

Assistant Engineer (Civil) - Screening Test

1. The piece of a brick which is cut longitudinally making it half with one uncut stretcher face is termed as

- (A) Queen closer
- (B) King closer
- (C) Bevelled closer
- (D) Half king closer

2. The type of bond in which every brick course contains stretchers and headers, is called

- (A) English bond
- (B) Stretcher bond
- (C) Flemish bond
- (D) Russains bond

3. Pick up the incorrect statement from the following

- (A) In Flemish bond headers and stretchers are laid alternatively in the same course
- (B) In Flemish bond every header in each course lies centrally over every stretcher of the underlying course
- (C) In English bond, stretchers are laid in every course
- (D) In English bond headers and stretchers are laid alternatively in the alternate course

4. For thick brick wall, say 4-1/2 brick thick and above, in the thickness of wall one should provide

- (A) Stretchers
- (B) Headers
- (C) Three-fourth bats
- (D) Half bats



5. The bond in brick work, wherein one finds continuous vertical joints at regular intervals in thickness of wall which are about $\frac{1}{4}$ brick length throughout the length of wall is
- (A) Dutch bond
 - (B) Double Flemish bond
 - (C) English bond
 - (D) Header bond
6. For masonry construction in cement mortar for a long bearing wall, usual proportion of sand: cement by volume is provided as
- (A) 01:03
 - (B) 04:01
 - (C) 01:02
 - (D) 06:01
7. A composite floor wherein I-sections of mild steel or wrought iron are provided at regular intervals of about 900 mm to 1000 mm on which brick masonry construction is done in curved shape to look like series of vaults in a room, is termed as
- (A) Flag stone floor
 - (B) Jack arch floor
 - (C) I-section and brick floor
 - (D) None of the above
8. A reinforced concrete floor supported on circular or square columns placed in regular grids of say 8.00 m X 8.00 m and having a drop panel and column capital above all columns is termed as
- (A) Flat plate floor
 - (B) Flat slab floor
 - (C) Panned floor
 - (D) Waffle slab
9. The two main compounds of Ordinary Portland Cement are
- (A) Tricalcium silicate and dicalcium silicate
 - (B) Dicalcium silicate and aluminate
 - (C) Tricalcium aluminate and silicate
 - (D) Tricalcium aluminate and Tetracalcium aluminoferrite



10. For a coarse aggregates using stones of thickness smaller as compared to other two dimensions is known as
- (A) Angular aggregates
 - (B) Irregular aggregates
 - (C) Flaky aggregates
 - (D) Elongated aggregates
11. The workability of concrete depends on
- (A) Shapes of aggregates-rounded, angular, flaky,etc.etc.
 - (B) Grading of coarse aggregates and fine aggregates
 - (C) Quality of cement paste in the mix and water content in concrete mix
 - (D) All of the mentioned
12. Revibration of concrete using ordinary portland cement can be done
- (A) After about one to one and half of concreting
 - (B) After about five to six hours of concreting
 - (C) Before the initial setting time of cement
 - (D) After about eight to ten hours of concreting
13. The good practice to use pocker or needle vibration for compaction of concrete is
- (A) To insert needle in inclined direction and remove the same immediately
 - (B) To insert needle slowly and vertically and after proper vibration of concrete the same should be removed slowly
 - (C) To insert needle in horizontal direction and removed immediately after vibration is completed
 - (D) No such measures to be taken
14. In case of deep prestressed concrete girder, the fresh concrete is compacted by adopting
- (A) Pocker/Needle vibrator and form vibrator
 - (B) Form vibrator and surface vibrator
 - (C) Needle vibrator and table vibrator
 - (D) All of the mentioned



15. Ready mixed concrete (RMC)

- (A) Is weight batched and mixed in a centrally located plant, transported in a truck mixer or agitator and delivered in condition ready to use
- (B) Is always produced at site under site condition
- (C) Does not require control of all operations of manufacture and transportation of fresh concrete
- (D) All of the mentioned

16. For placing the concrete underwater the principle technique used is

- (A) Tremie method
- (B) Bucket placing
- (C) Prepacked concrete
- (D) Placing in bags

17. Shotcrete is

- (A) Cement mortar using coarse graded sand or concrete with small size of graded aggregates deposited by jetting it with high velocity on a prepared surface
- (B) used for stabilization of rock or soil slopes
- (C) Also used for restoration and repair of fire damaged concrete structures
- (D) All of the mentioned

18. For a given water-cement ratio workability decreases if coarse aggregates used for concrete contain excess of:

- (A) Thin particles
- (B) Flaky particles
- (C) Elongated particles
- (D) All of the mentioned

19. The maximum bending moment caused on a simply supported beam subjected to two equal concentrated loads ($W/2$) spaced at equal distance ($L/3$) over the span is where L = Span and W = total of the load

