



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 –III

SPECIAL CONCRETE

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|---|-----|
| 1. a. What is light weight concrete? How is it produced? | 4M |
| b. What are the light weight aggregate concrete? | 3M |
| c. Explain workability scenario in light weight aggregate concrete? | 3M |
| 2. Explain i) Cellular concrete ii) No-fineness concrete | 5M |
| iii)High density concrete iv) Fibre Reinforced concrete | 5M |
| 3. a. What are different types of fibres used in the production of Fibre Reinforced concrete? | 5M |
| b. With respect Fibre Reinforced concrete explain following terms. | 5M |
| i)Aspect ratio ii) Percentage volume of fibre iii) Balling. | |
| 4. a. What are various factors affecting properties of Fibre Reinforced concrete? | 5M |
| b. Write applications of Fibre Reinforced concrete? | 5M |
| 5. a. Explain polymer concrete? | 5M |
| b. Explain types of polymer concrete? | 5M |
| 6. a. Explain properties of polymer concrete? | 5M |
| b. Explain application of polymer concrete? | 5M |
| 7. Explain high performance concrete and what are the advantages of high performance concrete over conventional concrete? | 10M |
| 8. What is self-consolidating concrete? What are the materials used for SCC. | 10M |
| 9. Explain self-healing concrete and bacterial concrete? | 5M |
| 10. a. List some of the artificial light weight aggregate | 2M |
| b. Define light weight concrete. | 2M |
| c. Define high performance concrete | 2M |
| d. Define Admixtures | 2M |
| e. List different materials used for self-healing concrete. | 2M |

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- A. clay B. Sand C. lime D. concrete
14. 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 liters
 C. 20 bags of cement make one tonne D. All the above
15. Concrete mainly consists of []
 A. cement B. Aggregates C. Admixture D. all the above
16. Workability of concrete is measured by []
 A. Vicat apparatus test B. Slump test
 C. Minimum void method D. Talbot Richard test
17. 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
18. The property of separation of cement paste from concrete while placing the concrete is called []
 A. Compaction B. Segregation C. Bleeding D. Shrinkage
19. 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
20. Factors affecting Workability of concrete []
 A Water Content B Mix Proportions
 C Size, Shape & Surface structure D All of the above
21. The compaction of concrete, improves []
 A. Density B. Strength C. Durability D. all the above.
22. Segregation is responsible for []
 A. honey-combed concrete B. porous layers in concrete
 C. surface scaling in concrete D. All the above
23. Addition of pozzolana to cement []
 A. decreases workability B. increases strength
 C. increases heat of hydration D. Increase workability
24. Permissible compressive strength of M 150 concrete grade is []
 A. 1000 kg/cm² B. 1500 kg/cm² C. 2000 kg/cm² D. 2500 kg/cm²
25. Pozzolana cement is used with confidence for construction of []
 A. dams B. massive foundations C. Abutments D. R.C.C. structures
26. Efflorescence in cement is caused due to an excess of []
 A. Alumina B. iron oxide C. Magnesium Oxide D. alkalis
27. The diameter of the Vicat plunger is 10 mm and its length varies from []
 A. 20 mm to 30 mm B. 30 mm to 40 mm C. 40 mm to 50 mm D. 50 mm to 60 mm
28. Tricalcium aluminate []
 A. reacts fast with water B. generates less heat of hydration
 C. causes initial setting and early strength of cement
 D. does not contribute to develop ultimate strength
29. According to Water-Cement Ratio Law, the strength of workable plastic concrete []
 A. depends upon the amount of water used in the mix
 B. does not depend upon the quality of cement mixed with aggregates

- C. does not depend upon the quantity of cement mixed with aggregates
D. all the above
30. Pick up the correct statement from the following: []
A. High percentage of C_3S and low percentage of C_2S cause rapid hardening
B. High percentage of C_3S and low percentage of C_2S make the cement less resistive to chemical attack
C. Low percentage of C_3S and high percentage of C_2S contribute to slow hardening
D. None
31. The factor which affects workability, is []
A. water content and its temperature B. shape and size of the aggregates
C. grading and surface textures of the aggregates D. All the above
32. The cement whose strength is a little lower than the ordinary cement during the first three months but attains afterwards the same strength, is known as []
A. low-heat Portland cement B. rapid hardening Portland cement
C. Portland blast slag cement D. none of these
33. Pick up the correct statement from the following: []
A. Water enables chemical reaction to take place with cement
B. Water lubricates the mixture of gravel, sand and cement
C. Only a small quantity of water is required for hydration of cement
D. Strength of concrete structure largely depends upon its workability
34. Pick up the correct statement from the following: []
A. Calcium chloride acts as a retarder B. Gypsum acts as a retarder
C. Calcium chloride acts as an accelerator D. Both C. and D.
35. Joints in concrete structures, are provided []
A. to reduce the shrinkage cracks likely to be developed due to evaporation of water
B. to minimize the change in the dimensions of the slab
C. to minimize the necessary cracking D. all the above.
36. High temperature []
A. increases the strength of concrete B. decreases the strength of concrete
C. has no effect on the strength of concrete D. none of these.
37. The bulk density of aggregates, is generally expressed as []
A. tonnes/cubic meter B. kg/cubic meter C. kg/liter D. g/cm^3
38. Determination of Moisture Content of aggregate by []
A. Drying method B. Displacement method
C. Calcium Carbide method D. All of the above.
39. Factors which promote alkali aggregate reaction are []
A. Reactive type of aggregate B. High alkali content
C. Availability of Moisture D. All the above
40. In concrete the fine aggregates is used to []
A. Fill up the voids in cement B. Fill up the voids in coarse aggregate
C. Fill up the voids in sand D. All the above