BUW

PROVISIONAL ANSWER KEY

Name of the post	**Lecturer, Architecture in Government Polytechnics, GES, Class-2 (Special Recruitment-PwD-Second Attempt) Class-2]EDUCATION DEPARTMENT**
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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 10-07-2026; 11:00 AM ONWARDS

Instructions / સૂચના

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

(1) Candidates have to pay fees of Rs.100/- for each objection. The fees can be paid from the link given herewith.

(2) The Candidate will be able to submit objection only after payment of the fees. The generation of the receipt will only be considered as final submission.

(3) The Candidate must retain the receipt of the payment of the fees. The fees, once paid, will not be refunded under any circumstances.

(4) All the objections should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical or submission through any other means will not be considered.

(5) All objections are to be submitted with reference to the Master Question Paper published with provisional answer key, published herewith on the website / online objection submission system. Objections should be sent referring to the Question No. & options of the Master Question Paper. Objections regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.

(6) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted objections are differed.

(7) Supportive document to the objection must be uploaded, without which objection will not be considered.

(8) Objections must be supported by authentic references or documentary evidence. Objections based solely on Al, GPT, or similar tools without supporting evidence shall not be considered. For calculation-based, mathematical, statistical, or reasoning questions, candidates shall provide the relevant calculation, methodology, or logical basis in support of the objection.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

(1) ઉમેદવારે દરેક વાંધા દીઠ રૂપિયા ૧૦૦/-ફી ભરવાની રહેશે. જે ફી આ સાથે આપેલ લીંક ઉપરથી ભરી શકાશે.

(2) ફી ભર્યા બાદ જ વાંધો સબમીટ થઈ શકશે. ફી ભર્યાની આખરી પહોંચ જ આખરી સબમીશન ગણાશે.

(3) ફી ભર્યાની પહોંચ ઉમેદવારે સાચવી રાખવાની રહેશે. એક વાર ભરેલ ફી કોઈ પણ પરિસ્થિતિમાં પરત આપવામાં આવશે નહિ.

(4) વાંધા ફક્ત **ઓનલાઈન ઓબ્જેકશન સબમીશન સીસ્ટમ** દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ, ટપાલ અથવા ઈ-મેઈલ કે અન્ય કોઈ રીતે આયોગને મોકલવામાં આવેલ વાંધા ધ્યાને લેવામાં આવશે નહીં, જેની ખાસ નોંધ લેવી.

(5) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતાં, તમામ વાંધા-સૂચનો વેબસાઈટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી(માસ્ટર પ્રશ્નપત્ર) ના પ્રશ્નક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા. માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા ધ્યાને લેવામાં આવશે નહીં.

(6) ઉમેદવારે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાવ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા ધ્યાને લેવાશે નહીં.

(7) વાંધા માટે સંદર્ભ જોડવો આવશ્યક છે, જેના વિના વાંધો ધ્યાને લેવામાં આવશે નહીં.

(8) વાંધો પ્રમાણભૂત અને અધિકૃત સંદર્ભો અથવા દસ્તાવેજી પુરાવાથી સમર્થિત હોવો આવશ્યક છે. માત્ર AI, GPT અથવા સમાન સાધનો દ્વારા જનરેટ કરાયેલ અને આધારભૂત પુરાવા વિનાના વાંધાઓની વિચારણા કરવામાં આવશે નહીં. ગણતરી આધારિત, ગાણિતિક, આંકડાશાસ્ત્રીય અથવા તાર્કિક પ્રશ્નોના કિસ્સામાં ઉમેદવારે સબંધિત ગણતરી, પદ્ધતિ અથવા તાર્કિક આધાર રજૂ કરવાનો રહેશે.

Website link for online objection submission system: https://www.formonline.co.in/GPSC_TRACK/SearchPage.aspx

1. Rani ki Vav at Patan in Gujarat is officially described by the Government of India as which type of structure?

A) Fort
B) Stepwell
C) Palace
D) Bridge

2. Which city in Gujarat is recognised as a UNESCO World Heritage City for its historic walled town?

A) Surat
B) Ahmedabad
C) Rajkot
D) Bhavnagar

3. Stepwells were mainly developed in India to cope with what condition?

A) Heavy snowfall
B) Seasonal fluctuations in water availability
C) Earthquakes
D) Wind erosion

4. Champaner–Pavagadh Archaeological Park in Gujarat is famous mainly for:

A) Buddhist monasteries from the Gupta period
B) A complete pre-Mughal Islamic city and earlier Hindu remains
C) Only modern museums
D) Wooden palace architecture

