ESTIMATION AND COSTEVALUATION

1. is required for preliminary studies of various aspects of a work or project.
A. supplementary estimate B. plinth area estimate C. revised estimate D. abstract estimate
D. abstract estimate
explanation:-to decide the financial position and policy for administrative sanction by the competent administrative authority. In case of
2. Per kilometre basis depending on the nature of road, for 10 km of a state highway approx. cost @ Rs. 50000/- per 1 km works out as Rs. 5 lakh.
A. true B. false
B. false
explanation:-per kilometre basis depending on the nature of road, for 10 km of a state highway approx. cost @ rs. 500000/- per 1 km works out as rs. 50 lakh
3. Approx. cost of a bridge of 3 spans of 50 m each span @Rs.30000/- per running m of span comes to 3*50*30000 = Rs. 45 lakhs.
A. true B. false
A. true
explanation:-per running metre of span depending on the roadway, nature and depth of foundation, type of structure, etc. for a small culverts approx. cost may also be per number of culverts of different spans.
4. Approximate cost of sewerage project for a population of one Rs. 10/- head works out as Rs. 10 lakh.
A. true

B. false

B. false

explanation:-approximate cost of sewerage project for a population of one rs. 100/- head works out as rs. 100 lakhs.

5. is prepared on the basis of plinth area of building, the rate being deducted from the cost of similar building having similar specification, heights and construction, in the locality.

- A. cube rate estimate
- B. supplementary estimate
- C. maintenance estimate
- D. plinth area estimate
- D. plinth area estimate

explanation:-plinth area estimate is calculated by finding the plinth area of the building and multiplying by the plinth area rate. The plinth area should be calculated for the covered area by taking external dimension of the building at the floor level.

6. is the amount provided in the estimate and bill of quantities for some specialised work to be done by a specialised firm; whose details are not known at the time of preparing estimate.

- A. prime cost
- B. provisional sum
- C. capital cost
- D. building cost index
- B. provisional sum

explanation:-the work like installation of refrigerating machine; installation of lift, air conditioning, etc., for which full information

7. estimate is a detailed estimate and is prepared to maintain the structure or work in proper order

and safe condition

- A. supplementary and revised estimate
- B. maintenance estimate
- C. item rate estimate
- D. revised estimate
- B. maintenance estimate

explanation:-for building; this includes white washing, colour washing, painting, minor repairs etc. for road works the a.r. estimate provides for patch repairing, renewals, repair of culverts, etc

- 8. A large work or project may consists of several building or small works and each of these work is known as
- A. sub-work
- B. sub-project
- C. sub-head
- D. sub-construction

A. sub-work

explanation:-detailed estimate of each sub- work is prepared separately and accounts of expenditure are kept sub-work wise.

9. The term is used to denote a procedure of costing or valuing an item of work on the basis of actual

labourers and materials required.

- A. prime cost
- B. hour-work
- C. day-work
- D. sub-work
- C. day-work

explanation:-certain items of work which cannot be measured as- a design in the plaster work, front architectural finish of a building, work under water, etc. are valued and paid by 'day work'. in such cases the schedule of rates of materials and different classes of labourers likely to be engaged in th work should be included in the tender and in contract agreement

- 10. The surface of the highway pavement should be designed to allow
- A. high rolling resistance
- B. low rolling resistance
- C. no rolling resistance
- D. very high rolling resistance
- B. low rolling resistance

explanation:-the surface of highway pavement should be designed to allow no rolling resistance for safety purposes

11. The soil becomes weak in

- A. summer
- B. winter
- C. rainy season
- D. spring season

C. rainy season

explanation:-the soil becomes weak in rainy season due to the absorption of water in the soil.

12. Which of the following pavement has greater life?

- A. bituminous pavements
- B. cement concrete pavements
- C. gravel roads
- D. earth roads

B. cement concrete pavements

explanation:-the cement concrete roads have a greater life than remaining all pavements which may last even up to 100 years.

13. Which of the following requirement is given most importance in highway design?

- A. structural
- B. functional
- C. seasonal
- D. maintenance

A. structural

explanation:-the structural design like highway speed, geometric design is given the most importance in design.

14. The surface of the pavement should be

- A. smooth
- B. rough
- C. sufficient enough to resist skid
- D. very rough
- C. sufficient enough to resist skid

explanation:-the surface of the pavement should be sufficient enough to resist the skid of vehicles by using friction

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- B. sub base
- C. base
- D. sub grade

B. sub base

explanation:-the drainage layer is the sub base layer that is used to collect the water from pavement surfaces to send to ground water.

16. The maximum stress sustained by concrete pavements in kg/cm2 is

- A. 40
- B. 45
- C. 50
- D. 55
- B. 45

explanation:-the concrete pavements are designed to sustain a stress of 45kg/cm2 which is the maximum limit.

17. The ICPB type of pavement uses

- A. concrete paver blocks
- B. fly ash
- C. ggbs
- D. rmc

A. concrete paver blocks

explanation:-the icpb uses mostly interlocking concrete paver blocks for the construction of pavements

18. The ICPB may be used in

A. water logged areas B. parks C. footpaths D. highways
A. water logged areas
explanation:-the inter locking concrete paver blocks may be used in water logged areas to absorb the water and send it to the ground water.
19. The maximum length of vehicle that can be used on Indian roads is
A. 11 B. 12 C. 13 D. 14
B. 12
explanation:-the maximum length of a vehicle in india is restricted as per the rotary design of the highway which is maximum 12m.
20. 3 SEPTIC TANK
A. 12 B. 10 C. 8 D. 15
D. 15
explanation:-the design life of flexible pavement is considered as 15 years, it may last even further if properly maintained
21. The design period of cement concrete road is taken as
A. 20 B. 25 C. 30 D. 35
C. 30

explanation: the design period of coment reads is usually taken as 20 years but they

explanation:-the design period of cement roads is usually taken as 30 years but they can even last longer if properly maintained and designed.
22. In India the flexible pavement is designed as per
A. msa B. ksa C. csa D. fsa
A. msa
explanation:-the flexible pavements are designed as per irc 37 which uses msa to specify the unit of the vehicles
23. Which of the following materials is not used in the construction of a septic tank?
A. concrete B. rubber C. fibreglass D. plastic
B. rubber
explanation:-a septic tank is a watertight chamber made of brick-work, concrete, fiberglass, pvoor plastic, through which black water from the cistern or pour-flush toilets and grey water through a pipe from inside a building or an outside toilet flows for primary treatment
24. Septic tank is a small scale treatment unit.
A. true B. false
A. true
explanation:-the septic tank is the most common small-scale decentralized unit for grey water and black water from cistern or pour-flush toilets. it is basically a sedimentation tank.
25. The shape of the tank is circular.

A. true B. false

B. false

explanation:-the shape of the septic tank can be rectangular or cylindrical. septic tanks are used for wastewater with a high content of settleable solids, typically for effluent from domestic sources.

