







- Q. 1 Relative positions of various points on the ground are determined in the horizontal plane by
- (a) Leveling
  - (b) Surveying
  - (c) Construction Engineering
  - (d) Project management

**Ans.** : (b)

**Explanation :** Surveying deals with measurements in horizontal plane.

- Q. 2 Relative positions of various points on the ground are determined in the vertical plane by
- (a) Leveling
  - (b) Surveying
  - (c) Construction Engineering
  - (d) Project management

**Ans.** : (e)

**Explanation :** Leveling deals with measurements in vertical plane.

- Q. 3 The bed profile of river, sea or lake is studied in ..... surveying
- (a) City
  - (b) Hydrological
  - (c) Hydrographic
  - (d) Topographic

**Ans.** : (c)

- Q.~4 The correct idea of ground profile can be obtained in ..... surveying
- (a) city
  - (b) Hydrological
  - (C) Hydrographic
  - (d) Topographic

**Ans.** : (d)

- Q. 5 Details like buildings, roads, water supply lines etc are located by ..... surveying
- (H) city
  - (b) Hydrological
  - (c) Hydrographic
  - (d) Topographic

**(Please refer section 2.2)**

**Ans.** : (a)

- 6 The part of the structure above ground is known as -----
- (a) Substructure
  - (b) superstructure
  - (C) plinth
  - (d) mega structure

**(Please refer section 2.3)**

**Ans.** : (b)

- 7 The part of the structure below ground is known as -----
- (a) Substructure
  - (b) superstructure
  - (C) plinth
  - (d) mega structure

**Ans.** : (l)

- Q. 8 The part of the structure between ground level and first floor level is known as -----  
(a) Substructure (b) superstructure  
(c) P<sub>mt</sub> (d) mega structure **Ans. : (c)**  
**(Please refer senior 2.3)**

- O. g The details of the objects are studied without being in touch with those objects is -----  
(a) Surveying (b) Leveling  
(C) Remote Sensing (d) Geodesy **Ans. : (c)**

**Explanation :** In remote sensing the objects are sensed without being in touch with them.

- Q. 10 The area of a plot having irregular boundaries is to be measured. Which branch will enable you to do so?  
(a) Construction Engineering (b) Surveying  
(c) Town Planning (d) Quantity Surveying **Ans. : (b)**

**Explanation :** Surveying deals with the measurements in the horizontal plane.

- Q. 11 A water line is to be laid with the given slope. State the branch which will help you.  
(a) Construction Engineering (b) Surveying  
(c) Town Planning (d) Quantity Surveying **Ans. : (b)**

**Explanation :** Surveying deals with the measurements in the horizontal plane.

- Q. 12 Lay out plan of a residential building is to be prepared. State the branch which will help you.  
(a) Construction Engineering (b) Surveying  
(c) Town Planning (d) Quantity Surveying **Ans. : (b)**

**Explanation :** Surveying deals with the measurements in the horizontal plane from which lay out plan may be prepared.

- Q. 13 Testing of constructional material like bricks is to be carried out. State the branch which will help you.  
(a) Construction Engineering (b) Surveying  
(c) Town Planning (d) Quantity Surveying **Ans. : (a)**

**Explanation :** Construction Engineering gives the necessary details about the tests.

- Q. 14 Optimal use of various resources for proper planning of various activities is ensured in \_\_\_\_\_.  
**(8) Construction Engineering** (b) Surveying  
**(C) Town Planning** (d) Project Management **Ans. : (d)**

**(please refer section 2.4)**

**Explanation :** Framed structure will be appropriate from strength point of view.

- Q. 16 The appropriate sequencing of various activities is studied in \_\_\_\_\_.  
(a) Construction Engineering      (b) Surveying  
(c) Town Planning      (d) Project Management

**Ans. : (d)**

**(Please refer section 2.4)**

**G. 17** The duration of a project is increased due to unavailability of the material and the labor. Which branch will help you to suggest suitable measures?

(a) Construction Engineering      (b) Surveying  
(c) Town Planning      (d) *Project Management*

**Ans.** : (d)

**Explanation :** Project management gives the necessary corrective measures.

- Q. 18 A suitable site for construction of a dam is to be selected. Which branch is not directly concerned? -

(a) Water Resources Engineering      (b) Surveying  
(c) Project Management      (d) Environmental Engineering      Ans. : (c)

**Explanation:** Project Management comes into picture during actual execution.

- 0.19 A suitable site for the construction of a national highway is to be selected. Which branch is not of direct concern?

  - a) Transportation Engineering (Et) Surveying
  - c) Project Management (d) both (award (b))

Ans. : (c)

**Explanation :** Project Management ~comes in to picture during actual execution.

- Q. 20 A suitable site for construction of a Wales. treatment plant is to be selected. Which branch is not directly useful?

  - (a) Environmental Engineering
  - (b) Surveying
  - (c) Project Management
  - (d) both (a) and (b)

Ans. : (c)

**Explanation :** Project Management comes in to picture during actual execution.

- O.21 A suitable site for construction of a dam is selected. Which of the following branches will help you to determine the reservoir capacity? " if  
(a) Surveying (b) Construction Engineering :-  
(c) Project management (d) Fluid Mechanics

**Explanation :** Surveying (leveling) is used to find reservoir capacity.

- Q. 22 Distribution of water stored in the dam is done by constructing -----  
 (a) Water tank (b) spillway (c) Road (d) Canal Ans. : (d)

Canal is used to distribute the water from one point to another point.

Q. 23 The road having its wearing surface consisting of clean, crushed Ag FE at, mechanically interlocked by rolling and bound together with filter material and Q a18 laid on a prepared base course is called :  
 (a) Earth road (b) WBM road  
 (c) Cement concrete road (d) Bituminous road Ans. : (b)

**(Please refer section 2.5.3)**

Q. 24 Various types of hydraulic machines are studied in  
 (a) Geotechnical Engineering (b) Quantity Surveying  
 (c) Transportation Engineering (d) Fluid Mechanics Ans. : (d)

**(Please refer section 2.6.1)**

Q. 25 A bridge is to be constructed. State which branch is not of direct concern?  
 (a) Geotechnical Engineering (b) Quantity Surveying  
 (c) Transportation Engineering (d) Environmental Engineering-- Ans. : (d)

**Explanation** z- Environmental Engineering deals with purification of water not construction of dam.

Q. 26 Which of the following is a type of a road classified according to traffic?  
 (a) National Highways (b) State Highways  
 (c) Major District Roads (d) Light traffic roads Ans. : (d)

**(Please refer section 2.5.2)**

Q. 27 Which of the following is a type of a road Classified according to tonnage?  
 (a) National Highways (b) State Highways  
 (c) Major District Roads (d) Light traffic roads Ans. : (d)

**(Please refer section 2.5.2)**

Q. 28 Which of the following is a type of a road classified according to location and function?  
 (a) National Highways (b) Very heavy traffic roads  
 (C) Medium traffic roads (d) Light traffic roads Ans.: (8)

**(Please refer section 2.5.2)**

Q. 29 Which of the following road is maintained by State Government?  
 (a) National Highways (b) State Highways  
 (C) Major District Roads (d) Village roads Ans. : (b)

**(Please refer section 2.5.2.1)**

G.37 which of the following is a type of a road classified according to tonnage?

- |                          |                              |
|--------------------------|------------------------------|
| (a) National Highways    | (b) State Highways           |
| (C) Major District Roads | (d) Very heavy traffic roads |
- Ans. : (d)

**(Please refer section 2.5.2)**

Q.38 Which of the following is a type of a road classified according to location and function?

- |                          |                              |
|--------------------------|------------------------------|
| (a) Medium traffic roads | (b) Very heavy traffic roads |
| (c) Major District Roads | (d) Light traffic roads      |
- Ans. : (c)

**(Please refer section 2.5.2)**

O.39 \_\_\_\_\_ has lower design specifications than Major District Roads

- |                          |                          |
|--------------------------|--------------------------|
| (a) National Highways    | (b) State Highways       |
| (c) Major District Roads | (d) Other District Roads |
- Ans. : (d)

**(Please refer section 2.5.2.1)**

Q.40 The road pavements which can change their shape to some extent without rupture are

- \_\_\_\_\_.
- |                          |                     |
|--------------------------|---------------------|
| (a) Semi rigid pavements | (b) Rigid pavements |
| (C) Flexible pavement    | (d) Loose pavement  |
- Ans. : (c)

**(Please refer section 2.5.4)**

O.41 The road pavements which cannot change their shape to some extent without rupture are

- \_\_\_\_\_.
- |                          |                    |
|--------------------------|--------------------|
| (a) Semi rigid pavements | (b) Rigid pavement |
| (c) Flexible pavement    | (d) Loose pavement |
- Ans. : (b)

**(Please refer section 2.5.4)**

O.42 The durability of ----- pavement is relatively less.