- (A) $WL/6$
- (B) $5WL/36$
- (C) $WL/8$
- (D) $3WL/20$



20. The maximum compressive stress in a cantilever beam with concentrated load acting downwards on the span is caused at
- (A) Top fibre at mid span
 - (B) Bottom fibre at mid span
 - (C) Bottom fibre at support
 - (D) Top fibre at support
21. The extreme bending moment (M) caused by the total uniformly distributed load (W), on a its entire span, on a cantilever beam of span (L) is
- (A) $M=WL/2$
 - (B) $M=WL/8$
 - (C) $M=WL/4$
 - (D) $M=WL/12$
22. The shear stress in a beam having rectangular section is zero
- (A) at the centroid of section
 - (B) at the neutral axis but not at the centroid
 - (C) on the extreme free surfaces fibres
 - (D) At the free edges
23. The bending stress at a point on cross section caused by a moment M is equal to where M=Bending moment, A=Area, I=Moment of Inetia, y=distance of point, z=Modulus of section, E= Young's modulus of Elasticity
- (A) M/A
 - (B) My/I
 - (C) My/z
 - (D) ME/I
24. The conditions required to be satisfied for the analysis of statically determinate structures are
- (A) $\Sigma V = 0$
 - (B) $\Sigma H = 0$
 - (C) $\Sigma M = 0$
 - (D) All of the mentioned



25. The maximum deflection in a simply supported beam subjected to a uniformly distributed load over a span is
(where W- Total Load, L-Span, EI Flexural Rigidity)
- (A) $WL^3 / 3EI$
 (B) $WL^4 / 48 EI$
 (C) $WL^3 / 16EI$
 (D) $5WL^3 / 384 EI$
26. Column of given length, cross section and material have different values of buckling loads for different end conditions. The strongest column is one whose
- (A) one end is fixed and other end is hinged
 (B) both ends are hinged or pin jointed
 (C) one end is fixed and the other end entirely free
 (D) both the ends are fixed
27. The minimum cement content of reinforced concrete using 40 mm size aggregates under extreme exposure conditions as per IS- 456 2000 shall be
- (A) 320 kg/m³
 (B) 330 kg/m³
 (C) 360 kg/m³
 (D) 300 kg/m³
28. According to clause 15.2 of IS 456 2000 minimum number of samples of each grade, for a quantity of 8 cu m of concrete shall be
- (A) 1 no of sample
 (B) 2 no of sample
 (C) 3 no of sample
 (D) 4 no of sample
29. Modulus of elasticity of steel shall be taken as
- (A) 2,00,000 N/ m²
 (B) 20 N/ m²
 (C) 20,000 N/ m²
 (D) 2000 N/ m²



30. In a singly reinforced concrete beam, if the crushing strain in concrete is reached earlier than the yield strain in steel, the beam section is called
- (A) under-reinforced section
 - (B) over-reinforced section
 - (C) economic section
 - (D) critical section
31. In case of singly reinforced rectangular section, as the percentage of tension steel increases
- (A) depth of neutral axis decreases
 - (B) depth of neutral axis increases
 - (C) lever arm increases
 - (D) None of the mentioned
32. The most reliable estimate is
- (A) Detailed estimate
 - (B) Preliminary estimate
 - (C) Plinth area estimate
 - (D) Cube rate estimate
33. The main factor to be considered while preparing a estimate, is
- (A) Quantity of the material
 - (B) Availability of the material
 - (C) Transportation of the material
 - (D) All of the mentioned
34. While estimating the quantities for the construction of a building, the correct Metric unit is
- (A) Metre for length
 - (B) cubic meter for volume
 - (C) square meter for area
 - (D) All of the mentioned
35. The order of booking dimensions is
- (A) Length, breadth, height
 - (B) Breadth, length, height
 - (C) Height, breadth, length
 - (D) None of the mentioned



36. The brick work is not measured in cum in case of
- (A) One or more than one brick wall
 - (B) Brick work in arches
 - (C) Reinforced brick work
 - (D) Half brick wall
37. The main cause of construction failure is / are
- (A) improper, inadequate deficiency or and / faulty design
 - (B) Use of poor material and poor workmanship
 - (C) Improper or/and absence of supervision from construction and improper or/and absence of inspection
 - (D) All of the mentioned
38. In case of reinforced concrete construction takes place during laying and compacting concrete, the probable reason due to which such failure takes place is
- (A) Due to false work and formwork failure
 - (B) Due to inferior and inadequate quality of concrete
 - (C) Due to inferior and inadequate quality of reinforcing steel
 - (D) None of the mentioned
39. Factor affecting the durability of reinforced concrete structure is/are
- (A) Structural design
 - (B) Quality of concrete
 - (C) Environmental exposure
 - (D) All of the mentioned
40. If, in a load bearing structures, wherein all walls are 350 mm thick in brick masonry, after about one year of construction one finds inclined cracks at the corner of opening of doors and windows, the probable reason for developing such cracks is
- (A) Creep in load bearing brick walls
 - (B) Shrinkage in load bearing brick wall
 - (C) Differential settlement of soil at foundation level of load bearing brick wall
 - (D) Moisture movement in load bearing brick walls