26. The heavy particles in the tank

- A. float
- B. sink into the bottom
- C. separated using magnetic methods
- D. flow along liquid

B. sink into the bottom

explanation:-liquid flows through the top and heavy particles sink to the bottom, while scum floats to the top. over time, the solids that settle to the bottom are degraded anaerobically

27. The scum formed in the tank

- A. flows
- B. gets dissolved
- C. sink into the bottom
- D. floats on top

D. floats on top

explanation:-the scum formed in the tanks floats over the top. over time, the solids that settle to the bottom are degraded anaerobically.

28. Which of the following methods are not used for the dispersion of the effluent out of a septic tank?

- A. wetlands
- B. soak pit
- C. evapo-transpiration mound
- D. leach field

A. wetlands

explanation:-by using a soak pit, evapo- transpiration mound or leach field, the effluent of the septic tank must be dispersed or transported to another treatment technology via a solids-free sewer, simplified sewer or solids-free sewer.

29. During the disposal of the sludge, it must be

- A. liquefied
- B. dried
- C. burned
- D. fluidized
- B. dried

explanation:-the sludge can be dried in planted or unplanted drying beds, settling or thickening ponds. if the sludge is dried or composted, it can be applied in agriculture as a valuable nutrient

30. The first chamber in a septic tank should be at least of the total length.

- A. 10 %
- B. 20 %
- C. 35 %
- D. 50 %
- D. 50 %

explanation:-the first chamber should be at least 50% of the total length and when there are only two chambers, it should be two thirds of the total length. most of the solids settle out in the first chamber

31. Which of the following reasons is correct with respect to the need of providing baffle walls?

- A. mixing of scum and wastewater
- B. settling of heavy particles
- C. increase velocity of the liquid
- D. prevent scum and solids from escaping

D. prevent scum and solids from escaping

explanation:-the baffle or the separation between the chambers is to prevent scum and solids from escaping with the effluent. a tshaped outlet pipe, the lower arm of which divides 30 cm below water level, further reduces the scum and solids that are discharged.

32. What are the product gases of anaerobic digestion?

- A. carbon-dioxide and methane
- B. methane and oxygen
- C. oxygen and carbon-dioxide
- D. nitrogen and methane

A. carbon-dioxide and methane

explanation:-over time, anaerobic bacteria and micro-organisms start to digest the settled sludge anaerobically, transforming it into co2 and ch4 and some heat. optimal physical treatment by sedimentation takes place when the flow is smooth and undisturbed.

33. What is the mixture of methane and carbon-dioxide of anaerobic digestion called?

- A. waste gases
- B. poisonous gas
- C. biogas
- D. carbo-methane

C. biogas

explanation:-the mixture of methane and carbon-dioxide of an anaerobic digestion is called biogas. over time, anaerobic bacteriaand micro-organisms start to digest the settled sludge anaerobically, transforming it into co2 and ch4 and some heat.

34. The term "septic" refers to

- A. anaerobic bacterial environment that develops in the tank
- B. refers to safety and precaution
- C. drainage of waste materials
- D. aerobic bacterial environment that develops in the tank
- A. anaerobic bacterial environment that develops in the tank

explanation:-the term "septic" refers to the anaerobic bacterial environment that develops in the tank which decomposes or

mineralizes the waste discharged into the tank. septic tanks can be coupled with other onsite wastewater treatment units such as

biofilters or aerobic systems involving artificially forced aeration.

35. Septic tank is usually consists of brick wall in cement not less than
A. 20 cm
B. 100 cm
C. 80 cm

A. 20 cm

D. 200 cm

explanation:-septic tank is usually consists of brick wall in cement not less than 20cm(9") thick and the foundation floor are of cement concrete 1:3:6 or 1:2:4. both inside and outside faces of wall and floor are plastered with a minimum thickness of 12mm thick cement mortar 1:3 and all inside corners are rounded

36. A is a type of toilet that collects human faeces in a hole in the ground.

A. gutter

B. septic tank

C. pit toilet

D. latrine

C. pit toilet

explanation:-a pit latrine or pit toilet is a type of toilet that collects human faeces in a hole in the ground. they use either no water or one to three litres per flush with pour-flush pit latrines. when properly built and maintained they can decrease the spread of vdisease by reducing the amount of human faeces in the environment from open defecation. this decreases the transfer of pathogens between faeces and food by flies.

37. The size of the faeces drop hole in the floor or slab should not be larger than

A. 5m

B. 25 cm

C. 45 cm

D. 250 mm

B. 25 cm

explanation:-the user positions themself over the small drop hole during use. the size of the feces drop hole in the floor or slab should not be larger than 25 centimeters (9.8 inches) to prevent children falling in. light should be prevented from entering the pit to reduce access by flies. this requires the use of a lid to cover the hole in the floor when not in use. however, in practice, such a lid is not commonly used as it is easy to lose it or for the lid to get very filthy.

38. As of 2013 pit latrines are used by an estimated people.

A. 1.77 billion

B. 2.77 million

C. 1.77 billion

D. 4.66 billion

C. 1.77 billion

explanation:-this is mostly in the developing world as well as in rural and wilderness areas. in 2011 about 2.5 billion people did not have access to a proper toilet and one billion resort to open defecation in their surroundings. southern asia and sub-

39. As a very general guideline it is recommended that the bottom of the pit should be at least above groundwater level.

A. 0.5 m

B. 2 m

C. 12 m

D. 20 m

B. 2 m

explanation:-as a very general guideline it is recommended that the bottom of the pit should be at least 2 m above groundwater level, and a minimum horizontal distance of 30 m between a pit and a water source is normally recommended to limit exposure to microbial contamination.[1]however, no general statement should be made regarding the minimum lateral separation distances required to prevent contamination of a well from a pit latrine. for example, even 50 m lateral separation distance might not be sufficient in a strongly karstified system with a down gradient supply well or spring, while 10 m lateral separation distance is completely sufficient if there is a well developed clay cover layer and the annular space of the groundwater well is well sealed.