- |                          |                     |
|--------------------------|---------------------|
| (a) Semi rigid pavements | (b) Rigid pavements |
| (c) Flexible pavement    | (d) Loose pavement  |
- Ans. : (c)

**(Please refer section 2.5.4.1)**

O.43 The durability of ----- pavement is relatively more -

- |                          |                      |
|--------------------------|----------------------|
| (a) Semi rigid pavements | (b) Rigid pavements  |
| (ii) Flexible pavement   | (d) Loose pavement-- |

Ans. : (b)

**(Please refer section 2.5.4.1)**

Q.44 Initial cost of flexible pavement is ----- that for rigid pavement.

- (a) More than      (b) Less than      (c) same      (d) None of these
- Ans. : (b)

**(Please refer section 2.5.4.1)**

- Q. 54 In ----- behavior of fluid is studied at the motion with considering pressure forces  
(a) Fluid Dynamics (b) Fluid Kinematics  
(C) Fluid Statics (d) Fluid Kinetics Ans. : (a)

(Please refer section 2.6)

Q. 55 Flow through pipes and canals is covered in  
(a) Structural mechanics (b) Computational Mechanics  
(c) Fluid Mechanics (d) Applied Mechanics Ans. : (c)

(Please refer section 2.6.2)

Q. 56 Design of spillways and control gates is covered in  
(a) "Structural mechanics (b) Computational Mechanics  
(c) Fluid Mechanics (d) Applied Mechanics Ans. : (c)

(Please refer section 2.6.1)

Q. 57 An Ideal Fluid is  
(a) Compressible and viscous (b) Incompressible and non viscous  
(c) Incompressible and viscous (d) Compressible and non viscous Ans. : (b)

(Please refer section 2.6)

Q. 58 A Heal fluid is  
(a) Compressible and viscous (b) Incompressible and non viscous  
(c) incompressible and viscous (d) Compressible and non viscous Ans. : (a)

(Please refer section 2.6)

Q. 59 Construction and maintenance Of dams, canals is covered in  
(a) Fluid Mechanics (b) Applied Mechanics  
(c) Irrigation Engineering (d) Sun/eying Ans. : (c)

(Please refer section 2.7.1)

Q. 60 Appropriate amount of water supply to different crops is studied in  
(a) Fluid Mechanics (b) Applied Mechanics  
(C) Irrigation Engineering (d) Surveying Ans. : (c)

**Explanation :** irrigation Engineering suggests crop rotation as well as the water demand.

Q. 61 Study of R.C.C. column design is covered in  
(a) Fluid Mechanics (b) Structural Engineering  
(c) Irrigation Engineering (G) Surveying Ans. : (b)

(Please refer section 2.8)

- 0.70 Designing proper type of foundation is covered in  
(a) Fluid Mechanics (b) Structural Engineering  
(C) Irrigation Engineering (d) Foundation Engineering

Ans. : (d)

(Please refer section 2.9.2)

- 0.71 Presence of water table ----- ultimate bearing capacity.  
(a) Increases (b) Decreases  
(c) sometimes (a) sometimes (b) (d) Can't say.

Ans. : (b)

**Explanation :** Presence of water reduces ultimate bearing capacity.

- Q.72 Knowledge of Geotechnical Engineering helps in  
(a) Designing spillways (b) Designing RCC Column  
(c) Designing suitable foundation (d) Designing pipe network

Ans. : (e)

(Please refer section 2.9.1.1)

- Q.73 Soil testing is an important concern in  
(a) Fluid Mechanics (b) Structural Engineering  
(c) Irrigation Engineering (d) Geotechnical Engineering

Ans. : (d)

(Please refer section 2.9.1.1)

- Q.74 Knowledge of Environmental Engineering helps in  
(a) Designing various parts of structure.  
(b) Determining ultimate bearing capacity of soil.  
(c) Studying different methods of water treatment.  
(d) Measuring volume of reservoir.

Ans. : (0)

(Please refer section 2.10.1)

- 0.75 Which of the following is not a part of Environmental Engineering?  
(a) Water Supply (b) Sanitary Engineering  
(c) Foundation Engineering (d) Environmental Pollution

Ans. : (c)

**Explanation :** Foundation Engineering comes under Geotechnical Engineering

- Q.76 To study control measures for reducing environmental pollution is a part of  
(a) Fluid Mechanics (b) Structural Engineering  
(c) Irrigation Engineering (d) Environmental Engineering

Ans. : (d)

(Please refer section 2.10.1)

- 9.77 Solid waste management is a part of  
(a) Project Management (b) Structural Engineering  
(Q) Irrigation Engineering (d) Environmental Engineering

Ans. : (d)

(Please refer section 2.10.1)

**Explanation :** Quantity Surveying gives the idea of probable cost of construction..

(Please refer section 2.11)



(Please refer section 2.11.3)

- Q. 87 Valuation of a property is required for

  - (a) Finding out probable cost of construction
  - (b) Finding out actual cost of construction
  - (c) Buying or Selling property
  - (d) Preparing tender documents

**Ans. : (C)**

**(Please refer section 2.11.3)**



(Please refer section 2.12)



(Please refer section 2.12)



**(Please refer section 2.12)**

- Q. 91 Zoning and land reservations are studied in  
(H) Earthquake Engineering      (b) Environmental Engineering .  
(C) Town Planning      (d) Surveying      Ahs. : (e)

**Explanation :** Town Planning deals with developmental aspects of a town.

(Please refer section 2.15)

- Q. 99 One of the need of automation in construction industry is :
- (a) Increase in project speed
  - (b) Ready mix concrete
  - (C) Provision of a proper drainage system
  - (d) Cube rate estimate
- Ans. : (a)**

**(Please refer section 2.16)**

- Q. 100 Cement concrete road is :
- (a) Flexible road
  - (b) Rigid road
  - (c) WBM road
  - (d) Strong road
- Ans. : (b)**

**(Please refer section 2.5.4.1)**

- Q. 101 Bituminous road is :
- (a) Flexible road
  - (b) Rigid road
  - (c) Weak road
  - (d) Strong road
- Ans. : (a)**

**(Please refer section 2.5.4.1)**

- Q. 102 The position occupied by the centre line of road in plan is called :
- (a) Road alignment
  - (b) Curve
  - (c) Gradient
  - (d) Super elevation
- Ans. : (a)**

**Explanation :** Road alignment is the orientation of centre line of the road.

- Q. 103 The members laid transversely under the rails for supporting and fixing them to the gauge distance apart are known as :
- (a) Sleepers
  - (b) Rails
  - (c) Gauge
  - (d) Ballast
- Ans. : (a)**

**(Please refer Fig. 2.5.5)**

- Q. 104 One of the application of project management is :
- (a) Planning all project activities with respect to time, so that resources are used optimally
  - (b) Finding out level difference between various points on the ground surface
  - (c) Determining the capacity of reservoir
  - (d) Failure analysis of collapsed structures
- Ans. : (a)**

**(Please refer section 2.4.1)**

- Q. 105 One of the application of fluid mechanics is :
- (a) Dimensional analysis and model studies help in solving complex problems of fluid flow.
  - (b) It helps to study the design of buildings.
  - (c) Design of structural elements
  - (d) The classification of soils can be done by studying the soil profile
- Ans. : (8)**

**(Please refer section 2.6.1)**

**Q. 106** One of the application of the Irrigation engineering is :

- (a) Development of water resources at right places
- (b) Water supply, drainage, gas line and roadwork can be laid at a particular SIQDI or gradient
- (C) Areas which are connected by proper means of transport can be developed <sup>8351</sup>
- (d) Basic concepts and index properties of soil can be studied.