41. One and only one property which affects the durability of concrete is
- (A) Porosity
 - (B) Permeability
 - (C) Creep
 - (D) Shrinkage
42. One of the major reasons due to which durability and subsequently Service Life of a reinforced concrete structure is affected is corrosion in reinforcing steel. Corrosion takes place in presence of
- (A) Carbon dioxide and moisture
 - (B) Oxygen and moisture
 - (C) Carbon monoxide and hydrogen
 - (D) Nitrogen and Oxygen
43. To prevent deterioration of reinforced concrete structures and subsequently to improve the durability of such structures, one should
- (A) Ensure sufficient alkalinity to provide passive environment against corrosion of reinforcing bars
 - (B) Provide limiting water-cement ratio
 - (C) Compact and cure concrete effectively
 - (D) All of the mentioned
44. Various structural members in reinforced concrete affected due to corrosion of reinforcing steel provided therein. The effect of corrosion is seen on the surface of the members which is /are termed as
- (A) Spalling of concrete
 - (B) Delamination of concrete
 - (C) Pop-outs in concrete
 - (D) All of the mentioned
45. In case of any construction project wherein all construction drawings of various disciplines such as architectural, structural, services like water supply and drainage etc.etc. are ready and can be submitted along with tender document for getting quotations, one can preferably go for
- (A) Measure and Value Contract
 - (B) Schedule of Price Contract
 - (C) Lump-Sum Contract
 - (D) Design and Construct Contract



46. As per the normal practice general arrangement drawings are provided along with the tender document for quotations from various contractors. During the execution of the construction work, there are possibilities for additions, alterations, modifications etc. etc. In such a situation the type of the contract to be adopted is
- (A) Design and Construct Contract
 - (B) Schedule of Quantities Contract
 - (C) Lump-sum Contract
 - (D) Measure and Value Contract
47. For the construction of flyover, to be adopted as grade separator, wherein there are possibilities of various alternatives for the design and construction technology to be adopted, considering the competency and expertise available with prequalified contractors, the type of the contract one should go for will be
- (A) Measure and Value Contract
 - (B) Lump-Sum Contract
 - (C) Design and Construct Contract
 - (D) Cost Plus Percentage Contract
48. For a substantially large Industrial Complex to have production of fertilizers housing large manufacturing plant along with structures with bulk storage facilities to be provided. The plant needs the technology transfer and the tender will be floated globally. The type of a contract in such a case should be
- (A) Lump Sum Contract
 - (B) Turnkey contract
 - (C) Measure and Value Contract
 - (D) Schedule of quantities contract
49. In case of usual general conditions of contract, any problem connected to delay in construction, quality of work etc due to sub contractor, the responsibility lies with
- (A) Main contractor
 - (B) Architect
 - (C) Owner
 - (D) sub contractor



50. In case of usual general conditions of contract, a sub-contractor nominated by the Architect and was supposed to work under main contractor under the contract between contractor and nominated sub-contractor. During the execution of the construction work , the work was delayed and quality of work was observed to be below standard. In such situation, the responsibility lies with

- (A) Main contractor
- (B) Architect
- (C) Nominated sub-contractor
- (D) Owner

51. Who wrote the 'Iliad'?

- (A) Homer
- (B) Plato
- (C) Aristotle
- (D) Socrates

52. What is the largest desert in Africa?

- (A) Arabian Desert
- (B) Kalahari Desert
- (C) Sahara Desert
- (D) Gobi Desert

53. What system of government is ruled directly by the people?

- (A) Monarchy
- (B) Republic
- (C) Theocracy
- (D) Direct Democracy

54. What does GDP stand for in economics?

- (A) General Development Plan
- (B) Gross Domestic Product
- (C) Gross Development Process
- (D) Global Distribution Policy



55. What is the study of human social behavior called?

- (A) Anthropology
- (B) Psychology
- (C) Sociology
- (D) Philosophy

56. What is the study of the fundamental nature of reality and existence?

- (A) Metaphysics
- (B) Epistemology
- (C) Aesthetics
- (D) Logic

57. Which theory emphasizes that the whole of anything is greater than its parts?

- (A) Behaviorism
- (B) Gestalt Psychology
- (C) Psychoanalysis
- (D) Humanistic Psychology

58. Who is the author of "Pride and Prejudice"?

- (A) Emily Bronte
- (B) Jane Austen
- (C) Charles Dickens
- (D) Mark Twain

59. What is the force acting on two charges separated by a distance?

- (A) Gravity
- (B) Magnetic Force
- (C) Frictional Force
- (D) Electrostatic Force

