\*\*\*Engineer\*\*\*

1. Pick up the correct statement from the following:

a. For I sections, the shear centre coincides with the centroid of the cross section of the beam

b. For channels, the shear centre does not concide its centroid

c. Bending loads should pass through the shear centre to avoid twisting

d. All the above.

2. Principal planes are subjected to

a. normal stresses only

b. tangential stresses only

c. normal stresses as well as tangential stresses

d. none of these.

3. Pick up the correct statement from the following:

a. In a loaded beam, the moment at which the entire section of the beam becomes fully plastic, is called plastic moment

b. In a fully plastic stage of the beam, the neutral axis divides the section in two sections of equal area

c. The ratio of plastic moment to the yield moment, is called shape factor

d. All the above.

4. If a rectangular beam measuring 10 x 18 x 400 cm carries a unformly distributed load such that the bending stress developed is 100 kg/cm2. The intensity of the load per metre length, is

a. 250 kg

b. 260 kg

c. 270 kg

d. 280 kg.

5. A simply supported beam carrying a uniformly distributed load over its whole span, is propped at the centre of the span so that the beam is held to the level of the end supports. The reaction of the prop will be

a. 3/8th the distributed load

b. 5/8th the distributed load

c. distributed load.

d. none of these.

6. Pick up the correct statement from the following :

a. the tangent screw enables to give small movement under conditions of smooth and positive control

b. standing on the tripod is the levelling head or trib arch

c. the levelling screws are used to tilt the instrument so that its rotation axis is truly vertical

d. all the above.

7. The most reliable method of plotting a theodolite traverse, is

a. by consecutive co-ordinates of each station

b. by independent co-ordinates of each station

c. by plotting included angles and scaling off each traverse leg

d. by the tangent method of plotting.

8. Pick up the correct statement from the following :

a. Cross staff is used for setting out right angles

b. Gradiometer is used for setting out any required gradient

c. Line ranger is used for locating intermediate stations on a survey line

d. All the above.

9. The bearings of the lines AB and BC are 146° 30' and 68° 30'. The included angle ABC is

a. 102°

b. 78°

c. 45°

d. none of these.

10. 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.

11. Two concave lenses of 60 cm focal length are cemented on either side of a convex lens of 15 cm focal length. The focal length of the combination is

a. 10 cm

b. 20 cm

c. 30 cm

d. 40 cm

12. Keeping the instrument height as 1.5 m, length of staff 4 m, the slope of the ground as 1 in 10, the sight on the down-slope, must be less than

a. 30 m

b. 25 m

c. 20 m

d. 15 m

13. In the cement the compound quickest to react with water, is

a. Tricalcium aluminate

b. Tetra-calcium alumino-ferrite

c. Tricalcium silicate

d. Dicalcium silicate.

14. The initial setting time of lime-pozzolana, is

a. 30 minutes

b. 60 minutes

c. 90 minutes

d. 120 minutes.

15. The variety of pig iron used for the manufacture of steel by Bessemer process, is

a. Bessemer pig

b. Grey pig

c. White forge pig

d. Mottled pig.

16. Vanadium steel is generally used for

a. railway switches and crossing

b. bearing balls

c. magnets

d. axles and springs.

17. Plastic

a. consists of natural or synthetic binders

b. finished products are rigid and stable at normal temperature

c. is capable of flow when necessary heat and pressure are applied

d. All the above.

18. The commonly used colour pigment in paints, is

a. carbon black

b. iron oxide

c. lamp black

d. all the above.

19. Construction joints are provided

a. where the member is supported by other member

b. at 18 m apart in huge structures

c. in concrete wall at sill level of windows

d. all the above.

20. After casting, an ordinary cement concrete on drying

a. expands

b. mix

c. shrinks

d. none of these.

21. The increased cohesiveness of concrete, makes it

a. less liable to segregation

b. more liable to segregation

c. more liable to bleeding

d. more liable for surface scaling in frosty weather

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

a. 1200°C

b. 1400°C

c. 1600°C

d. 1800°C

23. The bulk density of aggregates does not depend upon :

a. specific gravity of aggregates

b. grading of aggregates

c. size and shape of the container

d. none of these.