40. A houses the squatting pan or toilet seat and provides privacy and protection from the weather for the user.
A. roof B. terrace C. shade D. shelter
D. shelter
explanation:-a shelter, shed, small building or "super-structure" houses the squatting pan or toilet seat and provides privacy and
41. The theory of plasticity pertaining to soils is based on
A. mohr's theory B. rankine's method C. mohr-coulomb theory D none of the mentioned
D. none of the mentioned A. mohr's theory
explanation:-the theory of plasticity pertaining to soils is based on mohr's theory of rupture
42. On designing retaining walls it is necessary to take care of exerted by soil mass.
A. erosion B. lateral pressure C. surcharge D. lateral stress
B. lateral pressure
explanation:-in the designing of retaining walls; sheet piles or other earth-retaining structures, it is necessary to compute the lateral pressure exerted by the retained mass of soil.
43. The material retained or supported by the retaining structure is called

A. surcharge B. support wall C. back fill D. all of the mentioned C. back fill explanation:-the material retained or supported by the structure is called backfill which may have its top surface horizontal or inclined. 44. The coefficient of earth pressure when the soil is at equilibrium is A. σν /σh B. σh /σν C. $\sigma v \times \sigma h$ D. $\sigma 1 / \sigma 3$ B. $\sigma h / \sigma v$ explanation:-when the soil is at elastic equilibrium (i.e. at rest) the ratio of horizontal to vertical stress is called the co-efficient of earth pressure of rest. 45. The computation of stress in plastic equilibrium is based on A. theory of plasticity B. mohr's theory of rupture C. rankine's theory D. all of the mentioned A. theory of plasticity explanation:-the theory on which the computation of the stress in a state of plastic equilibrium

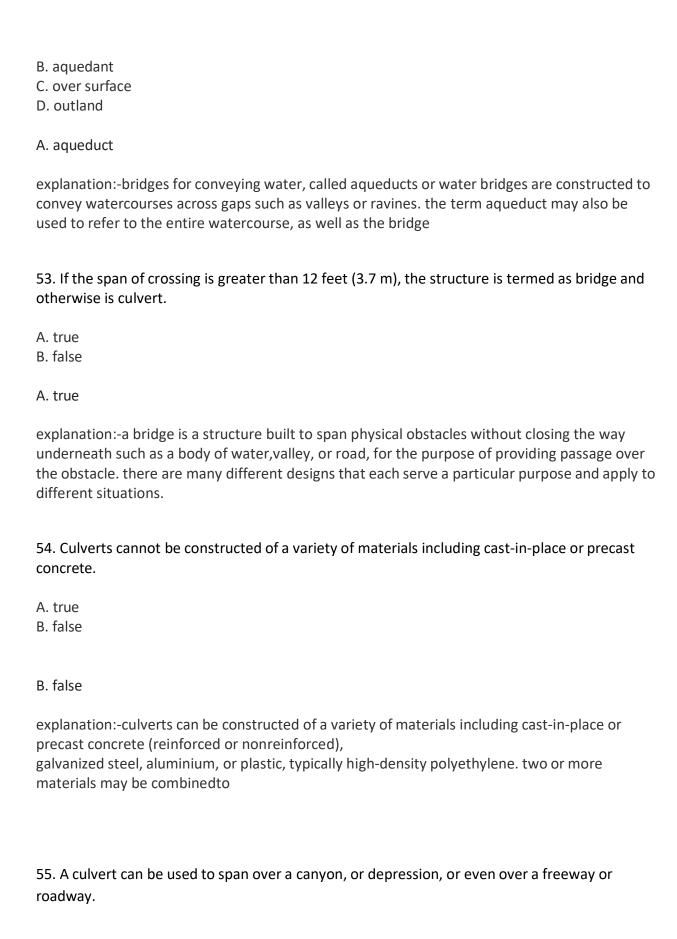
46. The wedge-shaped portion of the backfill tending to move with the wall is called

is based is called the theory of plasticity.

A. wedge fall

B. active fall C. failure wedge D. none of the mentioned
C. failure wedge
explanation:-during the active state, the wall moves away from backfill and a certain portion of the backfill in wedged-shaped tend to move which is called a failure wedge
47. In active stress, the major principal stress $\sigma 1$ acting on the wall will be in plane.
A. vertical B. horizontal C. inclined D. zero
B. horizontal
explanation:-in an active state, the major principal stress $\sigma 1$ is vertical and the minor principal stress $\sigma 3$ is horizontal
48. The plastic state of stress was proposed by
A. mohr B. rankine C. coulomb D. darcy
B. rankine
explanation:-the plastic state of stress when the failure is imminent was investigated by rankine in 1860
49. The position of the backfill lying above the horizontal plane at the top of wall is called
A. active state B. plasticity

C. surcharge D. slip lines
C. surcharge
explanation:-the position of the backfill lying above a horizontal plane at the elevation of the top of a wall is called the surcharge, and its inclination to the horizontal is called surcharge angle $\boldsymbol{\beta}$
50. What will be the co-efficient of passive earth pressure, at a depth of 8m in cohesion less soil sand with an angle of internal friction of 30° when the water rises to the ground level?
A. 4 B. 5 C. 3 D. 1
C. 3
explanation:-given ϕ = 30°
51. A structure that allows water to flow under a road, railroad, trail, or similar obstruction from one side to the other side iscalled as
A. drainage B. bridges C. tunnel D. culverts
D. culverts
explanation:-culverts are commonly used both as cross-drains for ditch relief and to pass water under a road at natural drainage and stream crossings. a culvert may be a bridge-like structure designed to allow vehicle or pedestrian traffic to cross over the waterway while allowing adequate passage for the water.
52. A structure that carries water above land is known as an
A. aqueduct



A. true B. false
B. false
explanation:-a bridge doesn't necessarily have to bridge over water. a bridge can be used to span over a canyon, or depression, or even over a freeway or roadway.
56. Construction or installation at a culvert site generally results in disturbance of the site soil.
A. true B. false
A. true
explanation:-construction or installation at a culvert site generally results in disturbance of the site soil, stream banks, or streambed, and can result in the occurrence of unwanted problems such as scour holes or slumping of banks adjacent to the culvert structure.
57. Box culverts can be defined as a passage for water over a natural ground having a deck
A. outlighting B. culverting C. daylighting D. inlighting
C. daylighting
explanation:-in urban design and urban planning, daylighting is the redirection of a stream into an above-ground channel
58. culverts have a concrete (sometimes other materials can be used too) floor allowing the water to flowsmoothly through it.
A. box B. cylindrical C. narrow D. long
A. box

explanation:-box culverts are usually made up of reinforced concrete (rcc). some box culverts can be built using compositestructures and are great when water needs to change direction or when a large flow of water is expected. box culverts can also be installed in such way that the top of the culvert is also the roadway surface. the most challenging part of installing these type of culverts is that you generally will need to have a dry surface to install the culvert, so dewatering or diversion of the water will be needed to complete the installation.

59. A is very useful equipment and it can be used for construction work like to clear the site of)f
work, to makethe land level, etc	

A. scraper

B. grader

C. excavator

D. bulldozer

D. bulldozer

explanation:-depending upon the mountains, bulldozer maybe crawler tractor mounted bulldozer or will tractor mounted bulldozer

60. The size of the bulldozer is indicated by the dimension of its

A. site

B. tyre

C. engine

D. blades

D. blades

explanation:-each blade has a theoretical capacity of hauling a particular type of earth and knowing the number of turns abulldozer will make in a given time, the approximate output of a bulldozer can be activated

61.A can be used on wet ground and in all conditions of weather.

