1. Total strain energy theory for the failure of a material at elastic limit, is known

a. Guest's or Trecas' theory

b. St. Venant's theory

c. Rankine's theory

d. Haig's theory

e. Von Mises's theory.

2. The shape factor of standard rolled beam section varies from

a. 1.10 to 1.20

b. 1.20 to 1.30

c. 1.30 to 1.40

d. 1.40 to 1.50

3. The point of contraflexure is the point where

a. B.M. changes sign

b. B.M. is maximum

c. B.M. is minimum

d. S.F. is zero.

4. A material which obeys Hook's law, is subjected to direct stress σ0. At its elastic limit, the following statement is true,

a. Strain is equal to

b. Maximum shear stress =

c. Strain energy =

d. Shear strain energy =

e. All the above.

5. The normal component of a force inclined through θ° is obtained by multiplying the force by

a. sin θ

b. cos θ

c. tan θ

d. sin θ cos θ

e. sin2θ

6. The accuracy of measurement in chain surveying, does not depend upon

a. length of the offset

b. scale of the plotting

c. importance of the features

d. general layout of the chain lines.

7. If S is the length of a subchord and R is the radius of simple curve, the angle of deflection between its tangent and sub-chord, in minutes, is equal to

a. 573 S/R

b. 573 R/S

c. 171.9 S/R

d. 1718.9 R/S

e. 1718.9 S/R.

8. In chain surveying tie lines are primarily provided

a. to check the accuracy of the survey

b. to take offsets for detail survey

c. to avoid long offsets from chain lines

d. to increase the number of chain lines.

9. Closed contours of decreasing values towards their centre, represent

a. a hill

b. a depression

c. a saddle or pass

d. a river bed.

10. The intercept of a staff

a. is maximum if the staff is held truly normal to the line of sight.

b. is minimum if the staff is held truly normal to the line of sight.

c. decreases if the staff is tilted away from normal

d. increases if the staff is tilted towards normal.

11. The real image of an object formed by the objective, must lie

a. in the plane of cross hairs

b. at the centre of the telescope

c. at the optical centre of the eye-piece

d. anywhere inside the telescope.

12. The radius of curvature of the arc of the bubble tube is generally kept

a. 10 m

b. 25 m

c. 50 m

d. 100 m

13. Black cotton soil is unsuitable for foundations because its

a. bearing capacity is low

b. permeability is uncertain

c. particles are cohesive

d. property to undergo a volumetric change due to variation of moisture content.

14. The foundation in which a cantilever beam is provided to join two footings, is known as

a. strip footing

b. strap footing

c. combined footing

d. raft footing

e. none of these.

15. The foundations are placed below ground level, to increase

a. strength

b. workability

c. stability of structure

d. all the above.

16. Pick up the commonly adopted geophysical method in civil engineering from the following :

a. the seisomic method

b. electrical resistivity method

c. gravitational method

d. magnetic method

e. both (a) and (b) of the above.

17. The under surface of an arch, is called

a. soffit

b. intrados

c. haunch

d. back.

18. Pick up the correct statement from the following :

a. inclined borings are made for taking samples under existing structures

b. inclined borings are occasionally used instead of vertical holes.

c. the spacing of inclined borings is kept such that one bore hole is vertically above the bottom of an adjacent bore hole.

d. all the above.

19. For ensuring quality of concrete, use

a. single sized aggegates

b. two sized aggregate

c. graded aggregates

d. coarse aggregates.

20. The mixture of different ingredients of cement, is burnt at

a. 1000°C

b. 1200°C

c. 1400°C

d. 1600°C

e. 1800°C

21. The risk of segregation is more for

a. wetter mix

b. larger proportion of maximum size aggregate

c. coarser grading

d. all the above.

22. For quality control of Portland cement, the test essentially done is

a. setting time

b. soundness

c. tensile strength

d. consistency

e. all the above.

