Insufficient quantity of water makes the concrete mix harsh
 B. Insufficient quantity of water makes the concrete unworkable
 C. Excess quantity of water makes the concrete segregated
 D. All the above
12. Slump test is done for []
 A. clay B. Sand C. lime D. concrete
13. Pick up the correct statement from the following: []
 A. The weight of ingredients of concrete mix, is taken in kilograms
 B. Water and aggregates are measured in litres
 C. 20 bags of cement make one tonne
 D. All the above
14. Concrete mainly consists of []
 A. cement B. Aggregates C. Admixture D. all the above
15. Workability of concrete is measured by []
 A. Vicat apparatus test B. Slump test
 C. Minimum void method D. Talbot Richard test
16. Internal friction between the ingredients of concrete, is decreased by using []
 A. less water B. fine aggregates
 C. rich mix D. more water and coarse aggregates
17. The property of separation of cement paste from concrete while placing the concrete is called []
 A. Compaction B. Segregation C. Bleeding D. Shrinkage
18. To prevent segregation, the concrete should not be thrown from a height of more than []
 A. 0.25m B. 0.5m C. 1.0m D. 1.5m
19. Factors affecting Workability of concrete []
 A Water Content B Mix Proportions
 C Size, Shape & Surface structure D All of the above
20. Separation of the constituent materials of concrete is []
 A Segregation B Bleeding C Workability D Vibration
21. The height of the slump cone apparatus will be []
 A 20cm B 25cm C 30cm D 35cm
22. W_p and W_f are the weights of a cylinder containing partially compacted and fully compacted concrete. If the compaction factor is $\left(\frac{W_p}{W_f}\right)$ 0.95, the workability of concrete is []
 A. extremely low B. very low C. Low D. High
23. The risk of segregation is more for []
 A. wetter mix B. larger proportion of maximum size aggregate
 C. coarser grading D. all the above
24. The increased cohesiveness of concrete, makes it []
 A. less liable to segregation B. more liable to segregation
 C. more liable to bleeding D. more liable for surface scaling in frosty weather
25. Workability improved by adding []

- A. air-entraining agent B. foaming agent C. oily-agent D. all the above
26. Proper proportioning of concrete, ensures []
 A. desired strength and workability B. desired durability
 C. water tightness of the structure D. all the above
27. Curing []
 A. reduces the shrinkage of concrete B. preserves the properties of concrete
 C. prevents the loss of water by evaporation D. all of the above
28. While compacting the concrete by a mechanical vibrator, the slump should not exceed []
 A. 2.5 cm B. 5.0 cm C. 7.5 cm D. 10 cm
29. Curing a concrete for long period ensures better []
 A. volume stability B. Strength C. water resistance D. all the above
30. The factor which affects the design of concrete mix is []
 A fineness modulus B water – cement ratio
 C slump D all the above
31. Commonly employed test for measurement of cement workability is _____ []
 A. Slump test B. Kelley bell test C. VeeBee consists meter D.
 All
32. Factors effecting the design of concrete mix is []
 A fineness modulus B w/c C slump D all
33. Stripping time of vertical formwork to columns, walls and beams []
 A 16-24 hrs B 12-16 hrs C 10-12 hrs D 8-10 hrs
34. In case of workable mixes, as per the Abrams Law the strength of concrete []
 A Depends on water/cement ratio B Independent of water/cement ratio
 C Decreases with water/cement ratio D None of the above
35. As per IS Code method, the water cement ratio is calculated from []
 A Target mean strength B Cement type C Both a and b D None
36. In order to make concrete durable, the water cement ratio should be []
 A High B Low C Moderate D None
37. Shrinkage in concrete can be reduced by using []
 A. low water cement ratio B. less cement in the concrete
 C. Both A & B D. None of the above
38. In M20 Grade concrete , 20 indicates []
 A. Compressive strength B. Tensile strength C. Mix D. None
39. Hardening of cement occurs at []
 A. rapid rate during the first few days and afterwards it continues to increase at a decreased rate
 B. slow rate during the first few days and afterwards it continues to increase at a rapid rate
 C. uniform rate throughout its age
 D. none of these
40. Effect of time on concrete workability is _____ []
 A. Increase workability as time passes B. Decrease workability as time passes
 C. No effect D. None

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