24. Degree of saturation of a natural soil deposit having water content 15%, specific gravity 2.50 and void ratio 0.5, is

a. 50%

b. 60%

c. 75%

d. 80%

25. The seepage force in a soil, is

a. perpendicular to the equipotential lines

b. proportional to the exit graident

c. proportional to the head loss

d. all the above.

26. A compacted soil sample using 10% moisture content has a weight of 200 g and mass unit weight of 2.0 g/cm3. If the specific gravity of soil particles and water are 2.7 and 1.0, the degree of saturation of the soil is

a. 11.1%

b. 55.6%

c. 69.6%

d. none of these.

27. The clay soil mainly consists of

a. Montomorillonite

b. Illites

c. Vermiculite

d. All the above.

28. 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.

29. If the failure of a finite slope occurs through the toe, it is known as

a. slope failure

b. face failure

c. base failure

d. toe failure.

30. If the total float and duration of an activity are 5 and 10 days respectively, the particular activity can be

a. started 5 days later

b. completed 5 days later

c. performed at slower rate in 15 days

d. all the above.

31. 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. LS = LF - D

b. LF = LS + D

c. D = EF - ES

d. all the above.

32. The object of technical planning, is

a. preparation of estimates

b. initiating the procurement action of resources

c. taking remedial action for likely bottleneck in the execution

d. all the above.

33. Works costing less than Rs. 20,000 are treated as

a. projects

b. major projects

c. minor projects

d. all the above.

34. A critical ratio scheduling

a. determines the status of each activity

b. adjusts automatically changes in activity progress

c. is a dynamic system

d. none of these.

35. The time which results in the leasi, possible construction cost of an activity, is known

a. normal time

b. slow time

c. crash time

d. standard time.

36. The inspection pit or chamber is a manhole provided in a base drainage system

a. at every change of gradient

b. at every 30 m intervals

c. at the point where vertical soil pipe joins the house drain

d. All the above.

37. Pick up the incorrect statement from the following:

a. Dimensions are measured to the nearest 0.01 m

b. Areas are measured to the nearest 0.01 sq.m

c. Cubic contents are measured to the nearest 0.1 cm m

d. Weights are measured to the nearest 0.001 tonnes

38. The height of the sink of wash basin above floor level is kept

a. 60 cm

b. 70 cm

c. 75 cm to 80 cm

d. 80 cm

39. The excavation exceeding 1.5 m in width and 10 sq.m in plan area with a depth not exceeding 30 cm, is termed as

a. Excavation

b. Surface dressing

c. Cutting

d. Surface excavation.

40. 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.

41. For drawing of small objects, the scale used is

a. enlarged

b. full size

c. reducing

d. all of the above

42. "Perspective Drawing" is an approximate representation on a flat surface of an image.......

a. as it is perceived by the eye

b. as it is drawn on computer

c. of a free hand drawing

d. as it is felt by the hands

43. The other name of axonometric projection is

a. one plane projection

b. two plane projection

c. three plane projection on

d. all of the above

44. The area occupied by Ao (drawing sheet) is ........... times the area occupied by A4 (drawing sheet)

a. 2

b. 4

c. 8

d. 16

45. Pick up the element of the cost from the following:

a. direct material

b. direct labour

c. Over head

d. All of these

46. Both architect and engineer make use of the cost estimate of the project:

a. for site selection

b. for designing of the project

c. for choosing alternatives

d. All of these

47. The project contractor relies on the cost of the estimate :

a. for submission of a competitive bid for a lumpsum contract

b. for a unit price contract

c. for preparation of a definitive estimate to help negotiate contract.

d. All of these

48. What is the provision in Engineer Council Act and Regulation in Nepal for the punishment na person practices Engineering work without registering into the Nepal Engineering Council?

a. Rs 1000 find or imprisonment of 1 month or both

b. Rs 5000 fine

c. Rs10000 fine

d. Rs3000 fine or Imprisonment of 3 month of both

49. Which one is correct with respect to values, morals and ethics?

a. values are the rules

b. morals are the personal character

c. ethics are professional sstandards

d. all of the above

50. In general, Nepal Engineering Council mecting per year should be held:

a. 2times

b. 3times

c. 4times

d. 5times