60. What is the chemical symbol for gold?

- (A) Gd
- (B) Au
- (C) Ag
- (D) Go



61. What process converts light energy into chemical energy in plants?
- (A) Osmosis
 - (B) Fermentation
 - (C) Respiration
 - (D) Photosynthesis
62. Which planet is known as the "Red Planet"?
- (A) Venus
 - (B) Mars
 - (C) Jupiter
 - (D) Saturn
63. What geometric shape has 5 faces, 5 vertices, and 8 edges?
- (A) Cube
 - (B) Pyramid
 - (C) Tetrahedron
 - (D) Octahedron
64. What programming language is known as the "Mother of all languages"?
- (A) C++
 - (B) Java
 - (C) Assembly Language
 - (D) Fortran
65. Who painted the Mona Lisa?
- (A) Vincent van Gogh
 - (B) Leonardo da Vinci
 - (C) Pablo Picasso
 - (D) Rembrandt
66. What refers to a legal rule protecting a person from double jeopardy?
- (A) Habeas Corpus
 - (B) Affidavit
 - (C) Bill of Attainder
 - (D) Double Indemnity



67. What gas is responsible for the greenhouse effect in Earth's atmosphere?

- (A) Carbon Dioxide
- (B) Oxygen
- (C) Nitrogen
- (D) Water Vapor

68. What vitamin is produced by the body when exposed to sunlight?

- (A) Vitamin C
- (B) Vitamin A
- (C) Vitamin D
- (D) Vitamin B

69. Who is the current Secretary General of the United Nations? (as of 2021)

- (A) Ban Ki-moon
- (B) Kofi Annan
- (C) Antonio Guterres
- (D) Boutros Boutros-Ghali

70. What is the primary sacred text of Hinduism?

- (A) Bible
- (B) Quran
- (C) Vedas
- (D) Torah

71. What battle marked the defeat of Napoleon in 1815?

- (A) Battle of Hastings
- (B) Battle of Trafalgar
- (C) Battle of Gettysburg
- (D) Battle of Waterloo

72. Which river is the longest in the world?

- (A) Nile River
- (B) Amazon River
- (C) Yangtze River
- (D) Mississippi River



73. What form of government is ruled by a small group of people?

- (A) Oligarchy
- (B) Democracy
- (C) Monarchy
- (D) Anarchy

74. Which economic system features government ownership of all means of production?

- (A) Capitalism
- (B) Socialism
- (C) Fascism
- (D) Communism

75. What term refers to the cultural beliefs and practices shared by a society?

- (A) Culture
- (B) Community
- (C) Ethnography
- (D) Sociology

76. Who is the philosopher known for his allegory of the cave?

- (A) Plato
- (B) Aristotle
- (C) Descartes
- (D) Kant

77. What type of reinforcement in psychology strengthens behavior by removing aversive stimuli?

- (A) Negative Reinforcement
- (B) Positive Reinforcement
- (C) Extinction
- (D) Punishment

78. Who wrote the play "Hamlet"?

- (A) William Shakespeare
- (B) John Milton
- (C) Geoffrey Chaucer
- (D) Samuel Beckett



79. What is the smallest particle of a chemical element that retains its chemical properties?

- (A) Molecule
- (B) Atom
- (C) Compound
- (D) Electron

80. What vitamin is also known as ascorbic acid?

- (A) Vitamin B
- (B) Vitamin A
- (C) Vitamin C
- (D) Vitamin D

81. Identify the synonym of 'Benevolent'.

- (A) Malevolent
- (B) Kind
- (C) Angry
- (D) Sad

82. Choose the antonym of "Sparse."

- (A) Empty
- (B) Thick
- (C) Full
- (D) Dense

83. Which punctuation mark would correctly complete this sentence "Are you coming ___"?

- (A) Comma
- (B) Period
- (C) Question Mark
- (D) Exclamation Mark

84. Identify the correct spelling.

- (A) Accommodate
- (B) Accomodate
- (C) Acommodate
- (D) Acomodate



85. Choose the plural form of "Thesis."

- (A) Theiss
- (B) Theses
- (C) Thesis's
- (D) Thesises

86. Select the word that best completes the sentence: "He is ___ to the doctor today."

- (A) went
- (B) goes
- (C) gone
- (D) going

87. Identify the correct pronoun: "Both of the boys brought ___ lunch."

- (A) his
- (B) their
- (C) its
- (D) her

88. What is the adjective in the sentence: "The sun gives off intense heat."

- (A) Sun
- (B) Gives
- (C) Off
- (D) Intense

89. Choose the adverb in the sentence: "She sings beautifully."

- (A) She
- (B) Sings
- (C) Beautifully
- (D) None of the mentioned

90. Select the correct form: "Neither of the girls ___ to the party."

- (A) is coming
- (B) are coming
- (C) coming
- (D) were coming



91. Identify the past perfect tense: "I ___ the movie before."

- (A) had seen
- (B) has seen
- (C) have seen
- (D) seeing

92. Choose the correct passive voice: "Shoes are made in that factory"

- (A) Shoes made in that factory
- (B) Shoes are made in that factory
- (C) In that factory shoes are made
- (D) By that factory shoes are made

93. Select the correct conjunction: "I want to play, ___ it's too late now."

- (A) but
- (B) and
- (C) or
- (D) nor

94. What does a thesaurus provide?

- (A) Definitions
- (B) Spelling
- (C) Synonyms and antonyms
- (D) Pronunciations