5. Stepwells are described as a type of which broader water structure?

A) Dams
B) Storage and irrigation tanks
C) Sea ports
D) Flood control channels

6. Rani ki Vav is recognized as a masterpiece of which architectural style?

A) Indo Saracenic architecture
B) Maru Gurjara architecture
C) Dravidian architecture
D) Mughal architecture

7. Dholavira in Kutch district of Gujarat is an important heritage site of which ancient civilisation?
A) Vedic civilisation
B) Indus (Harappan) civilisation
C) Gupta Empire
D) Mughal period

8. Lothal in Gujarat is best known as:
A) A Maratha hill fort
B) A Harappan port town with dockyard remains
C) A Buddhist pilgrimage centre
D) A medieval Jain monastic complex

9. A pol is described primarily as what?
A) A city level transport hub
B) A compact, gated residential street cluster
C) A type of temple complex
D) A modern apartment tower

10. Which small open to sky space is considered a key feature inside many pol houses in Ahmedabad?
A) Sabha
B) Otla
C) Chowk
D) Mandapa

11. The narrow streets and closely built houses of pols are understood to help mainly with which aspect of the urban environment?
A) Creating strong winds and dust
B) Providing shaded microclimate in hot weather
C) Allowing large vehicle movement
D) Increasing noise levels

12. Traditional pol houses of Ahmedabad are socially organized to reflect what?
A) Only random plot sales
B) Caste and occupational groupings
C) Purely height based zoning
D) Land value around highways

13. Which heritage site in Gujarat is known for ancient Buddhist caves and rock-cut architecture near the Uparkot fort?
A) Dholavira, Kutch
B) Buddhist Caves at Junagadh
C) Laxmi Vilas Palace, Vadodara
D) Girnar Hill Jain temples

14. In broad academic discussions on vernacular architecture, the term is generally used for buildings that are:
A) Designed by international star architects only
B) Built using local materials and traditional skills without formal professional design
C) Always made in steel and glass
D) Only built for religious purposes

15. Which local material is considered very important for the walls of vernacular houses in Kutch?
A) Aluminium panels
B) Mud or clay mixed with straw or dung
C) Plastic sheets
D) Pure glass blocks

16. Padma Vibhushan Ar. B. V. Doshi's work is presented as an example of:
A) International Style towers unrelated to local context
B) Modern Indian architecture rooted in local climate and tradition
C) Only industrial factory design
D) Temporary exhibition structures

17. Architects like B. V. Doshi and Charles Correa are considered important in India because they:
A) Removed regional identity from Indian buildings
B) Designed only replicas of European palaces
C) Worked only outside India
D) Helped create a modern architecture that responds to Indian climate and culture

18. A "scale" in technical drawing is mainly needed because:
A) Actual objects are always very small
B) Objects may be too large or too small to draw in their true size on the sheet
C) Drawing instruments cannot draw straight lines
D) Colours must be matched accurately

19. A graphical scale on a drawing is usually drawn as:
A) A straight line divided into equal parts
B) A circle with radial lines
C) A freehand sketch with random marks
D) A table of numbers without any line

20. A “plain scale” is defined as a scale that can:
A) Measure only areas and volumes
B) Measure only one unit
C) Measure a unit and its first subdivision
D) Measure angles but not lengths

21. To construct a plain scale, the first step is usually to:
A) Decide the Representative Fraction (R.F.) of the scale
B) Draw the object in full size
C) Colour the drawing sheet
D) Erase all lines

22. The length of a scale is calculated by which formula?
A) Length of scale = R.F. × maximum length to be measured
B) Length of scale = sheet size ÷ R.F.
C) Length of scale = height of building × R.F.
D) Length of scale = 1 ÷ R.F.

23. Scale selection in technical drawing depends mainly on:
A) The colour of the drawing paper
B) The available drawing instruments only
C) The size of the object and the size of the drawing sheet
D) The weather conditions

24. Engineering drawings are usually made to scale so that:
A) They look more artistic
B) The sheet can be reused
C) The ink does not spread
D) The object can be reproduced accurately by measurement from the drawing

25. Freehand sketches are normally:
A) Always drawn to precise scale
B) Drawn not to scale but in correct proportion
C) Drawn only by computers
D) Drawn only with rulers and set squares

26. In freehand sketching, “scale” means that objects should be sketched:
A) Without any reference to actual size
B) Only in full size
C) In proportion to the nearest possible actual size
D) Only in reduced micro size