Ans. : (a)

(Please refer section 2.7)

**Q. 107** Foundation of building structure is designed to serve the following purpose :

- (a) Settlement of structure should be uniform throughout the area of foundation
- (b) Basic concepts and index properties of soils can be studied
- (c) Design of structural element
- (d) Determining the capacity of reservoir

Ans. / (a)

(Please refer section 2.9.2.2)

**Q. 108** The cost of each item of construction work is determined in a format called as :

- (a) Revised estimate
- (b) Supplementary estimate
- (c) Abstract sheet
- (d) Construction sheet

Ans. : (c)

(Please refer section 2.11.1)

**Q. 109** Earthquakes are produced by sudden release of tremendous amounts of energy within the earth by a sudden movement at a point called :

- (a) Hypocenter
- (b) Epicenter
- (c) Corner
- (d) Seismic center

Ans. : (a)

(Please refer section 2.12)

**Q. 110** The point on the surface of the earth directly above the hypocenter is called :

- (a) Hypocenter
- (b) Epicenter
- (c) Center
- (d) Seismic center

Ans. : (b)

(Please refer section 2.12)

**Q. 111** Which is one of the preventive care that is taken against earthquake :

- (a) The maximum foundation pressure under dead and live loads combined with seismic forces shall not exceed by 10% of the normal safe bearing pressure.
- (b) An earthquake map of India has been prepared by the meteorological department showing zones liable to severe, moderate and minor earthquakes. Seismic forces vary rapidly with time. Therefore, they impose a dynamic loading on building.
- (C) During an earthquake, the ground may move horizontally in any direction and up and down, shifting the building foundation correspondingly.

Ans. : (a)

(Please refer section 2.12.1)

Q. 112 Remote sensing is a modern technique of \_\_\_\_\_



**Ans. : (b)**

(Please refer section 2.14)

Q. 113 Remote sensing in surveying uses a sensor system that transfers and receives the energy in the form of :



**Ans. : (b)**

(Please refer section 2.14)

Q. 114 Town planning helps to reduce illegal construction in *the area* by formation \_\_\_\_\_ rules for specific area.



**Ans. : (b)**

(Please refer section 2.15)

Q. 115 Following is an example of Automation in Civil Engineering.



**Ans : (d)**

(Please refer section 2.16)

Q. 116 Advantage of Automation is

- (a) Increase productivity
  - (b) Saves time
  - (c) Suitable in adverse condition
  - (d) All of above

**Ans : (d)**

(Please refer section 2.16)



Q. 1

The building " " \* ecQunl. for

(a) 95%

(b) 50%

(c) 100%

(d) aosl. to s0~

Ana|ola

Q. 2

The ~~com~~ 1 use of ouktng material lands to

(b) Efflcloncy

an StftvnVI"

(d) All of above

(c) EGO"0'Y'Y

£ »tV|o~"o": Appropriate use of materials loads to all these.

Are "(J)"

Q. 3

Qmqtanlls a mixture of

(al Calcareous material (Lime)

(b) Sllceous material (Silica)

(cl Argillaceous malarial (Alumina)

(d) All of above

Ans, g (Q;

**Explanation:** Cement consists of all these materials.

Q. 4

When cement particles are fine, strength of the cement is

(a) Excellent

(b) Bad

(G) Good

(d) Worst

Ans.: (a)

**Explanation:** Finer particles leads to excellent strength.

O. 5 The phenomenon by which the plastic cement paste becomes hard is known as

(al Soundness

(b) Setting of cement

(c) creeping

(d) Shrinkage of cement

Ans. : (I)

**Explanation:** Setting of cement means cement paste becomes hard.

Q. 6

The feeling of hand when immersed in cement should be -----

la) Cool      (b) Warm

(c) Hot

(d) Very hot

Ans. : (al

(Please refer section 3.2.1)

O. 7

Sulphate resisting cement is used in -----type of construction.

(a) Chemical plants

(b) Docks and Harbors

(C) Sewer Lines

(d) All of above

Ans. : (of

D. 8

In the const ct' n o Highway slabs-----cement is used.

(cl Pozollona

(b) Ordinary Portland

(Please refer section 3.2.2)

(d) Rapid hardening

Ans. : (U)

. 9

Low heat cement is used in the construction of

la) Dam

(b) Pipes

(C) Residential building

(d) brick masonry

Ans. : (H)

(Please refer section a.2.2)

- 0.10 Ingeneer, the Word Com  
ent mean s  
(8) Quick setting (b) High Alum'na  
(please refer section 3.2.2) (c) Portland (d) White Ans. : (c)

Q.10 Grade of the cement indicate its

- 0-11 3 Compressive (b) Tensile strength of 28 days.  
(c) Shear (d) Bending Ans. : (a)

Explanation : cement is designated by its compressive strength.

soundness test of cement is related with

- 0,12 (2) Tensile strength (b) Compressive Strength.  
(c) Expansion of cement (d) Shear Strength. Ans. : (c)

Explanation : Expansion of cement is determined by soundness test.

For ordinary building construction, initial setting time of cement should be less than

- 0,13 (a) 20 min (b) 30 min (c) 50 min (d) 40 min Ans. : (b)

Explanation : Initial setting time is normally kept as 30 min.

- 0,14 The standard size of the brick is ----- cm.

- (a) 9x9x20 (b) 9x9x9 (c) 19x19x19 (d) 19X9x9 Ans. : (d)

(Please refer Fig. 3.3.1)

- 0.15 Bricks are generally classified as -----

- (a) ISI Class (b) I" Class and II no class  
(c) I" Class, II no class, IIIrd class (d) II" Class Ans. : (C)

(Please refer section 3.3)

- 0.16 Absorption of water by weight in First Class brick is ----- than that in Second class brick.

- (a) More (b) Less (c) Same as (d) double of Ans. : (b)

Explanation : First class bricks are more superior than second class bricks.

- Q.17 Presence of salts in the bricks is determined ----- test.

- (at Compressive Strength (b) Soundness  
(C) Efflorescence (d) Tension Ans. : (c)

Explanation : Efflorescence test gives the indication of presence of salts.

- 0.18 Which type of following tests is never performed on bricks ?

- (at Compressive Strength (b) Tensile Strength  
(C) Efflorescence test (d) Water Absorption test Ans. : (b)

Explanation : Bricks are never subjected to tensile load.

(a) Please refers to the metal and the number indicated shows its \_\_\_\_\_ strength.

- (c) Compressive  
(d) Bending

- (b) Tensile

- (d) Shearing

Ahs

Q. 37

e415, Fe500 steel are also known as

- (a) Mild steel  
(c) High tensile steel

- (b) Tor steel

- (d) Pig Iron **steel**

Ah\$.

**Explanation :** High tensile steel has greater strength.

Q. 38

In pre stressed cement concrete, following type of steel is used.

- (a) Tor steel  
(c) High tensile steel

- (b) Mild steel

- (d) Cast iron

Ans.: (b)

**Explanation :** For pre stressed concrete, materials of greater strengths are used.

Q. 39

Tor steel is a chief component in

- (a) P.C.C.  
(c) Pre stressed Concrete

- (b) P.C.C.

- (d) None of these

Ans.: (b)

**Explanation :** Tor steel is used in R.C.C.

Q. 40

\_\_\_\_\_ concrete permits the use of large span with shallow members.

- (a) P.C.C.  
(c) Pre stressed Concrete

- (b) R.C.C.

- (d) Precast Concrete

Ans.: (c)

**Explanation :** Greater strength of pre stressed concrete allows large span.

Q. 41

P.C.C. do not contain-----

- (a) Cement  
(b) Sand

- (c) Water

- (d) Steel

Ans.: (d)

**Explanation :** P.C.C. with steel forms R.C.C.

Q. 42

'P.C.C. is weak in -----'

- (a) Tension  
(b) Compression

- (c) Bending

- (d) Torsion

Ans.: (a)

**Explanation :** In P.C.C. steel is added to improve tensile strength.

Q. 43

Compressive strength of P.C.C. is M20 wherein compressive strength is expressed in

- (a) KN/mm<sup>2</sup>  
(b) N/mm<sup>2</sup>

- (c) N/m<sup>2</sup>

- (d) N/Cm<sup>2</sup>

Ans.: (b)

**Explanation :** The values is expressed in N/mm<sup>2</sup>

Q. 44

P.C.C. is used in \_\_\_\_\_.

- (a) Columns  
(c) Bed Concrete in foundation

- (b) Beams

- (d) Slabs

Ans.: (G)

**Explanation :** P.C.C. is not used in columns, beams and slabs.

**Q. 45** AP.CC.of composition 1:& "6isu39dl,o,  
W Cement

1nction, '6' indicates volume of

- (C) Ooarse Aggregate      (b) Sand  
(Co) Water

Explanation : P.C.C. has more volume of sand.

**Ana.:(o)**

**Q. 46** Lee of steel in p.c.c. results in \_\_\_\_\_

- R.C.C.  
(II) Steel concne to  
(cl) arplanation : P.C.C. with steel forms R.C.C.
- (b) Lime concrete  
(d) None of these

**Ana. : (I)**

**Q. 47** in whidt type of concrete. **compressive** stresses are Induced before subjecting it to the fading?

- (al R.C.C.      Tb) Lime concrete  
(c) steel concrete      (d) Pre stressed concrete

**Ana. : (d)**

EXplanation : Pre stressed means stressing before loading.