95. Choose the correct form of the adjective. He is the ___ boy in his class.

- (A) Tall
- (B) Taller
- (C) Tallest
- (D) Tallish

96. What is the plural form of 'goose'?

- (A) Gooses
- (B) Geese
- (C) Gese
- (D) Goose



97. Select the correct preposition: We arrived __ New York at noon.
- (A) In
 - (B) At
 - (C) On
 - (D) Over
98. Choose the correct auxiliary verb: I __ working on this project for a week.
- (A) Have been
 - (B) Has been
 - (C) Had been
 - (D) Is been
99. What does an adverb modify?
- (A) Nouns
 - (B) Verbs
 - (C) Adjectives
 - (D) Both verbs and adjectives
100. Choose the correct pronoun: __ is on the table?
- (A) Whose
 - (B) Who
 - (C) Which
 - (D) Whom



Assistant Engineer (Civil) - Screening Test

1. The piece of a brick which is cut longitudinally making it half with one uncut stretcher face is termed as
 - ✓ A Queen closer
 - B King closer
 - C Bevelled closer
 - D Half king closer

2. The type of bond in which every brick course contains stretchers and headers, is called
 - A English bond
 - B Stretcher bond
 - ✓ C Flemish bond
 - D Russains bond

3. Pick up the incorrect statement from the following
 - A In Flemish bond headers and stretchers are laid alternatively in the same course
 - B In Flemish bond every header in each course lies centrally over every stretcher of the underlying course
 - ✓ C In English bond , stretchers are laid in every course
 - D In English bond headers and stretchers are laid alternatively in the alternate course

4. For thick brick wall, say 4-1/2 brick thick and above, in the thickness of wall one should provide
 - A Stretchers
 - ✓ B Headers
 - C Three-fourth bats
 - D Half bats



5. The bond in brick work, where the vertical joints are continuous vertical joints at regular intervals in thickness of wall which are about 1/4 brick length throughout length of wall is
- A Dutch bond
 - ✓ B Double Flemish bond
 - C English bond
 - D Header bond
6. For masonry construction in cement mortar or a long bearing wall usual proportion of sand: cement by volume is provided as
- A 01:03
 - B 04:01
 - C 01:02
 - ✓ D 06:01
7. A composite floor wherein I-section mild steel or wrought iron are provided at regular intervals of about 900 mm to 1000mm on which brick masonry is provided in a curved shape to look like series of vaults in a room is termed as
- A Flag stone floor
 - ✓ B Jack arch floor
 - C I-section and brick floor
 - D None of the above
8. A reinforced concrete floor supported on circular or square columns placed in regular grids of say 8.00 m X 8.00 m and having a drop panel and column capital above all columns is termed as
- A Flat plate floor
 - ✓ B Flat slab floor
 - C Panned floor
 - D Waffle slab
9. The two main compounds of Ordinary Portland Cement are
- ✓ A Tricalcium silicate and dicalcium silicate
 - B Dicalcium silicate and alumina
 - C Tricalcium aluminate and silicate
 - D Tricalcium aluminate and Tetracalcium aluminoferrite



10. For a coarse aggregates using s ones o c ness sma er as compared to other two d imentions is known as
- A Angular aggregates
 - B Irregular aggregate
 - ✓ C Flak aggr gates
 - D Elongated aggregate
11. he workability of concrete depends on
- A Shapes of aggregates-rounded, angular flaky etc e c.
 - B Grading of coarse aggregates and fine aggr gate
 - C Quality of cement paste in the mix and water content in concrete mix
 - ✓ D All of the mentioned
12. Revibration of concrte using ordinary portland cement can be done
- A After about one to one and half of concreting
 - B Afte about five to six hours of concreting
 - ✓ C Before the itial setting time of cement
 - D After about eight to ten hours of concreting
13. The good practice to use pocker or needle vibration for compaction of concrete is
- A To insert needle in inclined direction and remove the same immediately
 - ✓ B To insert needle slowly and vertically and after proper vibration of concrete the same should be removed slowly
 - C To insert needle in horizontal direction and removed immediately after vibration is completed
 - D No such measures to be taken
14. In case of deep prestressed concrete girder, the fresh concrete is compacted by adopting
- ✓ A Pocker/Needle vibrator and form vibrator
 - B Form vibrator and surface vibrator
 - C Needle vibrator and table vibrator
 - D All of the mentioned



- 15. Ready mixed concrete (RMC)**
- ✓ A Is weight batched and mixed in a centrally located plant, transported in a truck mixer or agitator and delivered in condition ready to use
 - B Is always produced at site under site condition
 - C Does not require control of all operations of manufacture and transportation of fresh concrete
 - D All of the mentioned
- 16. For placing the concrete underwater the principle technique used is**
- ✓ A Tremie method
 - B Bucket placing
 - C Prepacked concrete
 - D Placing in bags
- 17. Shotcrete is**
- A Cement mortar using coarse graded sand and or concrete with small size of graded aggregates deposited by jetting it with high velocity on a prepared surface
 - B used for stabilization of rock or soil slopes
 - C Also used for restoration and repair of fire damaged concrete structures
 - ✓ D All of the mentioned
- 18. For a given water cement ratio workability decreases if coarse aggregates used for concrete contain excess of**
- A Thin particles
 - B Flaky particles
 - C Elongated particles
 - D All of the mentioned
- 19. The maximum bending moment caused on a simply supported beam subjected to two equal concentrated loads ($W/2$) spaced at equal distance ($L/3$) over the span is where L - Span and W - total of the load**
- ✓ A $WL/6$
 - B $5W/36$
 - C $W/8$
 - D $3WL/20$