A. grader

B. scraper

C. escalator

D. bulldozer

D. bulldozer
explanation:-by suitable attachments to the bulldozer, it can be utilized to remove trees
62. A is used to level the ground and spreads the loose material.
A. excavator B. scraper C. grader D. tractor
C. grader
explanation:-grader is a self propelled at home by a tractor. it consists of 3 to 4 m long angled blade supported on a framework mounted on wheels. it performs various operations like grading, spreading, side cutting and mixing of materials
63. A Grader which is told by a tractor is known as
A. tractor grader B. motor grader C. scraper D. elevating grader
D. elevating grader
explanation:-the self propelled greater is known as a motor grader. for grading the machine moves forward and steering in controlling by steering wheel.
64. consists of a large bucket which is attached to a tractor.
A. bulldozer B. scraper

C. grader D. escalator

B. scraper

explanation:-the capacity of scrapper varies from 3 m cube to 9 m cube. the scrap as a cutting edge or blade and the bottom and it is possible to dig earth to a depth of about 250 mm.

65	are usually	/ mounted	on two	or four	nneumatic	tyred wheels
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- A. scraper
- B. backactor
- C. elevator
- D. escalator

A. scraper

explanation:-an apron is provided in front of the container which opens and close in order to regulate the flow of earth in and outof the container. scrapers are capable of producing a very smooth and accurate formation level.

66. type of scraper consists of a four wheeled scrapper bowl towed behind crawler Power unit.

- A. three axle
- B. two axle
- C. crawler drawn
- D. four axle

C. crawler drawn

explanation:-capacities of a scrapper bowl ranges from 3 metre cube to 50 metre cube. the speed of operation is governed bythe speed of towing vehicles, which is 8 km per hour when hauling, and 3 km per hour, when scrapping.

67. An is an oldest type of machine which removes earth.

- A. escalator
- B. excavator
- C. elevator
- D. bulldozer

B. excavator

explanation:-excavator performs it work of moving the earth while the main unit is stationary. the title effort is required to movethe dead weight of earth in a vertical plane.

68. type of excavator used for digging the foundation trenches below operating level.
A. clamshell B. backactor C. power shovel D. skimmer
B. backactor
explanation:-back trench hoe excavator can also be used for the excavation of smaller areas such as basement, footing andtrenches. the hoe is an instrument for scrapping, digging and losing the earth
69. type of excavator is used for digging below, at or above operating level in a vertical range.
A. skimmer B. dragline C. clamshell D. back trench
C. clamshell
explanation:-the clamshell excavator are widely used for rehandling of material and for working in limited space as in case offoundation trenches for pipelines, etc. it is also used for jobs that require fairly accurate dumping and disposal of material
70. type of excavator carries Shovel at its lower end.
A. power shovel B. dragline C. clamshell D. backactor
A. power shovel
explanation:-power shovel excavator is used to dig at or above the operating level. it can handle loose rock and the material caught in the shovel can be suitably disposed off.

71. type of excavator is used for digging at or below the operating level.
A. skimmer B. dragline C. power shovel D. dredger
B. dragline
explanation:-the various types of dragline excavator are available and the factor affecting the output of a dragline excavator
72. type of excavator carries the skimmer at its lower end.
A. skimmer B. dredger C. escalator D. elevator
A. skimmer
explanation:-skimmer is used for surface excavation and levelling and it cuts the surface of earth to a depth of about 200 mm to300 mm. the skimmer excavator can also be used for loading the loose excavated material
73. Which of the following is not a classification of labour?
A. skilled first class B. skilled second class C. unskilled D. unskilled fourth class

D. unskilled fourth class

explanation:-labour is classified into skilled first-class, skilled second class and unskilled. the purpose of analysis of rates is forworking out the economical use of materials and the actual cost of per unit of the items

74. The concrete used for cement concrete roads is of grade

A. m 10

B. m 15

C. m 20

D. m 35

B. m 15

explanation:-the concrete used for cement concrete roads is of grade m 15 using 20 mm

75. Which of the following is the correct order of stages of estimation of concrete roads?

A. earthwork excavations, cement concrete for the base course (1:4:8) and cement concrete for wearing course (1:2:8)

B. earthwork excavations, cement concrete for wearing course (1:4:8) and cement concrete for the base course (1:2:8)

C. earthwork excavations, cement concrete for the base course (1:6:9) and cement concrete for wearing course (1:7:9)

D. cement concrete for the base course (1:2:3), cement concrete for wearing course (2:7:9) and earthwork excavations

A. earthwork excavations, cement concrete for the base course (1:4:8) and cement concrete for wearing course (1:2:8)

explanation:-the correct order of stages of estimation of concrete roads is earth work excavations, cement concrete for the basecourse (1:4:8) and cement concrete for wearing course (1:2:8). cement concrete road is laid over an existing water boundmacadam road.

76. The rates of materials used for government works are approved by

A. executive board

B. sdo

C. elective board

D. board of chief engineers

D. board of chief engineers

explanation:-the board of chief engineers approves the rates of materials used for government works. however, every year, theseare fixed by the superintendent engineer

77. The quantity of sand required for RCC (1:2:4) for 15 cubic metres of wor	15 cubic metres of work	for 15 cubic	(1:2:4)	for RCC	auired	sand re	uantity of	7. The (77.
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A. 4.76 m3

B. 10.32 m3

C. 8.43 m3

D. 6.51 m3

D. 6.51 m3

explanation:-approximately 1.52 m3 of dry concrete is required for 1 m3 of wet concrete. the quantity of sand required for rcc(1:2:4) for 15 cubic metres of work is $[2/(1+2+4)] \times 1.52 \times 15$ m3 i.e. 6.51 m3.

78. The quantity of coarse aggregate required for RCC (1:3:6) for 20 cubic metres of work is

A. 18.24 m3

B. 15.23 m3

C. 24.87 m3

D. 32.45 m3

A. 18.24 m3

explanation:-the ratio 1:3:6 is for cement, sand and coarse aggregate. therefore, the quantity of coarse aggregate required for rcc(1:3:6) for 20 cubic metres of work is $[6/(1+3+6)] \times 1.52 \times 20$ m3 i.e. 18.24 m3.

79. The unit of payment of cement concrete in lintels is

A. per sqm

B. per cum

C. quintal

D. kilograms

B. per cum

explanation:-the unit of payment of cement concrete in lintels is per cum. the unit of payment of r.c.c. in the slab is also per cum.here, per cum stands for per cubic metre.

