



پیامبر اعظم (ص): آنکه در جست و جوی دانش بیرون رود، در راه خداست تا آنگاه که باز گردد..

Fill in the blanks with the given words.

- Engineering has developed from of the ways natural and constructed systems react and from development of empirical equations that provide bases for design.
 - constructions
 - observations
 - installations
 - destructions
- All building construction projects include some elements in common – design,, and legal considerations.
 - financial
 - essential
 - schedule
 - survival
- Hydraulic-pressed bricks, have a dense surface which makes them highly resistance to weathering and thus suitable for
 - arch works
 - modern works
 - masonry works
 - facing works
- Because mortar is slow-drying and slightly more hazardous to work with, it is less often used for new buildings, which take a different approach to damp prevention.
 - lime
 - cement
 - gypsum
 - sand



5. Solid masonry can be quite economical in some applications while susceptibility to and collapse is a major issue.
- bond
 - insulation
 - earthquake
 - plaster
6. In reinforced concrete structures where there would be extreme tension forces, the rebar may be bent into a
- hook
 - mesh
 - structure
 - compression
7. In welding process, the welding region is sometimes protected by some type of inert or semi-inert gas, known as a
- filling gas
 - shielding gas
 - fabricate gas
 - oxygen gas
8. footings are designed to accommodate eccentric loads.
- strip
 - continuous
 - mat
 - cantilever
9. One of the usages of a dam is in
- duration
 - repetition
 - civilization
 - irrigation



10. coordinate the effort of different groups of project participants.
- Landscape architects
 - Contractors
 - Facility managers
 - Construction managers

Choose the correct answer for the following questions.

11. Civil engineering is the art of directing the great sources of the power of Nature for the use and convenience of Human Kind. The term “directing” means:
- providing
 - dealing with
 - controlling
 - making
12. In physics, a rigid body is an idealization of a solid body of finite size in which deformation is neglected. In other words:
- the distance between any two given points of a rigid body changes.
 - the solid body deforms if external forces are applied.
 - the solid body is too hard to deform.
 - deformation is allowed for a rigid body.
13. Courses in a brick wall are:
- The bricks laid in rows.
 - The bricks laid to expose their ends.
 - The bricks laid to expose their sides.
 - The bricks laid to expose their heads.
14. Many old buildings have been damaged by being repointed in modern harder cements, which are not porous and change the water handling profile in an undesired way. This means that:
- It is better to use modern hard cement in modern buildings.
 - It is better not to use modern hard cement in modern buildings.
 - It is better not to use modern hard cement in old buildings.
 - It is better to use modern hard cement in old buildings.



15. Which tools are used when corners of the building have to be build to run in the bricks between?
- corner blocks
 - sieves
 - line and pins
 - Tingle plates
16. What is the effect of the ridges on the rebar?
- Increasing the surface area to resist tension forces.
 - Increasing tension resistance of the concrete.
 - Increasing the cross section area of the rebar.
 - Increasing the tension force of the rebar.
17. Which of the following answers are precautions of welding?
- Smaw,gtaw and saw
 - Electric shock and poisonous fumes.
 - Direct or alternating current (DC or AC)
 - Electric arc, laser and ultrasound
18. What Kind of loads may create significant dynamic effects?
- Dead load
 - Gravity weight
 - Wind gusts
 - Settlement of foundation
19. What kind of dam is designed to be overtaped?
- Dry
 - Dike
 - wing
 - Weir
20. What does create the need for design profession trained in all phases of the projects?
- The increasing complexity of construction projects
 - The demand for the room in congested areas
 - The military engineering
 - Preparing tender documents