23. Permissible compressive strength of M 300 concrete grade is

a. 100 kg/cm2

b. 150 kg/cm2

c. 200 kg/cm2

d. 250 kg/cm2

e. 300 kg/cm2

24. Pick up the incorrect statement from the following:

a. An activity of a project is denoted by an arrow on the net work

b. The tail of the arrow indicates the start of the activity

c. The head of the arrow indicates the end of the activity

d. The arrows are drawn to scale from left to right

e. Each activity consumes a given time.

25. The performance of a specific task in CPM, is known

a. Dummy

b. Event

c. Activity

d. Contract.

26. Mile Stone charts were invented in the year of

a. 1910

b. 1920

c. 1930

d. 1940

e. 1950

27. Which one of the following represents an activity

a. excavation for foundation

b. curing of concrete

c. setting of question paper

d. preparation of breakfast

e. all the above.

28. If D is the duration, ES and EF are the earliest start and finish, LS and LF are latest start and latest finish time, then the following relation holds good

a. EF = ES + D

b. LS = LF - D

c. LF = LS + D

d. D = EF - ES

e. all the above.

29. Frederick W. Taylor introduced a system of working known as

a. line organisation

b. line and staff organisation

c. functional organisation

d. effective organisation.

30. The quantity of seepage of water through soils is proportional to

a. coefficient of permeability of soil

b. total head loss through the soil

c. neither (a) nor (b)

d. both (a) and (b).

31. Minimum size of the particles of silt soil, is

a. 0.002 mm

b. 0.04 mm

c. 0.06 mm.

d. 0.08 mm

e. 1 mm

32. Pick up the correct statement from the following:

a. The rise of the ground surface due to frost action is called frost heave.

b. The freezing of water is accompained by a volume increase of 9%.

c. Below freezing point, higher soil suction develops.

d. The magnitude of frost heave decreases as the degree of saturation of soil decreases

e. All the above.

33. The lateral earth pressure on a retaining wall

a. is equal to mass of the soil retained

b. proportional to the depth of the soil

c. proportional to the square of the depth of the soil

d. proportional to the internal friction of the soil

e. none of these.

34. The minimum water content at which the soil retains its liquid state and also possesses a small shearing strength against flowing, is known

a. liquid limit

b. plastic limit

c. shrinkage limit

d. permeability limit.

35. Which one of the following statements is true ?

a. Clays are more porous than sands

b. Pressure of organic matter in a soil decreases the bearing capacity of the soil

c. Aluminous cement is used for foundations in soils with chemical deposits

d. All the above.

36. The brick work is measured in sq metre, in case of

a. Honey comb brick work

b. Brick flat soling

c. Half brick walls or the partition

d. All the above.

37. In long and short wall method of estimation, the length of long wall is the centre to centre distance between the walls and

a. breadth of the wall

b. half breadth of wall on each side

c. one fourth breadth of wall on each side

d. None of these.

38. Pick up the correct statement from the following:

a. The bent up bars at a support resist the negative bending moment

b. The bent up bars at a support resist the sharing force

c. The bending of bars near supports is generally at 45°

d. All the above.

39. Pick up the correct statement in case of water supply.

a. Pipes laid in trenches and pipes fixed to walls are measured separately

b. Cutting through walls and floors are included with the item

c. Pipes are classified according to their sizes and quality

d. In laying pipes, the method of jointing and fixing is specifically specified

e. All the above.

40. Pick up the item of work not included in the plinth area estimate

a. Wall thickness

b. Room area

c. Verandah area

d. W.C. area

e. Courtyard area.

41. The ratio obtained by dividing 'quick assests' by current liabilities is called

a. Turnover ratio

b. Acid test ratio

c. Solvency ratio

d. None of these.

42. Which one of the following questions is relevant to the construction estimates :

a. Did the estimators precisely evaluate site conditions ?

b. Did the estimators use short cut methods which may be un realistic in their situation ?

c. How much money will the contractor's risk, loosing if he Were to submit bid on the raw estimate of cost.

d. All of these

43. Which one of the following is included in financial ratios of the firm ?

a. Profitability ratio

b. Liquidity ratio

c. Turnover ratio

d. Ratio of overall performances

e. All of these