- 80. Which of the following are parameters involved in computing the total cost of a software development project?
- A. hardware and software costs
- B. effort costs
- C. travel and training costs
- D. all of the mentioned
- D. all of the mentioned

explanation:-all these are accounted for in estimating a software development cost

- 81. Which of the following costs is not part of the total effort cost?
- A. costs of networking and communications
- B. costs of providing heating and lighting office space
- C. costs of lunch time food
- D. costs of support staff
- C. costs of lunch time food

explanation:-this is a incurred by the employees

- 82. What is related to the overall functionality of the delivered software?
- A. function-related metrics
- B. product-related metrics
- C. size-related metrics
- D. none of the mentioned
- A. function-related metrics

explanation:-productivity is expressed in terms of the amount of useful functionality produced in some given time. function points and object points

83. A is developed using historical cost information that relates some software metric to the project cost.

A. algorithmic cost modelling B. expert judgement C. estimation by analogy D. parkinson's law
A. algorithmic cost modelling
explanation:-the model uses a basic regression formula with parameters that are derived from historical project data and currentas well as future project characteristics
84. It is often difficult to estimate size at an early stage in a project when only a specification is available
A. true B. false
A. true
explanation:-function-point and object-point estimates are easier to produce than estimates of code size but are often stillinaccurate.
85. Which technique is applicable when other projects in the same analogy application domain have been completed?
A. algorithmic cost modelling B. expert judgement C. estimation by analogy D. parkinson's law
C. estimation by analogy
explanation:-the cost of a new project is estimated by analogy with these completed projects
86. Which model assumes that systems are created from reusable components, scripting or database programming?
A. an application-composition model B. a post-architecture model C. a reuse model

D. an early design model

A. an application-composition model

explanation:-it is designed to make estimates of prototype development

87. Which of the following states that work expands to fill the time available.

A. case tools

B. pricing to win

C. parkinson's law

D. expert judgement

C. parkinson's law

explanation:-the cost is determined by available resources rather than by objective assessment. if the software has to be delivered in 12 months and 5 people are available, the effort required is estimated to be 60 person-months

88. Which model is used during early stages of the system design after the requirements have been established?

A. an application-composition model

B. a post-architecture model

C. a reuse model

D. an early design model

D. an early design model

explanation:-estimates are based on function points, which are then converted to number of lines of source code. the formula follows the standard form discussed above with a simplified set of seven multipliers.

89. Which model is used to compute the effort required to integrate reusable components or program code that isautomatically generated by design or program translation tools?

A. an application-composition model

B. a post-architecture model

C. a reuse model

C. a reuse model					
90. For First class building drawing room and dining room floors shall be of					
A. concrete B. tiles C. mosaic D. wooden					
C. mosaic					
explanation:-floors of bedrooms shall be coloured and polished of 2.5 cm(1") cement concrete over 7.5 cm(3") lime concrete					
91. For 2nd class building rain water pipes shall be of finished painted.					
A. cast iron B. bog iron C. brown ore D. pyrite					
A. cast iron					
explanation:-cast iron is a group of iron- carbon alloys with a carbon content greater than 2%.[1] its usefulness derives from its relatively low melting temperature. the alloy constituents affect its colour when fractured: white cast iron has carbide impurities which allow cracks to pass straight through, grey cast iron has graphite flakes which deflect a passing crack and initiate countless new cracks as the material breaks, and ductile cast iron has spherical graphite "nodules" which stop the crack from further progressing.					
92. Specification does not specify or describes the nature and the class off the work, materials to be used in the work, workmanship, etc.					
A. false B. true A. false					

D. an early design model

explanation:-specification specifies or describes the nature and the class off the work, materials to be used in the work, workmanship, etc., and is very important for the execution of the work. the cost of a work depends much on the specifications

the cost of a work depends much on the specifications
93. The specifications are written in a language so that they indicate what the work should be and words "shall be" or "should be" are used.
A. true B. false
A. true
explanation:-the general specification for civil engineering works lays down the quality of materials, the standards ofworkmanship, the testing methods and the acceptance criteria for civil engineering works undertaken for the government for a particular region. where necessary, this general specification should be supplemented by a particular specification
94. General specification gives the nature and the class of the work and the materials in general terms.
A. true B. false A. true
explanation:-it is a short description of different parts of the work specifying materials, proportion, qualities, etc. general specification give general idea of the whole work or structure and are useful for preparing the estimate
95. For first class building the foundation and plinth shall be of 1st class brickwork in lime mortar or 1:2 cement mortar overlime concrete or 1:6:7 cement concrete.
A. true B. false
B. false explanation:-foundation and plinth shall be of 1st class brickwork in lime mortar or 1:6 cement mortar over lime concrete or 1:4:8cement concrete
96. For 2nd class building superstructure shall be of 1st class brickwork in lime mortar.
A. true

B. false

В.	fal	lse
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explanation:-for 2nd class building superstructure shall be of 2nd class brickwork in lime mortar. lintels over doors and windows shall be of r.b.

97. For third class building flooring shall be of brick-on-edge floor over well rammed earth

A. true

B. false

A. true

explanation:-rammed earth is simple to manufacture, non-combustible, thermally massive, strong, and durable. however, structures such as walls can be laborious to construct of rammed earth without machinery,

98. For fourth class building the doors and windows shall be of wood or country wood.

A. sal

B. neem

C. teak

D. mango

D. mango

explanation:-technically mango is a hardwood with dense grains, so it has the strength to bear the weight necessary for chairs and heavy tables, but it's still soft enough that it's relatively easy to work with, requiring no special tools on behalf of the manufacturers. mango furniture can stand the wear and tear of time as well as your grandmother's oak kitchen table, but, unlike

99. The water proof mud- plaster consists of

A. soil

B. janta emulsion

C. cowdung

D. soil, janta emulsion and cowdung

D. soil, janta emulsion and cowdung

explanation:-soil – soil should not be too much clayey nor too much sandy (50% clay and 50% sand are suitable). weight of dryearth should do about 112 kg per cu m (70 lbs per cu ft).

100. The brick work is not measured in cu m in case of

- A. one or more than one brick wall
- B. brick work in arches
- C. reinforced brick work
- D. half brick wall
- D. half brick wall

explanation:-half brick wall is measured in sq m.

101. 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. surface excavation
- D. cutting

C. surface excavation

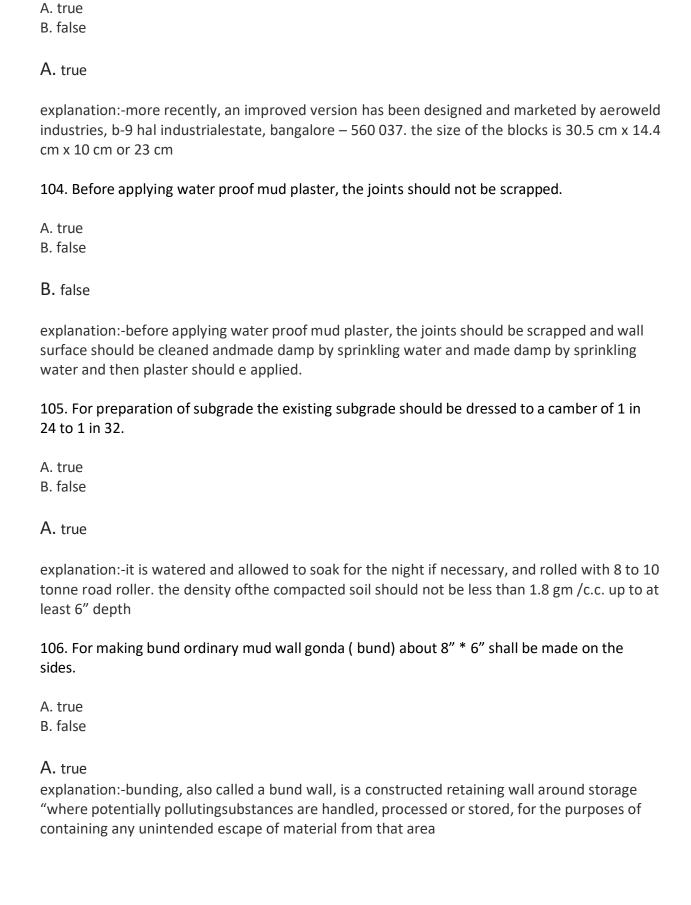
explanation:-surface dressing is done upto 15 cm depth and surface excavation upto 30 cm depth.