**Q. 48** Fencing Dpi is a practical example of -----

- tal N.C.C.      (b) Precast concrete  
(C) steel concrete      (d) Prestreed concrete

**Ans. : (b)**

Explanation : Fencing post is cast in casting yard.

**Q. 49** TensHe strength of steel bars provided in Pre stressed concrete is \_\_\_\_\_ that in R.C.C.

- (a) Less than      (b) More than  
(c) Same as      (d) None of these

**Ans. : (b)**

Explanation : Greater strength of pre stressed concrete allows large span

**Q. 50** Which of the following is the method of applying pre stress ?

- (a) Pre tensioning      (b) Pre compressing  
(c) Pre twisting      (d) Pre bending

**Ans. : (a)**

**Explanation** : Pre tensioning induces compressive stresses in concrete.

**Q. 51** Tensile strength of Mild Steel is \_\_\_\_\_ that of Tor steel.

- (a) Less than      (b) More than  
(C) Same as      (d) None of these

**Ans. : (a)**

Explanation : Mild Steel is weaker than Tor steel.

**Q. 52** Ductility of Mild Steel is ----- that of tor steel?

- (a) Less than      (b) More than  
(c) Same as      (d) None of these

**Ans. : (b)**

Explanation : Mild Steel is more ductile than Tor steel



- Q. 62 Kitchen platform is made of  
(a) Lime stone (b) Slate (c) Granite (d) Quartzite **Ans. : (c)**  
**(Please refer section 3.4.1)**
- G. 6 3 when the grain size of sand decreases its ..... Increases.  
(a) surface area (b) Weight (c) Mass (d) None of these. **Ans. : (a)**
- Explanation :** Decrease in grain size of sand increases surface area.
- Q. 64 For M15 grade ----- is a proportional mix.  
(a) 1:2:4 (b) 1:3:4 (c) 1:2:6 (d) 1:2:3 **Ans. : (a)**  
**(Please refer section no. 3.7.1)**
- O. 65 As the grade of concrete increases, the proportion of sand and coarse aggregate  
(a) Increases (b) Decreases (c) remains the same (d) None of these. **Ans. : (b)**
- Explanation :** More is the grade of concrete, more is the cement content.
- Q. 66 As the grade of concrete increases, the proportion of cement  
(a) Increases (b) Decreases (c) remains the same (d) None of these. **Ans. : (a)**  
**Explanation :** More is the grade of concrete, more is the cement content
- Q. 67 R.C.C. is a mixture of  
(a) P.C.C. + steel (b) Cement + sand  
(c) Cement + water (d) Sand + coarse aggregate + water **Ans. : (a)**
- Explanation :** P.C.C. with steel forms R.C.C.
- J. 68 Following is an advantage of artificial sand.  
(a) Required quantity is easily available  
(b) Well graded sand is available  
(c) Sand is available with good texture  
(d) All of above **Ans. : (d)**  
**(Please refer section no. 3.5.2)**
- 69 In case of large span and heavy loads on bridges ----- concrete is suitable.  
(a) R.C.C. (b) P.C.C. (c) Pre stressed (d) Post stressed **Ans. : (c)**
- Explanation :** Greater strength of pre stressed concrete allows large span
- 70 Compressive strength of M 30 concrete is -----  
(a) 10 N/mm<sup>2</sup> (b) 20 N/mm<sup>2</sup> (c) 30 N/mm<sup>2</sup> (d) 40 N/mm **Ans. : (c)**
- Explanation :** The value designated shows strength in N/mm<sup>2</sup>

Q. 1

- The part of the structure below the ground level is  
 (a) Super structure      (b) Substructure  
 (c) Plinth                (d) Hyper structure

Ans. : (b)

(Please refer section 4.1)

Q. 2

- Ultimate bearing capacity of soil is given by  
 (a) S.B.C x F.S.      (b) F.S./S.B.C-  
 (c) S.B.C./F.S.          (d) None

Ans. : (a)

**Explanation :** Please refer article 4.4.

Q. 3

- One part of the structure settles more than the other part, it is known as  
 (a) Uniform Settlement      (b) Differential settlement  
 (c) Punch settlement        (d) Heavy settlement

Ans. : (b)

(Please refer section 4.5.3)

Q. 4

- Which is the example of substructure?  
 (a) Footing      (b) Door      (c) Window      (d) Slab

Ans. : (a)

**Explanation :** The part below the ground level is substructure.

Q. 5

- Which of the following is used to design the footing?  
 (a) Safe bearing capacity      (b) Ultimate bearing capacity  
 (c) Limited bearing capacity      (d) Super bearing capacity

Ans. : (a)

**Explanation :** Design of footing is done on the basis of safe bearing capacity.

Q. 6

- The footings used to support individual column is  
 (a) Mat Footing      (b) Isolated Footing  
 (c) Combined Footing      (d) Strap Footing

Ans. : (b)

(Please refer section 4.6.1)

Q. 7

- When the load on the two close columns is unequal, ..... footing is used.  
 (a) Rectangular      (b) Trapezoidal  
 (c) Strap      (d) Isolated Column

Ans. : (b)

(Please refer figure 4.6.10)

Q. 8

- When the soil is sufficiently erratic, ----- type of footing is used.  
 (a) Cantilever      (b) Isolated      (c) Continuous      (d) Mat

Ans. : (d)

(Please refer section 4.6.1)

Q. 9

- The foundation is known as shallow when.....  
 (a)  $D > B$       (b)  $D \leq B$       (g)  $D = B$   
 (d)  $D >> B$

Ans. : (b)

(Please refer section 4.6.2)

Q. 10 Bearing capacity of soil is measured in-----

- (a) KN/m<sup>2</sup>
- (b) Knit
- (c) Km/mf'
- (d) KN/m"

**Ans. : (a)**

**Explanation :** Bearing capacity Is the strength of the soil developed per unit area.

Q.11 Bearing capacity depends upon-----

- (a) Particle size
- (b) Moisture content
- (c) Density
- (d) All of above

**Ans. : (d)**

**Explanation :** Bearing capacity Is more If compaction is more.

Q.12 Maximum load Intensity which a soil can carry without having the risk of failure is

- (a) Safe bearing capacity
- (b) Ultimate bearing capacity
- (c) Limited bearing capacity
- (d) Super bearing capacity

**Ans. : (a)**

**Explanation :** Maximum load per unit area is Ultimate bearing capacity.

Q. 13 The value of Factor of safety is more for -----

- (a) Important structure such as power plants
- (b) Ordinary building construction
- (c) Temporary constructions
- (d) All of above

**Ans. : (a)**

**Explanation :** More FSI means more safety which is required for important structures.

Q. 14 Maximum load per unit area which a soil can develop below the footing is

- (a) Safe bearing capacity
- (b) Ultimate bearing capacity
- (c) Limited bearing capacity
- (d) Super bearing capacity

**Ans. : (b)**

**Explanation :** Maximum load per unit area is Ultimate bearing capacity.

Q. 15 Area of footing required = Load on the column/ -----

- (a) Safe bearing capacity
- (b) Ultimate bearing capacity
- (c) Limited bearing capacity
- (d) Super bearing capacity

**Ans. : (a)**

**Explanation :** Design of footing is done on the basis of safe bearing capacity

Q.16 For stability of any type of footing, resultant of loads carried by the column should pass through -----

- (a) Centre of gravity
- (b) Outside the footing
- (c) At the corner of the footing
- (d) None of these

**Ans. : (a)**

**Explanation :** Resultant if passes through centre of gravity, ensures more stability.

Q. 17 Withdrawal of moisture from the soil will result in

- (a) Twisting of soil
- (b) Tensile stresses in soil
- (C) Settlement of soil
- (d) All these

**Ans. : (c)**

**(Please refer section 4.5.1)**

The 8LIP9I'SUIJCIUI'9 receives SuPport from ,the underlying soil or rock generally known as

- 0.27  
BS  
(a) FootIng (b) S\6p8  
(0) Foundation bed (d) Subgrade

Ans. : (c)

**Explanation :** Foundation bed Is the

- 0.28 The vertical downward movement of loaded base je kno  
(8) Settlement of foundation (b) BearIng capacity WH B8  
(0) Elastic distortion (d) Volume change

Ans. : (a)