27. Perspective projection is used mainly to:
A) Show how a building appears to the human eye
B) Show only the structural forces in a building
C) Simplify dimensioning
D) Draw hidden details in a section

28. In perspective projection, parallel lines that recede from the observer appear to:
A) Stay parallel and never meet
B) Become curved
C) Meet at a vanishing point
D) Disappear completely

29. One point perspective is also called:
A) Parallel perspective
B) Angular perspective
C) Oblique projection
D) Aerial perspective

30. Two point perspective is used when:
A) The object’s front face is parallel to the picture plane
B) The object is placed such that two sets of its edges recede to two vanishing points
C) The object is seen only from above
D) The object is transparent

31. Engineering/Technical/Architectural drawings must follow:
A) Only local informal rules
B) Conventions and standards so that all readers can understand them
C) Only artistic preferences of the draftsman
D) Rules decided every time by the contractor

32. Standard line conventions in drawing help mainly to::
A) Make drawings colourful
B) Reduce sheet size
C) Increase printing cost
D) Distinguish between different types of edges and features

33. Dimensioning on a technical drawing must be done so that:
A) Only one person can read it
B) All sizes needed for manufacture or construction are clearly shown
C) No numerical values appear
D) Only approximate lengths are given

34. Sectioning in drawings is mainly used to:
A) Show internal details that cannot be seen from outside
B) Show only external colour of the object
C) Remove all hidden lines
D) Reduce the number of views

35. Bricks used in building construction are generally obtained by which process?
A) Cutting stone blocks into thin slices
B) Moulding clay in rectangular blocks and then drying and burning
C) Casting concrete in steel moulds
D) Pressing lime and sand into blocks without burning

36. At places where stones are not easily available but plenty of clay is present, which type of masonry usually proves cheaper?
A) Stone masonry
B) Timber construction
C) Concrete block masonry
D) Brick masonry

37. For good brick earth, the percentage of alumina (clay) should be approximately:
A) 5–10%
B) 15–20%
C) 20–30%
D) 40–50%

38. In good brick earth, silica should be present in what approximate proportion?
A) 10–20%
B) 20–30%
C) 30–40%
D) 50–60%

39. A small quantity of finely powdered lime in brick earth is mainly added to:
A) Increase shrinkage of raw bricks
B) Prevent shrinkage and help fuse sand as a cementing material
C) Make bricks darker in colour
D) Reduce the burning temperature too much

40. A small amount of iron oxide in brick earth mainly:
A) Makes bricks white
B) Prevents burning of bricks
C) Helps fuse sand and imparts red colour
D) Completely waterproofs the bricks

41. Which of the following ingredients in brick earth is considered harmful because it can cause efflorescence on walls?
A) Finely powdered lime
B) Silica
C) Alkalies such as soda and potash
D) Alumina

42. Which sequence correctly represents the four main operations in the manufacture of bricks?
A) Moulding, burning, drying, preparation of clay
B) Preparation of clay, moulding, drying, burning
C) Burning, drying, moulding, preparation of clay
D) Drying, preparation of clay, burning, moulding

43. During preparation of clay for bricks, the top layer of soil (about 20 cm) is removed mainly because it:
A) Is too dry
B) Contains too much sand
C) Contains many impurities and is unsuitable for bricks
D) Is too strong for moulding

44. Tempering of brick earth is the process in which:
A) Bricks are cooled after burning
B) Clay is exposed to sun and wind
C) Water is added and clay is thoroughly kneaded to proper consistency
D) Bricks are dipped in colour solution

45. Because bricks shrink during drying and burning, moulds for bricks are generally made:
A) Smaller than finished brick size
B) Equal to finished brick size
C) Larger by about 8–12% in all directions
D) Larger only in length

46. A frog in a brick is best described as:
A) A hollow used for reinforcement
B) A depression or mark about 10–20 mm deep on one face
C) The rounded edge of the brick
D) A type of decorative projecting brick

47. In proper brickwork practice, bricks are usually laid with the frog:
A) Uppermost
B) On the side
C) Downwards
D) Alternately up and down

48. The recommended standard size for a building brick in India (excluding mortar) is:
A) 20 cm × 10 cm × 10 cm
B) 19 cm × 9 cm × 9 cm
C) 22.5 cm × 11.25 cm × 7.5 cm
D) 25 cm × 12.5 cm × 7.5 cm

49. For a good first class brick, the water absorbed after 24 hours' immersion in cold water should not exceed approximately:
A) 5–10% of its dry weight
B) 10–15% of its dry weight
C) 20% of its dry weight
D) 40% of its dry weight