- 102. The roofing cannot be made with slate.
- A. true
- B. false
- B. false

explanation:-slate can be made into roofing slates, a type of roof shingle, or more specifically a type of roof tile, which are installed by a slater. slate has two lines of breakability – cleavage and grain – which make it possible to split the stone into thin sheets. when broken, slate retains a natural appearance while remaining relatively flat and easy

to stack.

103. Average number of blocks required for a two-roomed house is about 2500.



until such time as remedial action can be taken.

107. A written report is more formal than an oral report.

A. true

B. false

A. true

explanation:-the statement is true. a written report is more formal in nature than an oral report and it removes almost every flawinherent in an oral report.

108. Which of these is usually written in a form of a memorandum?

- A. informal reports
- B. formal reports
- C. professional reports
- D. business reports

A. informal reports

explanation:-written reports can be of two types. they are: formal reports and informal reports. informal reports are normallywritten in the form of a memorandum or a letter

109. Which of these is not a formal report?

- A. informational
- B. informal
- C. interpretative
- D. routine

B. informal

explanation:-formal reports can be classified into three different types. they are: informational, interpretative and routine

110. Into which of these types are formal reports not classified?

- A. informational
- B. interpretative
- C. oral
- D. routine
- C. oral

explanation:-formal reports are written reports. they can be classified into three types : informational, interpretative and routine.

111. Which of these reports provide information without any evaluation?

- A. informational
- B. interpretative
- C. routine
- D. progress

A. informational

explanation:-informational reports accumulate and provide information without any assessment or evaluation. they do not make any recommendations they do not give any findings.

112. report provides rational findings.

- A. informative
- B. interpretative
- C. routine
- D. progress

B. interpretative

explanation:-interpretative reports do not merely provide data. they assess this data and provide rational findings and worthwhilerecommendations.

113. Interpretative reports are also known as

- A. recommendation reports
- B. routine reports
- C. progress reports
- D. informal reports

A. recommendation reports

explanation:-the correct statement is: interpretative reports are also known as recommendation reports. they assess the data and provide rational findings and worthwhile recommendations

114. Which of these reports are written for recording information?

- A. informational
- B. interpretative
- C. routine
- D. recommendation

C. routine

explanation:-routine reports are normally written for recording information which is required at periodic intervals. in most casesthere may be printed forms where relevant gaps have to be filled with acquired data.

115. Which of these is not mentioned in a progress report?

- A. name of project
- B. right choice of instruments
- C. nature of work
- D. amount of work left

B. right choice of instruments

explanation:-a progress report should contain information like: name of project, nature of project, extent of work to be completed, amount of work left, etc.

116. Which of these reports involves the checking of a piece of equipment to see if it's still in working condition?

- A. progress report
- B. laboratory report
- C. inspection report
- D. inventory report

C. inspection report

explanation:-an inspection report is made when: an equipment is inspected to establish whether or not it is in working condition.

117. Box culverts can be defined as a passage for water over a natural ground having a deck slab over it as path way for vehicles.

A. true B. false
B. false
explanation:-slab culvert- a passage for water over a natural ground having a deck slab over it as path way for vehicles
118. The process of removing culverts, which is becoming increasingly prevalent, is known as
A. outlighting B. culverting C. daylighting D. inlighting
C. daylighting
explanation:-in urban design and urban planning, daylighting is the redirection of a stream into an above-ground channel
119. An culvert is normally a low profile culvert. It allows them to be installed without disturbing the causewayas it will span over the entire drainage width.
A. box B. rectangle C. arch D. circular
C. arch
explanation:-they are normally made of metal, stone masonry or rcc. they are installed easily, and you don't need to use expensive water diversion structures to install it. common shapes include semicircular arch, elliptical arch, and concrete boxculverts
120. Which of the following is not a type of cyber crime?
A. data theft B. forgery C. damage to data and systems

D. installing antivirus for protection

D. installing antivirus for protection

explanation:-cyber crimes are one of the most threatening terms that is an evolving phase. it is said that major percentage of theworld war iii will be based on cyber-attacks by cyber armies of different countries.

121. Cyber-laws are incorporated for punishing all criminals only.

- A. true
- B. false

B. false

explanation:-cyber-laws were incorporated in our law book not only to punish cyber criminals but to reduce cyber crimes and tiethe hands of citizens from doing illicit digital

122. Which of the following is not a type of peer-to-peer cyber-crime?

- A. phishing
- B. injecting trojans to a target victim
- C. mitm
- D. credit card details leak in deep web

D. credit card details leak in deep web

explanation:-phishing, injecting trojans and worms to individuals comes under peer-to- peer cyber crime. whereas, leakage ofcredit card data of a large number of people in deep web comes under computer as weapon cyber- crime.

123. Which of the following is not an example of a computer as weapon cyber-crime?

- A. credit card fraudulent
- B. spying someone using keylogger
- C. ipr violation
- D. pornography

B. spying someone using keylogger

explanation:-ddos (distributed denial of service), ipr violation, pornography are mass attacks done using a computer. Spying

124. Which of the following is not done by cyber criminals?

- A. unauthorized account access
- B. mass attack using trojans as botnets
- C. email spoofing and spamming
- D. report vulnerability in any system

D. report vulnerability in any system

explanation:-cyber-criminals are involved in activities like accessing online accounts in unauthorized manner; use trojans to attacklarge systems, sending spoofed emails. but cyber-criminals do not report any bug is found in a system, rather they exploit the bug for their profit.

125. What is the name of the IT law that India is having in the Indian legislature?

- A. india's technology (it) act, 2000
- B. india's digital information technology (dit) act, 2000
- C. india's information technology (it) act, 2000
- D. the technology act, 2008

C. india's information technology (it) act, 2000

explanation:-the indian legislature thought of adding a chapter that is dedicated to cyber law. this finally brought india'sinformation technology (it) act, 2000 which deals with the different cyber-crimes and their associated laws.

126.A tender is advertised in

- A. newspapers
- B. business environment
- C. domestic markets
- D. sellers

A. newspapers

explanation:-there is a difference between quotations and tenders. a tender is advertised in newspapers, magazines, etc.