**(Please refer section 4.5.1)**

- 0.29 If the downward vertical movement of the total base of the structure is equal the settlement is  
(8) Excess (b) Uniform  
(c) Uneven (d) Non-uniform

Ans. : (b)

**(Please refer section 4.5.2)**

- 0.30 The difference between the magnitudes of the settlements at any two points is known as  
(a) Excess settlement (b) Less settlement  
(c) Differential settlement (d) More settlement

Ans. : (c)

**(Please refer section 4.5.3)**

- 0.31 The ratio of differential settlement to the distance between the points under consideration is called as  
(a) Angular distortion (b) Differential distortion  
(c) Non-uniform distortion (d) Linear distortion

Ans. : (a)

**(Please refer section 4.5.3)**

- 0.32 The possibility of heavy differential settlement is also reduced when footings are provided with a -----.  
(a) Isolated base (b) Simple base  
(c) Common base (d) Uniform base

Ans. : (c)

**Explanation :** Differential settlement is reduced when a common base is provided.

- 0.33 A ----- is defined as a slender column capable of transferring the structural loads to the deep underlying layer  
(al Deep (b) Raft (C) Pile (d) Mat

Ans. : (c)

**(Please refer section 4.6.2)**



Q 28 To bind the stones or bricks together, a mix of cement, Sand and water called '85 \_\_\_\_\_ is used in between every course and on either side of brick or stones

- (a) Masonry
- (b) Bond
- (c) Cement motor
- (d) Plaster

Ans. : (a)

(Please refer section 5.5)

Q.29 Generally external walls are \_\_\_\_\_ than Inner or partition walls

- (a) Thiner
- (b) Thicker
- (c) Longer
- (d) Smaller

Ans. : (b)

(Please refer section 5.5)

Q.30 The stones, bricks, cement to be used for masonry construction should satisfy requirements of \_\_\_\_\_ for durability, strength etc.

- (a) Indian standard
- (b) Building standard
- (c) Material standard
- (d) BIS

Ans. : (in)

**Explanation :** BIS gives the norms of the testing methods as well as properties.

Q.31 Proper \_\_\_\_\_ is to be maintained while laying courses of Masonry

- (a) Bond
- (b) Brick
- (c) Stone
- (d) Plaster

Ans. : (b)

(Please refer section 5.5)

Q.32 \_\_\_\_\_ masonry use brick and mortar for constructing walls.

- (a) Brick
- (b) Stone
- (c) Cement
- (d) Aggregate

Ans. : (a)

(Please refer section 5.5.2)

Q.33 \_\_\_\_\_ masonry has lesser wall thickness as compared to stone masonry

- (a) Brick
- (b) Stone
- (c) Aggregate
- (d) Mortar

Ans. :(a)

(Please refer section 5.5.2)

Q.34 Brick masonry is \_\_\_\_\_

- (a) Less costly
- (b) Costly
- (c) Heavy
- (d) Light

Ans. : (a)

(Please refer section 5.5.2)

Q.35 Stone-masonry is \_\_\_\_\_ as compared to brick masonry

- (a) More durable
- (b) Less durable
- (c) Not durable
- (d) Weak

Ans. : (a)

(Please refer section 5.5.2)

Q.36 The old construction in Pune like shaniwarwada is example of

- (a) Loading bearing
- (b) Framed
- (c) Composition
- (d) Loaded

Ans. : (a)

Explanation : Normally old constructions are of load bearing type.

- Q. 1** Surveying is the science and art of  
(a) Drawing map  
(b) Taking measurements  
(c) Determining relative positions of points on the surface of earth.  
(d) None of these.

Ans. : (q)

**(Please refer section 6.1)**

- Q. 2** While carrying out survey of a piece of land, principles of surveying are followed to  
(a) Draw the map.  
(b) Save the time  
(c) Save the money  
(d) Enhance the accuracy by minimizing errors.

Ans. : (d)

**(Please refer section 6.2.1)**

- Q. 3** Which of the following exercise will be less accurate?  
(a) One in which only linear measurements are taken  
(b) One in which only angular measurements are taken  
(c) One in which linear and angular measurements are used in combination.  
(d) One in which no instruments are used and map is drawn with eye judgment.

Ans. : (d)

**Explanation :** Instruments are used to enhance accuracy.

- Q. 4** Primary aim of survey is to  
(a) Plot the map. (b) Earn money  
(c) Increase **safety** at the construction. (d) None of these

Ans. : (a)

**Explanation :** Survey is carried out to prepare the map.

- Q. 5** The principle of survey is to  
(a) From part to whole (b) From whole to part  
(c) From top to bottom (d) From bottom to top

Ans. : (b)

**(Please refer section 6.2.1)**

- Q. 6** In the process of surveying of a piece of land  
(a) Outer survey stations are fixed first and then inner survey stations are fixed  
(b) Inner survey stations are fixed first and then outer survey stations are fixed  
(c) Survey stations are fixed in middle portion of the land  
(d) No such considerations are absolutely required.

Ans. : (3)

**(Please refer section 6.2.1)**

- Q 7 In surveying, a point is fixed with respect to the other known point by at least
- (a) One independent measurement.
  - (b) Two independent measurements.
  - (C) Three independent measurements.
  - (d) Four independent measurements.

Ans. : (b)

(Please refer section 6.2.2)

- Q. 8 Principle of 'Working from whole to part' if followed
- (a) Minimises errors
  - (b) Maximises errors
  - (c) Requires less time
  - (d) Requires more time

Ans. : (a)

(Please refer section 6.2.1)

- Q. 9 Types of rocks are seen in
- (a) Topographic map
  - (b) Geological map
  - (c) Cadastral maps
  - (d) Environmental map

Ans. : (b)

(Please refer section 6.3.5)

- Q. 10 Nature of the ground profile can be seen in
- (a) Topographic map
  - (b) Geological map
  - (c) Cadastral maps
  - (d) Environmental map

Ans. : (a)

(Please refer section 6.3.1)

- Q. 11 Position of a particular site and its boundaries are shown in
- (a) Topographic map
  - (b) Geological map
  - (c) Location map
  - (d) Environmental map

Ans. : (c)

(Please refer section 6.3.2)

- Q. 12 Which of the following maps is used to assess valuation and taxation of land.
- (a) Topographic map
  - (b) Geological map
  - (c) Cadastral maps
  - (d) Environmental map

Ans. : (c)

(Please refer section 6.3.3)

- Q. 13 Which of the following maps shows official land subdivisions?
- (a) Topographic map
  - (b) Geological map
  - (c) Cadastral maps
  - (d) Environmental map

Ans. : (c)

(Please refer section 6.3.3)

- Q. 14 Which of the following maps facilitates the administration and transfer of land?
- (H) Topographic map
  - (b) Geological map
  - (C) Cadastral maps
  - (d) Environmental map

Ans. : (c)

(Please refer section 6.3.3)



- Q. g** Total Station is a combination of  
(a) EDM + Polarimeter      (b) Digital Theodolite + Polarimeter  
(c) EDM + Digital Theodolite      (d) None of these      **Ans. : (b)**

**(Please refer section 7.9)**

**Q. 10** Total Station can measure  
(a) Horizontal Distance      (b) Area of figure  
(C) Horizontal Angle      (d) All of the above      **Ans. : (a)**

**(Please refer section 7.9)**

**Q. 11** In total station there is a data recording module which is also called as  
(a) Electronic field book      (b) Field book  
(C) Recorder      (d) Memory      **Ans. : (a)**

**(Please refer section 7.9)**

**Q. 12** In EDM \_\_\_\_\_ is used for checking centring of the instrument.  
(a) Levelling head      (b) Control panel  
(C) Optical plummet      (d) Aiming telescope      **Ans. : (c)**

**(Please refer section 7.3.4)**

**Q. 13** The wave used for measurement of distance is called as \_\_\_\_\_  
(a) Measuring waves      (b) Measuring distance  
(c) Measuring length      (d) Measuring height      **Ans. : (a)**

**(Please refer section 7.5)**

**Q. 14** The difficulty with transmission of \_\_\_\_\_ waves is that they cannot be transmitted.  
(a) Electromagnetic      (b) Magnetic  
(c) Sound      (d) Carrier      **Ans. : (a)**

**(Please refer section 7.5)**

**Q. 15** Which of the following is a part of Digital Polarimeter?  
(a) Telescope      (b) Optical Plummet  
(c) Tracing arm      (d) Leveling head      **Ans. : (c)**

**(Please refer section 7.8)**

**Q. 16** Digital Theodolite is not used for taking  
(a) Angular measurements      (b) Linear Measurements  
(c) Area Measurements      (d) None of these      **Ans. : (d)**

**Explanation :** Area is measured from Digital Polarimeter.

**Q. 17** Which of the following is not a part of Digital Theodolite?  
(a) Telescope      (b) Optical Plummet

Lew Dc..