20. The maximum compressive stress in a cantilever beam with concentrated load acting downwards on the span is caused at
- A Top fibre at mid span
 - B Bottom fibre at mid span
 - C Bottom fibre at support
 - D Top fibre at support
21. The extreme bending moment (M) caused by the total uniformly distributed load (W), on a its entire span, on a cantilever beam of span (L) is
- A $M=WL/2$
 - B $M=WL/8$
 - C $M=WL/4$
 - D $M=WL/12$
22. The shear stress in a beam having rectangular section is zero
- A at the centroid of section
 - B at the neutral axis but not at the centroid
 - C on the extreme free surfaces fibres
 - D At the free edges
23. The bending stress at a point on cross section caused by a moment M is equal to where M=Bending moment, A=Area, I=Moment of Inertia, y=distance of point, z=Modulus of section, E= Young's modulus of Elasticity
- A M/A
 - B My/I
 - C My/z
 - D ME/I
24. The conditions required to be satisfied for the analysis of statically determinate structures are
- A $\sum V = 0$
 - B $\sum H = 0$
 - C $\sum M = 0$
 - D All of the mentioned



25. The maximum deflection in a simply supported beam subjected to a uniformly distributed load over a span is
(where W= Total Load, L=Span, EI =Flexural Rigidity)
- A $WL^3 / 3EI$
 - B $WL^4 / 48 EI$
 - C $WL^3 / 16EI$
 - D $5W^3 / 384 EI$
26. Column of given length cross section and material having different values of loading and/or different end conditions. The strongest column is one whose
- A one end is fixed and other end is hinged
 - B both ends are hinged or pin jointed
 - C one end is fixed and the other end entirely free
 - D both the ends are fixed
27. The minimum cement content of reinforced concrete using 40 mm size aggregates under extreme exposure condition as per IS 456:2000 shall be
- A 320 kg/m³
 - B 330 kg/m³
 - C 360 kg/m³
 - D 300 kg/m³
28. According to clause 15.2 of IS. 456-2000 minimum number of samples of each grade, for a quantity of 8 cu.m of concrete shall be
- A 1 no of sample
 - B 2.no of sample
 - C 3.no of sample
 - D 4.no of sample
29. Modulus of elasticity of steel shall be taken as
- A 2,00,000 N/ m²
 - B 20 N/ m²
 - C 20,000 N/ m²
 - D 2000 N/ m²



30. In a singly reinforced concrete beam, if the crushing strain in concrete is reached earlier than the yield strain in steel, the beam section is called
- A under-reinforced section
 - B over-reinforced section
 - C economic section
 - D critical section
31. In case of singly reinforced rectangular section, as the percentage of tension steel increases
- A depth of neutral axis decreases
 - B depth of neutral axis increases
 - C effective arm increases
 - D None of the mentioned
32. The most reliable estimate is
- A Detailed estimate
 - B Preliminary estimate
 - C Plinth area estimate
 - D Cube rate estimate
33. The main factor to be considered while preparing an estimate, is
- A Quantity of the material
 - B Availability of the material
 - C Transportation of the material
 - D All of the mentioned
34. While estimating the quantities for the construction of a building, the correct Metric unit is
- A Metre for length
 - B cubic meter for volume
 - C square meter for area
 - D All of the mentioned
35. The order of booking dimensions is
- A Length, breadth, height
 - B Breadth, length, height
 - C Height, breadth, length
 - D None of the mentioned



- 36.** The brick work is no measure in cum in case of
- A One or more than one brick wall
 - B Brick work in arches
 - C Reinforced brick work
 - D Half brick wall
- 37.** The main cause of construction failure is/are
- A improper, inadequate deficiency or and /faulty design
 - B Use of poor material and poor workmanship
 - C Improper or/and absence of supervision from construction and improper or/and absence of inspection
 - D All of the mentioned
- 38.** In case of reinforced concrete construction takes place during curing and compacting concrete the probable reason due to which such failure takes place is
- A Due to false work and formwork failure
 - B Due to inferior and inadequate quality of concrete
 - C Due to inferior and inadequate quality of reinforcing steel
 - D None of the mentioned
- 39.** Factor affecting the durability of reinforced concrete structure is/are
- A Structural design
 - B Quality of concrete
 - C Environmental exposure
 - D All of the mentioned
- 40.** If, in a load bearing structures, wherein all walls are 350 mm thick in brick masonry, after about one year of construction one finds inclined cracks at the corner of opening of doors and windows the probable reason for developing such cracks is
- A Creep in load bearing brick walls
 - B Shrinkage in load bearing brick wall
 - C Differential settlement of soil at foundation level of load bearing brick wall
 - D Moisture movement in load bearing brick walls