127. DRAFTING MODEL TENDERS , E-TENDERING- DIGITAL SIGNATURE CERTIFICATES-ENCRYPTING — DECRYPTING

- A. date
- B. notice number

- C. sign D. designation C. sign explanation:-a tender does not have the sign of the authority mentioned in it. it only has the designation mentioned
- 128. Where is the designation of the authority giving the tender mentioned?
- A. top center
- B. bottom left
- C. bottom right
- D. top left
- C. bottom right

explanation:-the name of the authority is mentioned in the bottom right corner along with the organization's name and branch.

- 129. Where is the name of the organization mentioned in the tender?
- A. top left
- B. top center
- C. top right
- D. bottom center
- B. top center

explanation:-the name of the organization along with tender notice number and date is mentioned in the top center in bold in thebeginning.

- 130. Which of these is mentioned in a tender?
- A. notice number
- B. signature
- C. address of the tenderer
- D. courteous leave-taking
- A. notice number

explanation:-in the top center, the name and address of the organisation is mentioned along with the tender notice number andthe date.

131. How are final contracts signed in modern business?

- A. e-signatures
- B. document scanning
- C. thump impression
- D. shaking hands

A. e-signatures

explanation:-electronic signatures, or e- signatures, have become crucial for businesses as they seek to increase the speed oftime-to-signature, e-signatures are legally binding and have the same legal status as a written signature, as long as it fulfills the regulation it was created under.

132. Which tender allows anyone to submit a tender to supply the goods or services that are required?

- A. framework tendering
- B. selective tendering
- C. open tendering
- D. close tendering

C. open tendering

explanation:-on larger projects, there may then be a pre-qualification process that produces a short-list of suitable suppliers who

133.involves the preparation of tenders based on a typical or notional bill of quantities or scheduleof works.

- A. framework tendering
- B. selective tendering
- C. negotiated tendering
- D. serial tendering
- D. serial tendering

explanation:-the rates submitted can then be used to value works over a series of similar projects, often for a fixed period of time following which the tendering procedure may be repeated. serial tendering can reduce tender costs, and may encourage suppliers to submit low rates to secure an ongoing program of work.

134.tendering is used when all the information necessary to calculate a realistic price is available when tendering commences.

- A. single-stage
- B. double-stage
- C. framework
- D. serial

A. single-stage

explanation:-single-stage tendering is the more traditional route, used when all the information necessary to calculate a realistic rice is available when tendering commences:

135. An invitation to tender might not include?

- A. holiday packages
- B. preliminarie
- C. a letter of invitation to tender
- D. design drawing

A. holiday packages

explanation:-an invitation to tender might be issued for a range of contracts, including; equipment supply, the main construction contract (perhaps including design by the contractor), demolition, enabling works and

136.. In Schedule contract the contractor undertakes the execution or construction of specific work with all its contingencies, to complete it in all respect within a specified time for a fixed amount.

- A. false
- B. true

A. false

explanation:-in lump sum contract the contractor undertakes the execution or construction of specific work with all its contingencies, to complete it in all respect within a specified time for a fixed amount. in this an owner agrees to pay a contractor

a specified lump sum after the completion of work without a cost breakdown. after work no detailed measurements are required.

137. Scrap value is the net annual letting value of a property, which is obtained after deducting the amount of yearly repairs from the gross income.
A. true B. false
B. false
explanation:-in financial accounting, scrap value is associated with the depreciation of assets used in a business. in this situation, scrap value is defined as the expected or estimated value of the asset at the end of its useful life. scrap value is also referred to as an asset's salvage value or residual value
138.is required for preliminary studies of various aspects of a work or project.
A. supplementary estimate B. plinth area estimate C. revised estimate D. abstract estimate
D. abstract estimate
139.Approximate cost of a hostel building for 100 students @Rs.10000/- per student works out as Rs. 10 lakhs.
A. true B. false A. true
140.Per kilometre basis depending on the nature of road, for 10 km of a state highway approx. cost @ Rs. 50000/- per 1 km works out as Rs. 5 lakh.
A. true B. false
B. false

141.Approx. cost of a bridge of 3 spans of 50 m each span @Rs.30000/- per running m of span

comes to 3*50*30000 = Rs.45 lakhs.

A. true B. false	
A. true	
142.Approximate cost of sewerage project for a population of one Rs. 10/- head works out as Rs. 10 lakh.	
A. true B. false	
B. false	
143. Cube rate estimate is less accurate as compared to the plinth area estimate as the height of the building is also compared.	
A. false B. true	
B. true	
144 is prepared on the basis of plinth area of building, the rate being deducted from the cost of similar building having similar specification, heights and construction, in the locality	f
A. cube rate estimate B. supplementary estimate C. maintenance estimate D. plinth area estimate	
D. plinth area estimate	
145 A large work or project may consists of several building or small works and each of these work is known as	
A. sub-work B. sub-project C. sub-head D. sub-construction	
A. sub-work	

146. The surface of the highway pavement should be designed to allow

- A. high rolling resistance
- B. low rolling resistance
- C. no rolling resistance
- D. very high rolling resistance
- B. low rolling resistance

147. The soil becomes weak in

- A. summer
- B. winter
- C. rainy season
- D. spring season
- C. rainy season

148. Which of the following pavement has greater life?

- A. bituminous pavements
- B. cement concrete pavements
- C. gravel roads
- D. earth roads
- B. cement concrete pavements

149. Which of the following requirement is given most importance in highway design?

- A. structural
- B. functional
- C. seasonal
- D. maintenance
- A. structural

150. The surface of the pavement should be

- A. smooth
- B. rough
- C. sufficient enough to resist skid
- D. very rough

C. sufficient enough to resist skid 151. The drainage layer is A. surface course B. sub base C. base D. sub grade B. sub base 152. The maximum length of vehicle that can be used on Indian roads is A. 11 B. 12 C. 13 D. 14 B. 12 153.. The design period of cement concrete road is taken as A. 20 B. 25 C. 30 D. 35 C. 30 154. The first chamber in a septic tank should be at least of the total length. A. 10 % B. 20 % C. 35 % D. 50 % D. 50%

155. Which of the following reasons is correct with respect to the need of providing baffle walls?

A. mixing of scum and wastewater

B. settling of heavy particles

C. increase velocity of the liquid

D. prevent scum and solids from escaping	
D. prevent scum and solids from escaping	
156.Septic tank is usually consists of brick wall in cement not less than	
A. 20 cm B. 100 cm C. 80 cm D. 200 cm	
A. 20 cm	
157.A is a type of toilet that collects human faeces in a hole in the ground.	
A. gutter B. septic tank C. pit toilet D. latrine	
C. pit toilet 158 On designing retaining walls it is necessary to take care of exerted by soil mass.	
A. erosion B. lateral pressure C. surcharge D. lateral stress	
B. lateral pressure	
159.A structure that allows water to flow under a road, railroad, trail, or similar obstruction from one side to the other side is called as	
A. drainage B. bridges C. tunnel D. culverts	
D. culverts	

