



- Systematic arrangement of calculations, neat drawings and clear answers are essential.
- Any data not given can be reasonably assumed. The exam consists of four questions. All of them must be answered. All dimensions in meter.

14- For RC circular deep tanks maximum loads are

- A) In vertical direction only
- B) In horizontal direction only
- C) In both vertical and horizontal directions
- D) All of the above
- E) None of the above

15- For achieving a good bond in RC water tanks

- A) Ripped steel rod reinforcement are used
- B) Small diameters of steel rod reinforcement are used
- C) High cement content are used
- D) Additives and compaction are used
- E) All of the above
- F) None of the above

16- For RC continuous deep beams, it is recommended to

- A) Extend the full amount of the tension steel at the middle of the spans to supports
- B) Half the tension steel required at the counter liner of the supports must be arranged over the full length of the adjoining spans and the other half to be extended to distance equal to $0.3L$ on each side of the center line of the support
- C) (A) and (B)
- D) All of the above
- E) None of the above

17- For save RC structures against fire it was recommended to use

- A) Gravel as course aggregate
- B) Limestone as course aggregate
- C) Sand stone as course aggregate
- D) All of the above
- E) None of the above

18- Factors affecting crack width in RC structures are

- A) Concrete cover and steel type
- B) Characteristic strength of concrete
- C) Stresses in steel reinforcement
- D) Largest diameters of steel beams
- E) All of the above

19- According to great fire of London

- A) First British standards (BS) was born in 1666
- B) First British standards (BS) was born in 1871
- C) First British standards (BS) was born in 2001
- D) First British standards (BS) was born in 40 B.C.
- E) All of the above

20- The most popular standard for fire testing and design of RC structures are

- A) ASTM E-119 and ISO 834
- B) ASTM E-119 only
- C) ISO 834 only
- D) NFPA-5000 building code
- E) All of the above