50. A good brick, when struck against another brick, should:
A) Produce a dull thud
B) Produce a clear ringing sound
C) Not produce any sound
D) Break into pieces immediately

51. The minimum crushing strength specified for a brick is about:
A) 15 kg/cm²
B) 25 kg/cm²
C) 35 kg/cm²
D) 75 kg/cm²

52. In climate responsive building design, climate is mainly analysed so that buildings can:
A) Ignore local temperature and wind
B) Adapt their form and envelope to local temperature, sun and wind conditions
C) Always rely on air conditioning
D) Be the same in all regions

53. Buildings contribute significantly to greenhouse gas emissions, so green buildings mainly aim to:
A) Increase energy use for comfort
B) Reduce emissions by lowering energy demand and using efficient systems
C) Use only decorative features
D) Increase use of fossil fuels

54. Mahoney tables in architecture are primarily used as:
A) Structural design charts for beams
B) Colour selection charts
C) Cost estimation tables
D) Reference tables to derive climate appropriate design guidelines from basic climate data

55. According to descriptions of the Mahoney method, typical input data for these tables include:
A) Only soil type and slope
B) Monthly air temperature, humidity, precipitation and wind
C) Only building height
D) Only electricity tariff

56. A bioclimatic or bioclimatic psychrometric chart is mainly used in building design to:
A) Show soil bearing capacity
B) Draw structural reinforcement details
C) Relate climate data to human comfort zones and suggest passive design strategies
D) Plot traffic counts

57. Passive solar building design is described as a design approach that:
A) Uses electric heaters only
B) Takes advantage of site, climate, and building materials to reduce energy use
C) Depends only on mechanical cooling
D) Works only in very cold climates

58. In passive solar design, thermal mass materials such as brick or concrete are used mainly to:
A) Reduce structural strength
B) Absorb, store, and later release heat to moderate indoor temperature
C) Reflect all solar radiation
D) Increase sound transmission

59. Passive thermal design strategies in buildings typically rely on:
A) Natural processes like conduction, convection and radiation without external power
B) Only electric chillers and fans
C) Diesel generators for heating
D) Continuous mechanical ventilation

60. Active thermal design systems in buildings usually refer to:
A) Only orientation and shading
B) Systems that use external energy (fans, pumps, compressors) to control temperature
C) Only use of heavy walls
D) Only use of reflective paints

61. Cross ventilation is a form of natural ventilation where:
A) Air flows between openings on opposite or adjacent sides of a space
B) Air enters and leaves through the same opening
C) Only ceiling vents are used
D) Only mechanical ducts are used

62. A key limitation of cross ventilation in dense urban areas is that:
A) It always causes noise problems
B) Nearby buildings and obstructions can block the wind needed for airflow
C) It is illegal in multi storey buildings
D) It only works at night

63. Rainwater harvesting is promoted in Indian building policy primarily to:
A) Increase surface runoff into drains
B) Store rainwater and recharge groundwater, reducing dependence on municipal supply
C) Increase building height
D) Reduce property tax

64. Model Building Bye Laws in India recommend that buildings integrate rainwater harvesting systems mainly for:
A) Decorative landscaping
B) Vehicle washing only
C) Fireworks storage
D) Reducing potable water demand and improving groundwater recharge

65. GRIHA is described as:
A) A foreign rating system imported from Europe
B) India's own national green building rating system
C) Only an academic research project
D) A tax rebate scheme only

66. IGBC Green Homes is a rating system developed in India primarily for:
A) New and existing residential buildings like apartments and individual homes
B) Highway projects
C) Only large IT office parks
D) Only factories

67. The Bureau of Energy Efficiency (BEE) Star Rating scheme for office buildings in India mainly evaluates:
A) Colour of external paint
B) Building energy performance, especially electricity use per square metre
C) Quality of interior furniture
D) Number of car parking spaces

68. A concise way to summarise the main roles of green building rating systems such as GRIHA, IGBC and BEE in India is that they:
A) Only promote building aesthetics
B) Replace all local building bye laws
C) Deal only with financial accounting
D) Provide structured criteria to improve energy, water and environmental performance of buildings

69. According to Comprehensive General Development Control Regulations (CGDCR), before making use of any completed building, what must the owner obtain from the Competent Authority?

A) Development Permission
B) Structural stability certificate only
C) Building Use Permission
D) Building Completion Certificate only

70. As per Comprehensive General Development Control Regulations (CGDCR), who is primarily responsible for ensuring that the building complies with Development Regulations?