160.A structure that carries water above land is known as an

A. aqueduct B. aquedant C. over surface D. outland
A. aqueduct
161.If the span of crossing is greater than 12 feet (3.7 m), the structure is termed as bridge and otherwise is culvert
A. true B. false
A. true
162.Culverts cannot be constructed of a variety of materials including cast-in-place or precast concrete.
A. true B. false
B. false 163.A culvert can be used to span over a canyon, or depression, or even over a freeway or roadway.
A. true B. false
B. false
164. Construction or installation at a culvert site generally results in disturbance of the site soil.
A. true B. false
A. true
165.Box culverts can be defined as a passage for water over a natural ground having a deck

A. outlighting
B. culverting C. daylighting
D. inlighting
D. Imighting
C. daylighting
culverts have a concrete (sometimes other materials can be used too) floor allowing the er to flows moothly through it.
A. box
B. cylindrical
C. narrow
D. long
A. box
168. Which of the following is not a classification of labour?
A. skilled first class
B. skilled second class
C. unskilled
D. unskilled fourth class
D. unskilled fourth class
169.The concrete used for cement concrete roads is of grade
A. m 10
B. m 15
C. m 20
D. m 35
B. m 15
170. Which of the following is the correct order of stages of estimation of concrete roads?
A. earthwork excavations, cement concrete for the base course (1:4:8) and cement concrete for
wearing course (1:2:8)
B. earthwork excavations, cement concrete for wearing course (1:4:8) and cement concrete for the base course (1:2:8)
C. earthwork excavations, cement concrete for the base course (1:6:9) and cement concrete for wearing course (1:7:9)

D. cement concrete for the base course (1:2:3), cement concrete for wearing course (2:7:9) and earthwork excavations
A. earthwork excavations, cement concrete for the base course (1:4:8) and cement concrete for wearing course (1:2:8)
171. The rates of materials used for government works are approved by
A. executive board B. sdo C. elective board D. board of chief engineers
D. board of chief engineers
172. The quantity of sand required for RCC (1:2:4) for 15 cubic metres of work is
A. 4.76 m3 B. 10.32 m3 C. 8.43 m3 D. 6.51 m3
D. 6.51 m3
173. The quantity of coarse aggregate required for RCC (1:3:6) for 20 cubic metres of work is
A. 18.24 m3 B. 15.23 m3 C. 24.87 m3 D. 32.45 m3
A. 18.24 m3
174.The unit of payment of cement concrete in lintels is
A. per sqm B. per cum C. quintal D. kilograms

B. per cum
175 Which of the following states that work expands to fill the time available.
A. case tools B. pricing to win C. parkinson's law D. expert judgement
C. parkinson's law
176. For first class building the foundation and plinth shall be of 1st class brickwork in lime mortar or 1:2 cement mortarover lime concrete or 1:6:7 cement concrete.
A. true B. false
B. false
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A. true B. false
B. false
178. For third class building flooring shall be of brick-on-edge floor over well rammed earth.
A. true B. false
A. true
179. For fourth class building the doors and windows shall be of wood or country wood.
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D. mango	
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A. soil B. janta emulsion C. cowdung D. soil, janta emulsion and cowdung	
D. soil, janta emulsion and cowdung	
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A. excavation B. surface dressing C. surface excavation D. cutting	
C. surface excavation 183.The roofing cannot be made with slate.	
A. true B. false	
B. false	
184. Average number of blocks required for a two-roomed house is about 2500.	
A. true B. false	

185.Before applying water proof mud plaster, the joints should not be scrapped.
A. true B. false
B. false
186.A written report is more formal than an oral report.
A. true B. false
A. true
187. Which of these is usually written in a form of a memorandum?
A. informal reports B. formal reports C. professional reports D. business reports
A. informal reports
188. Which of these is not a formal report?
A. informational B. informal C. interpretative D. routine
B. informal
189. Which of these reports provide information without any evaluation?
A. informational B. interpretative

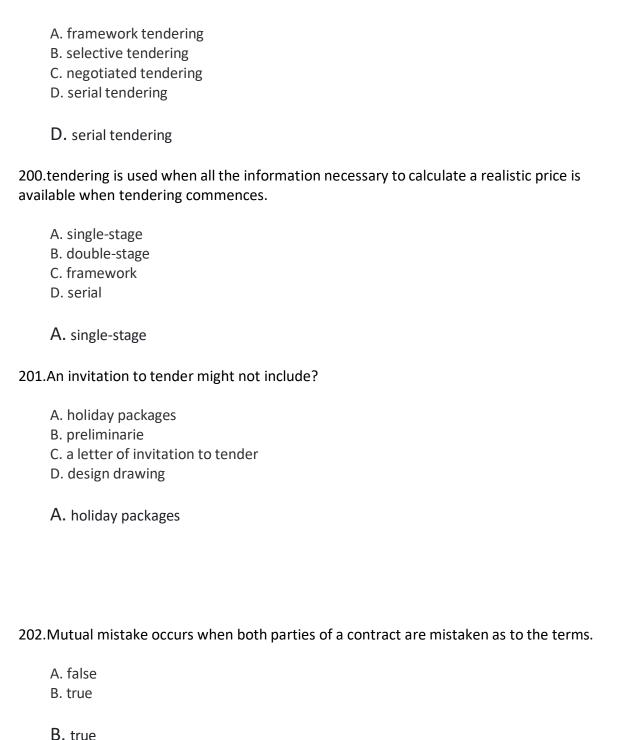
A. true

C. routine D. progress
A. informational
190.Interpretative reports are also known as
A. recommendation reports B. routine reports C. progress reports D. informal reports
A. recommendation reports
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A. newspapers B. business environment C. domestic markets D. sellers A. newspapers
194.7 DRAFTING MODEL TENDERS , E-TENDERING- DIGITAL SIGNATURE CERTIFICATES- ENCRYPTING – DECRYPTING

A. date B. notice number
C. sign
D. designation
C. sign
195. Where is the designation of the authority giving the tender mentioned?
A. top center
B. bottom left
C. bottom right
D. top left
C. bottom right
196. Where is the name of the organization mentioned in the tender?
A. top left
B. top center
C. top right
D. bottom center
B. top center
197. Which of these is mentioned in a tender?
A. notice number
B. signature
C. address of the tenderer
D. courteous leave-taking
A. notice number
198.In reverse engineering process, what refers to the sophistication of the design information that can be extracted from the source code?
A. interactivity
B. completeness
C. abstraction level
D. direction level

C. abstraction level

199.involves the preparation of tenders based on a typical or notional bill of quantities or scheduleof works.



203 Scrap value is the net annual letting value of a property, which is obtained after ded	lucting
the amount of yearly repairs from the gross income.	

A. true

B. false

B. false