Q. 26 ( ) P.S is used

- (a) For mine exploration  
 (c) Night vision operations  
 (d) Porn

(b) In Baseline survey

(d) All these

Ans. : (d)

(Please refer section 7.11)

Q. 27 G.P.S. is applied in

- (a) Land, sea and air navigation      (b) Search and rescue operations  
 (c) Space craft operations      (d) All these

Ans. : (d)

(Please refer section 7.11)

Q. 28 G.I.S. is used

- (a) To make better decisions      (b) In defence industry  
 (c) For making maps      (d) All these

Ans. : (d)

(Please refer section 7.10)

Q. 29 Rotary laser mounted on the tripod is used for

- (a) Laser leveling      (b) Area measurement  
 (C) Measuring horizontal angle .      (d) Measuring vertical angle.

Ans. : (a)

(Please refer section 7.12)

Q. 30 For checking the orientation of lines in vertical and horizontal planes very accurately at site

- (a) Laser instruments are used      (b) G.P.S. is used  
 (c) G.I.S. is used      (d) E.D.M. is used

Ans. : (a)

(Please refer section 7.12)

Q. 31 Different types of maps and data can be retrieved by

- (a) G.P.S.      (b) G.I.S.      (c) E.D.M.      (d) Total station

Ans. : (b)

(Please refer section 7.10)

Q. 32 Which of the following is not an electronic instrument?

- (a) G.P.S.      (b) Digital Theodolite  
 (C) Geodimeter      (d) Mechanical Polarimeter

Ans. : (d)

**Explanation :** Digital Polarimeter is digital version of Mechanical Polarimeter.

Q. 33 For electronic measurement of distance \_\_\_\_\_ is required at the remote station.

- (H) Reflector with mirror      (b) Reflector with prism  
 (C) Receiver with plates      (d) None of these

Ans. : (b)

(Please refer section 7.4)

Q. 34 In \_\_\_\_\_ the line of sight of theodolite and EDM are parallel to each other

- (a) Telescope mounted instrument      (b) Total station

H.I. of collimation of the telescope indicate

- Q. 8 (a) Vertical line (b) Level line  
(C) Horizontal line (U) Datum line

Ans. : (c)

**Explanation :** A line perpendicular to vertical line is Horizontal Line.

Q. 9 Horizontal surface is always

- (a) normal to level surface (b) Tangential to level surface  
(0) parallel to level surface (d) Coincide with level surface

Ans. : (b)

**(Please refer section 8.2)**

Q. 10 which of the following is the correct statement?

- (a) Level line is perpendicular to vertical line at every point on the level surface  
(b) Level line is parallel to vertical line at every point on the level surface  
(C) Level line is tangential to vertical line at every point on the level surface  
(d) Level line is inclined to vertical line at every point on the level surface

**(Please refer section 8.2)**

Q. 11 One meter length of telescopic staff is divided into -----equal parts.

- (a) 20 (b) 200 (c) 10 (d) 100

Ans. : (b)

**Explanation :** Least count is 5 mm.

Q. 12 By bringing the bubble of the longitudinal bubble tube at the centre

- (a) Vertical axis is brought along the plumb line  
(b) Vertical axis is brought perpendicular to the plumb line  
(c) Line of collimation is brought along the plumb line  
(d) Axis of bubble tube along the plumb line

Ans. : (a)

**Explanation :** Bringing bubble at the centre makes vertical axis truly vertical.

Q. 13 Height of the Instrument (H.I.) is \_\_\_\_\_.

- (a) The vertical distance of telescope above the ground level  
(b) The vertical distance of the line of collimation from the datum surface  
(C) The vertical distance of the axis of bubble tube from the datum surface  
(G) The vertical distance of the ground point from the datum surface

Ans. : (b)

**(Please refer section 8.6)**

Q. 14 Back Sight (B.S.) is the staff reading on

- (a) Any point on the ground  
(b) Any point backside of the instrument station  
(C) Any point on the ground whose elevation is known  
(d) The last point taken from the instrument station

Ans. : (c)

**(Please refer section 8.6)**

- Q.21 Which of the following is the correct statement ?
- (a) R.L. of any type of B.M. is always measured from Mean Sea Level
  - (b) ... P are :M- Is always measured from Mean Sea Level
  - (C) n.L. of G.T.S. B.M. is always measured from Mean Sea Level
  - (U) F.L.1 of arbitrary B.M. is always measured from Mean Sea Level  
(please refer section 8.5)

Ans. : (c)

- Q.22 What is the relation between the line of collimation and the vertical axis?
- (a) Normal to each other
  - (b)  $30^\circ$  to each other
  - (c) Parallel to each other
  - (d)  $45^\circ$  to each other

Ans. : (a)

(Please refer section 8.3.2.1)

- Q.23 Staff readings taken on the continuously sloping ground from the same instrument station will
- (a) "Decrease
  - (b) Increase
  - (C) Remain Same
  - (d) Be negative

Ans. : (b)

Explanation : In case of Fall, staff reading increases.

- Q.24 The Bench Mark established by Department of Survey of India is
- (a) G.T.S. bench mark
  - (b) Permanent bench mark
  - (c) Temporary bench mark
  - (d) Arbitrary bench mark

Ans. : (a)

(Please refer section 8.5)

- Q.25 The arithmetic check, if satisfied indicate
- (a) No errors in the field survey
  - (b) High accuracy of leveling
  - (c) Less errors in surveying
  - (d) No mistakes in the calculation of H.L.s

Ans. : (d)

Explanation : Arithmetic Check has nothing to do with the accuracy of field work.

- Q.26 Temporary adjustments of Dumpy Level are carried out
- (H) At every instrument station
  - (b) Once in entire leveling
  - (c) Once in life time.
  - (d) Once in a day

Ans. : (a)

(Please refer section 8.4)

- Q.27 Which of the following staff readings is additive to H.I. -<sup>9</sup>
- (a) B.s.
  - (b) I.S.
  - (C) F.S.
  - (d) C.P.

Ans. : (a)

Explanation :  $H.I. = R.L. + B.S.$

- Q.28 If the desired relations between the fundamental axes of Dumpy Level are not observed
- (H) Instrument requires tempo of HfY adjustment
  - (b) Instrument is out of service

- Bubbles in the longitudinal bubble tube of the Dumpy Level moves in the direction of left thumb.**
- Q.36** (a) Sometimes (a) Some time (b) Left thumb (c) S(b) (d) Can't say **Ans. : (b)**
- X la'l'3 t'o<sup>11</sup>**: Bubble moves in the direction of left thumb.
- E P** | voling work is to last for many days **SE** of the day's work. bench mark is established at the
- Q.37** (a) permanent (b) Temporary (c) Arbitrary (d) G.T.S. **Ans. : (b)**
- (Please refer section 8.5)**
- Q.38** Following are the observations taken during leveling work. A (B.S.) = 1.250 B (F.S.) = 2.250 . What is the correct conclusion?
- (a) There is rise from A to B. (b) There is fall from A to B  
 (c) The ground is flat from A to B. (d) A and B have the same Ft.L. **Ans. : (b)**
- Explanation** : Over the sloping ground, staff reading goes on increasing.
- Q.39** Following are the observations taken during leveling work. A (B.S.) = 2.250 and C (F.S.) = 2.000. What is the correct conclusion?
- (a) There is rise from A to C. (b) There is fall from A to C  
 (c) The ground is flat from A to C (d) A and C have the same R.L. **Ans. : (a)**
- Explanation** : Over the sloping ground, staff reading goes on increasing.
- Q.40** Following are the observations taken during leveling work. A (B.S.) = 2.250 B (I-S-) = 2.500, C (F.S.) = 2.000 . What is the correct conclusion ?
- (a) There is rise from A to B. (b) There is fall from A to B  
 (c) The ground is flat from A to B (d) A and B have the same R.L. **Ans. : (b)**
- Explanation** : Over the sloping ground, staff reading goes on increasing.
- Q.41** Following are the observations taken during leveling work. A (B.S.) = 2.250 B (I.S) = 2.500, C (F.S.) = 2.000 . What is the correct conclusion ?
- (a) There is rise from B to C. (b) There is fall from B to C  
 (c) The ground is flat from B to C (d) B and C have the same R.L. **Ans. : (a)**
- Explanation** : Over the sloping ground, staff reading goes ON increa sin Q
- Q.42** R.L. of A = 100.000 R.L. of B = 98.000. Staff Reading on A 000  
 Staff Reading on B = ?. Assume same instrument station. **Ans. : (c)**
- (a) 2.000 (b) 2.500 (c) 3.000 (d) 1.500

- Q. 80 contour points are located by eye judgment.  
none of the above

(please refer section 8.18.1)

An 5 ~ (8)

contour map is used to .

