

Question Bank

B. Sc. (Regular) (Part- III) (Semester IVI) Examination 2022

Geology

Engineering Geology and Geo-techniques (Paper- XI) (C.B.C.S.)

Sub. Code: 79705

Fill in the blanks with appropriate answer:

1. The concrete walls on either side of the spillway is known as---
A) Side Wall B) Key Wall C) Training Wall D) Key Wall
2. The excess quantity of rock broken and removed from the proposed tunnel is known as ---
A) Caving B) Over Break C) Excavation D) Rock Slip
3. Coarse grained open packed rocks are called as ---.
A) Elastic B) Semi elastic C) Non elastic D) None of these
4. --- are not suitable sites for a reservoir.
A) Anticlines B) Valleys C) Flatlands and plains D) None of these
5. The strain at a point is ----.
A) Scalar B) Vector C) Tensor D) None of these
6. The portion of the dam that touches the ground on downstream side is---.
A) Toe B) Heel C) Axis D) Spillway
7. The earth dam is constructed mainly by ---.
A) Soil B) Rocks C) Sand D) None of these
8. A brittle material has ---zone.
A) Large plastic B) No Plastic C) Elastic D) None of these
9. Triaxial Test used to assess behavior of rock to ---.
A) Confining Pressure B) Directed Pressure C) Both of these D) None of these
10. In most engineering calculations --- density is referred.
A) Saturated B) Dry C) Bulk D) None of these

11. The ability of porous solid to transmit fluid is ---
A) Porosity B) Permeability C) Transmissivity D) None of these
12. Tunnel constructed for water supply is known as---
A) Aquiclude B) Aquiduct C) Aquifer D) Aquitard
13. Sloping surface of valley upon which dam rests is known as---
A) Pier B) Abutment C) Side wall D) Relief surface
14. For a topography having a wide canyon with gentle slope, the suitable dam type is---
A) Arch Dam B) Buttress Dam C) Gravity Dam D) None of these
15. --- dam has a triangular profile
A) Gravity B) Arch C) Earthen D) None of these
16. The upstream portion of the dam where it conducts the bearing is known as ---.
A) Toe B) Abutment C) Axis D) Heel
17. --- dams are built over wide valleys.
A) Arch B) Embankment C) Gravity D) None of these
18. --- are not suitable sites for a reservoir.
A) Anticlines B) Valleys C) Flatlands and plains D) None of these
19. The portion of the dam that touches the ground on downstream side is---.
A) Toe B) Heel C) Axis D) Spillway
20. The earth dam is constructed mainly by ---.
A) Soil B) Rocks C) Sand D) None of these
21. Heel is that portion of dam that touches the ground on --- side.
A) Downstream B) Back C) Upward D) Upstream
22. The resistance of the rock to the shearing forces is called as --- strength.
A) Crushing B) Shear C) Durability D) Heel
23. --- factor is of vital consideration in bridge construction.
A) Road B) Scour C) Shear D) Transverse
24. --- of the following material is least porous.
A) Silt B) Till C) Gravel D) Clay
25. Brazilian Test is used to determine --- strength.
A) Tensile B) Shear C) Bulk D) None of these

26. Increased pore pressure has an adverse effect on--- strength of the rock.
 A) Crushing B) Shearing C) Transverse D) None of these
27. Sagging effect is caused by load of ----
 A) Rocks B) Material C) Impounded water D) None of these
28. The site is unfavorable for a highway if water table is ---.
 A) Low B) High C) Medium D) None of these
29. The inverse ratio between the axial and transverse strain is--
 A) Triaxial Test B) Young Modulus C) Compression D) Poisson's Ratio
30. The excess quantity of rock broken and removed from the proposed tunnel is known as --
 A) Caving B) Over Break C) Excavation D) Rock Slip
31. The Young modulus of a material is equal to stress/strain is ---.
 A) Within the elastic limit B) Within the yield point C) The elastic limit
 D) None of these
32. Maximum force expressed per unit area which a stone can withstand is---.
 A) Confining Pressure B) Crushing Strength C) Both of these D) None of these
33. In most engineering calculations --- density is referred.
 A) Saturated B) Dry C) Bulk D) None of these
34. For a topography having a wide canyon with gentle slope, the suitable dam type is---
 A) Arch Dam B) Buttress Dam C) Gravity Dam D) None of these
34. The resistance of soil to shearing forces is called as---
 A) Gravity B) Shearing strength C) Compressive strength D) None of these
35. The structure on the side of a dam that contains flow of excess water is ---
 A) Spill way B) Inspection Chamber C) Gallery D) Void
36. Arc dams are better suited for --- valleys with strong abutments.
 A) U shaped B) Broad C) Narrow D) None of these
37. Tunnel through which water is allowed to flow under a pressure head is--- tunnel.
 A) Subway B) Pedestrian C) Navigational D) Pressure
38. The concrete walls on either side of the spillway is known as---
 A) Side Wall B) Key Wall C) Training Wall D) Key Wall

39. The excess quantity of rock broken and removed from the proposed tunnel is known as ---

- A) Caving B) Over Break C) Excavation D) Rock Slip

40. The inclined canal through which water is discharged is called as—

- A) Toe B) Chamber C) Chute D) Gallery

Answer any two of the following:

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1. Describe various engineering properties of rocks.
2. Describe various types of tunnels.
3. Describe soil groups of India.
4. Describe significance of jointing during tunneling in hard rocks.
5. Describe various types of bridges.
6. Explain in detail significance of engineering geology
7. Explain seepage problem in tunnels and its preventive measures.
8. Describe various types of tunnels.
9. Describe various types of dams.
10. Explain in detail geological problems caused to reservoirs.
11. What geological sites are suitable for bridges?
12. Explain various geological factors that need to be determined for a site selection of a dam.
13. Describe significance of basalt as a building stone.
14. Explain engineering properties of a soil.
15. Explain various environmental considerations in a site selection of any engineering construction.

Write notes on the following:

1. Embankment dam
2. Compressive strength
3. Upliftment pressure
4. Modulus of elasticity
5. Porosity
6. Soil Compressibility
7. Silting of reservoir
8. Arch Dam
9. Engineering properties of basalts
10. Density
11. Tensile strength

12. Durability
13. Truss bridge
14. Gravity Dam
15. Water pressure
16. Shear strength
17. Durability
18. Soil Texture
19. Permeability
20. Pressure Tunnel