41. One and only one property which affects the durability of concrete is
- A Porosity
 - B Permeability
 - C Creep
 - D Shrinkage
42. One of the major reasons due to which durability and subsequently Service life of reinforced concrete structure is affected is corrosion in reinforcing steel. Corrosion takes place in presence of
- A Carbon dioxide and moisture
 - ✓ B Oxygen and moisture
 - C Carbon monoxide and hydrogen
 - D Nitrogen and Oxygen
43. To prevent deterioration of reinforced concrete structures and subsequently to improve the durability of such structures, one should
- A Ensure sufficient alkalinity to provide passive environment against corrosion of reinforcing bars
 - B Provide limiting water-cement ratio
 - C Compact and cure concrete effectively
 - ✓ D All of the mentioned
44. Various structural members in reinforced concrete affected due to corrosion of reinforcing steel provided therein. The effect of corrosion is seen on the surface of the members which is /are termed as
- A Spalling of concrete
 - B Delamination of concrete
 - C Pop-outs in concrete
 - ✓ D All of the mentioned
45. In case of any construction project wherein all construction drawings of various disciplines such as architectural, structural, services like water supply and drainage etc.etc. are ready and can be submitted along with tender document for getting quotations, one can preferably go for
- A Measure and Value Contract
 - B Schedule of Price Contract
 - ✓ C Lump-Sum Contract
 - D Design and Construct Contract



- 46.** As per the normal practice, general arrangement drawings are provided alongwith the tender document for quotations from various contractors. During the execution of the construction work, there are possibilities for additions, alterations, modifications etc etc. In such situation the type of the contract to be adopted is
- A Design and Construct Contract
 - B Schedule of Quantities Contract
 - C Lump-sum Contract
 - D Measure and Value Contract
- 47.** For the construction of flyover, to be adopted as grade separator, wherein there are possibilities of various alternatives for the design and construction technology to be adopted, considering the competency and expertise available with prequalified contractors, the type of the contract one should go for will be
- A Measure and Value Contract
 - B Lump-Sum Contract
 - C Design and Construct Contract
 - D Cost Plus Percentage Contract
- 48.** For a substantially large Industrial Complex to have production of fertilizers housing large manufacturing plant alongwith structures with bulk storage facilities to be provided. The plant need the technology transfer and the tender will be floated globally. The type of a contract in such a case should be
- A Lump-Sum Contract
 - B Term key contract
 - C Measure and Value Contract
 - D Schedule of quantities contract
- 49.** In case of usual general conditions of contract, any problem connected to delay in construction, quality of work etc due to sub contractor, the responsibility lies with
- A Main contractor
 - B Architect
 - C Owner
 - D sub contractor



50. In case of usual general conditions of contract, a sub-contractor nominated by the Architect and was supposed to work under main contractor under the contract between contractor and nominated sub-contractor. During the execution of the construction work, the work was delayed and quality of work was observed to be below standard. In such situation, the responsibility lies with
- A Main contractor
 - B Architect
 - C Nominated sub-contractor
 - D Owner
51. Who wrote the 'Iliad'?
- A Homer
 - B Plato
 - C Aristotle
 - D Socrates
52. What is the largest desert in Africa?
- A Arabian Desert
 - B Kalahari Desert
 - C Sahara Desert
 - D Gobi Desert
53. What system of government is ruled directly by the people?
- A Monarchy
 - B Republic
 - C Theocracy
 - D Direct Democracy
54. What does GDP stand for in economics?
- A General Development Plan
 - B Gross Domestic Product
 - C Gross Development Process
 - D Global Distribution Policy



55. What is the study of human social behavior called?
- A Anthropology
 - B Psychology
 - C Sociology
 - D Philosophy
56. What is the study of the fundamental nature of reality and existence?
- A Metaphysics
 - B Epistemology
 - C Aesthetics
 - D Logic
57. Which theory emphasizes that the whole of anything is greater than its parts?
- A Behaviorism
 - B Gestalt Psychology
 - C Psychoanalysis
 - D Humanistic Psychology
58. Who is the author of "Pride and Prejudice"?
- A Emily Bronte
 - B Jane Austen
 - C Charles Dickens
 - D Mark Twain
59. What is the force acting on two charges separated by a distance?
- A Gravity
 - B Magnetic Force
 - C Frictional Force
 - D Electrostatic Force
60. What is the chemical symbol for gold?
- A Gd
 - B Au
 - C Ag
 - D Go



61. What process converts light energy into chemical energy in plants?
- A Osmosis
 - B Fermentation
 - C Respiration
 - D Photosynthesis
62. Which planet is known as the "Red Planet"?
- A Venus
 - B Mars
 - C Jupiter
 - D Saturn
63. What geometric shape has 5 faces, 5 vertices, and 8 edges?
- A Cube
 - B Pyramid
 - C Tetrahedron
 - D Octahedron
64. What programming language is known as the "Mother of all languages"?
- A C++
 - B Java
 - C Assembly Language
 - D Fortran
65. Who painted the Mona Lisa?
- A Vincent van Gogh
 - B Leonardo da Vinci
 - C Pablo Picasso
 - D Rembrandt
66. What refers to a legal rule protecting a person from double jeopardy?
- A Habeas Corpus
 - B Affidavit
 - C Bill of Attainder
 - D Double Indemnity