- 0~a0 (a) Measure horizontal angle  
(b) check indivisibility between two Station  
(c) Measure bearing of a line  
(d) Calculate the distance between two Points

Ans. : (b)

(Please refer section 8.17)

- Q. 81) In \_\_\_\_\_ method contours to be plotted are actually located directly in the field.  
(a) Direct (b) Radial lines  
(c) Indirect (d) Cross-sectioning

Ans. : (a)

(Please refer section 8.18.1)

- Q. 82) In \_\_\_\_\_ method a central commanding point is selected from where the entire area to be surveyed is visible.  
(a) Direct (b) Radial lines  
(c) Indirect (d) Cross-sectioning

Ans. : (b)

(Please refer section 8.18.1)

- Q. 83) In \_\_\_\_\_ methods RLs of various points surveyed in the field are taken. Then contours are plotted by using specific procedure.  
(a) Direct method (b) Radial lines  
(c) Indirect method (d) Straight method

Ans. : (c)

(Please refer section 8.18.2)

- Q. 84) In \_\_\_\_\_ methods, the area to be surveyed is divided into regular squares.  
(a) Direct method (b) Radial line  
(c) Method of squares (d) Tachometric

Ans. : (c)

(Please refer section 8.18.2)

- Q. 85) \_\_\_\_\_ of contours is the method of spacing the contours proportionately between the various ground points surveyed.  
(a) Interpolation (b) Direct  
(c) Indirect (d) Radial lines

Ans. : (a)

(Please refer section 8.48.3)



- Q. 1** Branch of science that deals with plant and animal relationship is called \_\_\_\_\_.  
(a) Nlylhology      (b) Ecology      (c) Geology      (d) Biology  
**(Please refer section 9.1)**
- Q. 2** Which is the climatic abiotic factor ?  
(a) Rainfall      (b) Soil      (c) Pressure      (d) Acidity  
**(Please refer section 9.2.2.2)**
- Q. 3** Geomagnetism is a \_\_\_\_\_ type of abiotic factor.  
(a) Climatic      (b) Medical      (c) Physical      (d) Chemical  
**(Please refer section 9.2.2.2)**
- Q. 4** The ecology ~~his~~ deals with study of individual species in relationship to environment is called  
(a) Synecology      (b) Ecosystemology  
(c) Autecology      (d) None of these  
**Explanation :** The branch of ecology that deals with the biological relationship between an individual organism or an individual species and its environment is Autecology.
- Q. 5** The boundary of ecosystem is  
(a) Rigid      (b) Flexible      (c) Durable      (d) Natural  
**Explanation :** There is no rigid boundary of ecosystem.
- Q. 6** Ecosystem pass from a less complex state to more complex state is called as \_\_\_\_\_.  
(a) Succession      (b) Deviation  
(c) Depression      (d) Elevation  
**Explanation :** Complexity increases which is known as Succession
- Q. 7** Biotic factors includes  
(a) Producers      (b) Consumers  
(c) Deccmposers      (d) All of these  
**(Please refer section 9.2.2.1)**
- Q. 8** The term ecosystem was first proposed by \_\_\_\_\_.  
(a) Odum      (b) Michael Allaby  
(c) A.G.Tranley      (d) Newton  
**Explanation :** A.G.Tranley proposed the term ecosystem

Ans. : (b)

Ans. : (a)

Ans. : (c)

Ans. : (C)

Ans. : (b)

Ans. : (3)

Ans. : (d)

Ans. : (G)

- Q. 09 Food chain is always restricted to four or five steps since energy available \_\_\_\_\_ with each step.
- (a) Decreases  
(b) Remains same  
(c) Increases  
(d) None of these. **Ans. : (a)**
- Explanation :** Energy is consumed in every step of Food Chain.
- Q. 10 In any eco system, energy flow is based on two laws of \_\_\_\_\_.
- (a) Aerodynamics  
(b) Fluid dynamics  
(c) Thermo dynamics  
(d) Structural dynamics. **Ans. : (c)**
- Explanation :** Thermodynamics deals with heat and its relation with heat and work.
- Q. 11 The flow of energy in any eco system is \_\_\_\_\_.
- (a) Unidirectional  
(b) Bidirectional  
(c) Tri directional  
(d) Multi directional. **Ans. : (a)**
- Explanation :** The energy flows in one direction only.
- Q. 12 Ecological pyramids are of \_\_\_\_\_ types.
- (a) Two  
(b) Three  
(c) Four  
(d) Five. **Ans. : (b)**
- Explanation :** There are three types of ecological pyramids.
- Q. 13 Following is the measure for the sustainable development.
- (a) Population Control  
(b) Reduced Consumption  
(c) Water Resource Management  
(d) All of the above. **Ans. : (d)**
- (Please refer section 9.6)**
- Q. 14 Study of changes in the environment due to Engineering Project is called as
- (a) Environmental impact Evaluation  
(b) Environmental Impact Assessment  
(c) Environmental impact Assignment  
(d) Environmental Impact Management. **Ans. : (b)**
- (Please refer section 9.7)**
- Q. 15 Environmental Impact Assessment is normally carried out
- (a) Before the start of the project  
(b) After completion of the project  
(c) Simultaneously with project  
(d) None of these. **Ans. : (a)**
- (Please refer section 9.7)**
- Q. 16 Which are the methods of Environmental impact Assessment?
- (a) Adhoc method  
(b) Overlay Method  
(c) Check List Method  
(d) All the above. **Ans. : (d)**
- (Please refer section 9.7.1.2)**

Q. 17 Bio Chemical cycles are \_\_\_\_\_ aspect of ecosystem.

- (a) Structural
- (b) Functional
- (c) Succession
- (d) Pyramidal

**Explanation :** Nitrogen, Oxygen and Phosphorous cycles are Bio Chem' Cal Cycles.

Ans.: (be)

Q. 18 Producers are \_\_\_\_\_ aspect of ecosystem.

- (a) Functional
- (b) Behavioral
- (c) Elevated
- (d) Structural

**Explanation :** These are structural aspects of ecosystem.

Ans. : (up)

**(Please refer section 9.2.2.1)**

Q. 19 Industrial space is an example of \_\_\_\_\_ ecosystem.

- (a) Terrestrial
- (b) Marine
- (c) Running Water
- (d) Artificial (Man Made)

Ans.: (q)

**(Please refer section 9.2.1)**

Q. 20 Macrophytes like Hydrilla is a producer in \_\_\_\_\_ ecosystem.

- (a) Forest
- (b) Grassland
- (c) Pond
- (d) Desert

Ans. : (c)

**(Please refer section 9.2.5.1)**

Q. 21 Desert is an example of \_\_\_\_\_ ecosystem.

- (a) Terrestrial
- (b) Marine
- (c) Running Water
- (d) Artificial

Ans. : (a)

**(Please refer section 9.2.4.3)**

Q. 22 Cows, buffaloes, deer, sheep are primary consumers in \_\_\_\_\_ ecosystem.

- (a) Forest
- (b) Grass land
- (c) Desert
- (d) All the above

Ans. : (d)

**(Please refer section 9.2.4.1, 9.2.4.2, 9.2.4.3)**

Q. 23 \_\_\_\_\_ bring minerals back to soil, thus making them available to producers.

- (a) Primary consumers
- (b) Secondary consumers
- (c) Tertiary consumers
- (d) Decomposers

Ans. : (d)

**(Please refer section 9.2.2.1)**

Q. 24 Macrophytes, phytoplanktons are producers in \_\_\_\_\_ ecosystem.

- (a) Lake
- (b) Grass Land
- (c) Desert
- (d) Forest

Ans. : (H)

**(Please refer section 9.2.5.1)**

Q. 25 De nitrification is associated with \_\_\_\_\_ cycle.

- (a) Carbon
- (b) Nitrogen
- (c) Phosphorous
- (d) Sulphur

Ans. : (b)

**(Please refer section 9.3.3)**

is basic element involved in the basic processes of energy transfer during

25 We of Irving tissue.

- II gro (a) Carbon (b) Nitrogen (c) Phosphorous (d) Sulphur Ans. : (c)

(a) refer section 9.3.5)

P "nitrOge" cycle conversion of Ammonia to Nitrites is called \_\_\_\_\_.

- Q21 (a) Eurofication (b) De nitrification  
 (b) nitritication (c) Electrification Ans. : (c)  
 (d) Please refer section 9.3.3)

as in sulfur cycle, H<sub>2</sub>S get converted to elemental sulphur in presence of O<sub>2</sub> due to

- (H) Thirohodac€ (b) Chlorobacteria  
 (G) Thiorhodacae (d) Desulphovibro Ans. : (a)

(please refer section 9.3.4)

0.29 Following is the method of collection of solid waste.

- (a) Curb system (b) Alley system  
 (c) Back Yard system (d) All the above Ans. : (d)

(Please refer section 9.8.3)

0.30 the method of FIA in which data is collected in questionnaire and scrutinized and summary is made in a systematic manner is called as \_\_\_\_\_.

- (a) Adhoc method (b) Overlay Method  
 (c) Check List Method (d) Matrix Method Ans. : (c)

(Please refer section 9.7.1.2)

0.31 The method of FIA in which several maps for various resources and physical aspects are prepared for nearby area of project under consideration and these maps are superimposed with area of high pollution for selection of project site is called \_\_\_\_\_.

- (a) Adhoc method (b) Overlay Method  
 (c) check List Method (d) Matrix Method Ans. : (b)

(Please refer section 9.7.1.2)

0.32 Following is the measure for sustainable development.

- (a) Recycling of organic matters  
 (b) Use of CNG in vehicles  
 (c) Planning of more compact cities to reduce traffic  
 (d) All these Ans. : (d)

P lease refer section 9.6.3)

- Q. 50 In \_\_\_\_\_ method the e-waste ~is burnt in a closed container at a very high temperature.
- (a) Landfill      (b) Incineration      (c) Trenching      (d) Composting

**(Please refer section 9.8.5.3)**

- Q. 51 In \_\_\_\_\_ method of EIA group of experts comprising of Scientists, engineers, social groups, etc. review and Identify various events of the projects and possible effects on the existing environmental conditions for the Project area under consideration.
- (a) Ad hoc method      (b) Overlays method  
(c) Matrix method      (d) Network method

**Ans. : (a)**

**(Please refer section 9.7.1.2)**

- Q. 52 The \_\_\_\_\_ method of EIA is adopted for a project of considerable Magnitude
- (a) Ad hoc method      (b) Networks method  
(c) Matrix method      (d) Networks method

**Ans. : (b)**

**(Please refer section 9.7.1.2)**

- Q. 53 \_\_\_\_\_ are other organisms that depend on producers for their energy Sources.
- (a) Producers      (b) Consumers  
(c) Decomposers      (d) Manmade

**Ans. : (b)**

**(Please refer section 9.2.2.1)**

- Q. 54 Producers are also called as \_\_\_\_\_.
- (a) Autotrophs      (b) Heterotrophy      (c) Natural      (d) Manmade

**Ans. : (a)**

**(Please refer section 9.2.2.1)**

- Q. 55 Consumers are also called as \_\_\_\_\_.
- (a) Autotrophy      (b) Heterotrophy      (c) Natural      (d) Manmade

**Ans. : (b)**

**(Please refer section 9.2.2.1)**

- Q. 56 Green plants and algae are the examples of \_\_\_\_\_ group.
- (a) Autotrophy      (b) Heterotropy  
(c) Artificial      (d) Manmade

**Ans. : (a)**

**(Please refer section 9.2.2.1)**

- Q. 57 \_\_\_\_\_ are mainly the bacteria and fungi that decompose the decayed material.
- (H) Autotrophy      (b) Heterotropy  
(C) Natural      (d) Decomposers

**Ans. : (d)**

**(Please refer section 9.2.2.1)**

- Q. 74 Ocean cover more than 2.2%<sup>th</sup> area of the earth surface.
- (a) 3<sup>10</sup> (b) 4<sup>1</sup> (c) 1<sup>1</sup> (d) 3<sup>11</sup>
- (Please refer section 9.2.5.3)
- Ans. : (a)

- Q. 75 \_\_\_\_\_ are characterized by their high concentration of salts and mineral and ions.
- (8) ocean (b) River (c) Stream  
(d) Pond
- (Please refer section 9.2.5.3)
- Ans. : (a)

- Q. 76 In ocean ecosystem mainly large fish that feed on the smaller fish and include cod, shark etc are \_\_\_\_\_.  
 (a) primary consumers (b) Secondary  
 (G) Tertiary (d) Decomposers
- (Please refer section 9.2.5.3)
- Ans. : (=<)

- Q11 In ocean ecosystem various microorganisms including fungi, bacteria that are responsible for the decomposition of organic matter are
- (a) Decomposers (b) Producers  
 (C) Consumers (d) Supplier
- (Please refer section 9.2.5.3)
- Ans. : (a)

- Q. 78 \_\_\_\_\_ are the paths more or less circular in nature wherein the materials, energy and the chemical elements pass in back and forth between the biotic and abiotic factors.
- (a) Ecological cycle (b) Hydrological  
 (c) Carbon (d) Nitrogen
- (Please refer section 9.3)
- Ans. : (a)

- Q. 79 Out of 3% fresh water available more than 70% is trapped in .
- (a) Glaciers (b) Ground (c) Vapour (d) Stream
- (Please refer section 9.3.1)
- Ans. : (a)

- Q. 80 The \_\_\_\_\_ cycle depends on the inter-relationship of evaporation and Precipitation,
- (H) HYdrological cycle (b) Carbon cycle  
 (C) Nitrogen cycle (d) Sulphurcycle
- (Please refer section 9.3)
- Ans. : (a)

- Q. 81 Water on the earth gets evaporated as vapours from oceans due to solar heat and also goes into the atmosphere in the form of transpiration. This vapour comes back in the form of rainwater or snowfall which is normally expressed as
- (H) Precipitation (b) See page  
 (C) Evaporation (d) Percolation
- (Please refer section 9.3.1)
- Ans. : (a)

Q. 82 It is interesting to note that oceans which are the ultimate deposits of the tuffitents have \_\_\_\_\_ CO<sub>2</sub> than the atmosphere.  
(a) More (b) Less (c) Medium (d) Too less  
**(Please refer section 9.3.2)**

Ans. : (a)

Q. 83 In addition to the daily production and consumption of carbon as CO<sub>2</sub> the large amount of carbon is also found in the earth in the form of inorganic deposits like Wood (d) Water  
(a) Organic fossil fuel (b) Stone (c)  
**(Please refer section 9.3.2)**

Ans. : (a)

Q. 84 Nitrogen constitutes maximum percentage in air as high as  
in) 79% (b) 76.5% (c) 79.5 (d) 90%  
**(Please refer section 9.3.3)**

Ans. : (a)

Q. 85 Nitrogen fixation predominantly occurs due to \_\_\_\_\_ means  
(a) Biological (b) Chemical (c) Physical (d) Mechanical  
**(Please refer section 9.3.3)**

Ans. : (a)

Q. 86 By fixation, nitrogen gets converted into various compounds, mainly into \_\_\_\_\_.  
(a) Nitrates and ammonia (b) Complex compound  
(c) Simpler compound (d) Urea  
**(Please refer section 9.3.3)**

Ans. : (a)

Q. 87 \_\_\_\_\_ is present and it is the main constituents of proteins in plants and animals.  
(a) Nitrogen (b) Carbon (c) Sulphur (d) Phosphorus  
**(Please refer section 9.3.4)**

Ans. : (c)

Q. 88 On absorption from soil by plants \_\_\_\_\_ ions get reduced and are converted into sulphhydryl group.  
(a) Sulphate (b) Nitrogen (c) Carbon (d) Phosphorus  
**(Please refer section 9.3.4)**

Ans. : (a)

Q. 89 Due to some specific industrial waste treatments, sulphates get converted into hydrogen sulphide. This is mainly due to a typical group of bacteria called \_\_\_\_\_.  
(a) Desulphovibrio (b) Azetobacter  
(c) Clostridium (d) Bacteria  
**(Please refer section 9.3.4)**

Ans. : (a)

Q. 90 The \_\_\_\_\_ Cycle is the biogeochemical cycle that describes the movements of oxygen within and between its three main reservoirs the atmosphere, biosphere and the lithosphere.  
(H) Oxygen (b) Hydrogen (c) Nitrogen (d) Carbon  
**(Please refer section 9.3.6)**

Ans. / (3)