67. What gas is responsible for the greenhouse effect in Earth's atmosphere?

- A Carbon Dioxide
- B Oxygen
- C Nitrogen
- D Water Vapor

68. What vitamin is produced by the body when exposed to sunlight?

- A Vitamin C
- B Vitamin A
- C Vitamin D
- D Vitamin B

69. Who is the current Secretary-General of the United Nations? (as of 2021)

- A Ban Ki-moon
- B Kofi Annan
- C Antonio Guterres
- D Boutros Boutros-Ghali

70. What is the primary sacred text of Judaism?

- A Bible
- B Quran
- C Vedas
- D Torah

71. What battle marked the defeat of Napoleon in 1815?

- A Battle of Hastings
- B Battle of Trafalgar
- C Battle of Gettysburg
- ✓ D Battle of Waterloo

72. Which river is the longest in the world?

- ✓ A Nile River
- B Amazon River
- C Yangtze River
- D Mississippi River



- 73.** What form of government is ruled by a small group of people?
- A Oligarchy
 - B Democracy
 - C Monarchy
 - D Anarchy
- 74.** Which economic system features government ownership of all means of production?
- A Capitalism
 - B Socialism
 - C Fascism
 - D Communism
- 75.** What term refers to cultural beliefs and practices shared by a society?
- A Culture
 - B Community
 - C Ethnography
 - D Sociology
- 76.** Who is the philosopher known for his allegory of the cave?
- A Plato
 - B Aristotle
 - C Descartes
 - D Kant
- 77.** What type of reinforcement in psychology strengthens behavior by removing aversive stimuli?
- A Negative Reinforcement
 - B Positive Reinforcement
 - C Extinction
 - D Punishment
- 78.** Who wrote the play "Hamlet"?
- A William Shakespeare
 - B John Milton
 - C Geoffrey Chaucer
 - D Samuel Beckett



79. What is the smallest particle of a chemical element that retains its chemical properties?

- A Molecule
- B Atom
- C Compound
- D Electron

80. What vitamin is also known as ascorbic acid?

- A Vitamin B
- B Vitamin A
- C Vitamin C
- D Vitamin D

81. Identify the synonym of "benevolent".

- A Malevolent
- B Kind
- C Angry
- D Sad

82. Choose the antonym of "sparse".

- A Empty
- B Thick
- C Full
- D Dense

83. Which punctuation mark would correctly complete this sentence: "Are you coming ___?"

- A Comma
- B Period
- C Question Mark
- D Exclamation Mark

84. Identify the correct spelling.

- A Accommodate
- B Accomodate
- C Accomodate
- D Accomodate



85. Choose the plural form of "Thesis."

- A Thesiss
- B Theses
- C Thesis's
- D Thesises

86. Select the word that best completes the sentence: "He is ___ to the doctor today."

- A went
- B goes
- C gone
- D going

87. Identify the correct pronoun: "Both of the boys brought ___ lunch."

- A his
- B their
- C its
- D her

88. What is the adjective in the sentence: "The sun gives off intense heat."

- A Sun
- B Gives
- C Off
- D Intense

89. Choose the word that best fits the sentence: "She sings beautifully."

- A She
- B Sings
- C Beautifully
- D None of the mentioned

90. Select the correct form: "Neither of the girls ___ to the party."

- A is coming
- B are coming
- C coming
- D were coming



91. Identify the past perfect tense ' the movie before
- A had seen
 - B has seen
 - C have seen
 - D seeing
92. Choose the correct passive voice "They make shoes in that factory /."
- A Shoes made in that factory
 - B Shoes are made in that factory
 - C In that factory shoes are made
 - D By that factory shoes are made
93. Select the correct conjunction "I want to pay it's too late now"
- A but
 - B and
 - C or
 - D nor
94. What does a thesaurus provide?
- A Definitions
 - B Spelling
 - C Synonyms and antonyms
 - D Pronunciations
95. Choose the correct form of the adjective: He is the boy in his class.
- A Tall
 - B Taller
 - C Tallest
 - D Tallish
96. What is the plural form of 'goose'?
- A Geeses
 - B Geese
 - C eses
 - D Goose



97. Select the correct preposition: We arrived __ New York at noon.
- A In
 - B At
 - C On
 - D Over
98. Choose the correct auxiliary verb I __ working on this project for a week.
- A Have been
 - B Has been
 - C Had been
 - D Is been
99. What does an adverb modify?
- A Nouns
 - B Verbs
 - C Adjectives
 - D Both verbs and adjectives
100. Choose the correct pronoun: __ is on the table?
- A Whose
 - B Who
 - C Which
 - D Whom