A) Only the Architect on Record
B) Only the Structural Engineer on Record
C) The Owner or Developer
D) The Contractor

71. For all buildings except small dwellings, the marginal space adjacent to the building, as per Comprehensive General Development Control Regulations (CGDCR) fire provisions, should be:

A) Covered with sheds for parking
B) Open to sky and motorable
C) Used only for landscaping
D) Allowed to be fully built over

72. In Comprehensive General Development Control Regulations (CGDCR), the minimum clear width of a non residential corridor up to 9 m length is:

A) 0.9 m
B) 1.2 m
C) 1.5 m
D) 2.0 m

73. According to Comprehensive General Development Control Regulations (CGDCR), lifts and escalators are normally:

A) Always counted as exits
B) Not normally considered as exits
C) Allowed as the only exits
D) Required only in basements

74. Comprehensive General Development Control Regulations (CGDCR) requires that emergency escape lighting should:

A) Be manually switched on after 10 minutes

B) Be independent of the main supply and start within one second of failure

C) Work only during day time

D) Be provided only in basements

75. For escape routes, Comprehensive General Development Control Regulations (CGDCR) specifies that the illumination at floor level of means of exit must not be less than:

A) 1 lux

B) 2 lux

C) 5 lux

D) 10 lux

76. In Comprehensive General Development Control Regulations (CGDCR), adequate natural and artificial lighting for buildings is to be provided as per which document?

A) CPWD Manual only

B) National Building Code of India, Part 8, Section 1

C) Only State PWD Schedule

D) Town Planning Scheme

77. Which NBC volume and part mainly contains “Acoustics, Sound Insulation and Noise Control”?

A) Volume 1, Part 4

B) Volume 2, Part 8, Section 4

C) Volume 1, Part 3, Section 1

D) Volume 2, Part 9, Section 1

78. The main purpose of acoustic design in spaces like auditoriums or classrooms, as per NBC Section on Acoustics, is to:

A) Increase echoes and reverberation

B) Reduce unwanted noise and improve hearing conditions

C) Increase structural load

D) Stop all sound transmission

79. Which NBC section gives the main technical guidance for “Air Conditioning, Heating and Mechanical Ventilation”?

A) Part 8, Section 3
B) Part 3, Section 1
C) Part 9, Section 2
D) Part 11, Section 1

80. Comprehensive General Development Control Regulations (CGDCR) states that every habitable room should be equipped for adequate ventilation by windows and/or ventilators that open into an open space at least equal to what fraction of the floor area of the room?

A) One twentieth
B) One tenth
C) One seventh
D) One third

81. According to Comprehensive General Development Control Regulations (CGDCR), any deficiency in natural ventilation in rooms may be compensated by use of:

A) Larger doors only
B) Mechanical system such as blowers, exhaust fans or air conditioning
C) False ceilings
D) Extra paint on walls

82. When no public drainage facility is available, Comprehensive General Development Control Regulations (CGDCR) requires the owner to provide which of the following for sewage disposal?

A) Direct discharge into nearest river
B) Septic tank and soak pit / soak well
C) Roadside open drain
D) Septic tank and soak pit / soak well

83. Comprehensive General Development Control Regulations (CGDCR) specifies that every septic tank shall be provided with a ventilating pipe of at least:

A) 25 mm diameter
B) 40 mm diameter
C) 50 mm diameter
D) 75 mm diameter

84. As per Comprehensive General Development Control Regulations (CGDCR), effluent from a septic tank should not be allowed into an open channel drain or body of water:
A) Under any circumstances
B) Without adequate treatment
C) If the drain is covered
D) Only during monsoon

85. Comprehensive General Development Control Regulations (CGDCR) requires that electric distribution cables and wiring in a building be laid in:
A) Open corridors for cooling
B) Only surface conduits in rooms
C) The same shaft as water pipes
D) A separate duct sealed at every floor with non combustible materials

86. According to Comprehensive General Development Control Regulations (CGDCR), electric supply to high pressure fire pump and fire lift should:
A) Be switched off with the main building supply
B) Be supplied parallel and not cut off with main supply
C) Be taken from any tenant meter
D) Be provided only by solar

87. For residential buildings (Dwelling) above 13 m height, Comprehensive General Development Control Regulations (CGDCR) requires at least:
A) No lift
B) Minimum 1 lift, or 1 lift per 20 dwelling units above certain floors
C) Minimum 2 lifts in all cases
D) A lift only above 30 m

88. Comprehensive General Development Control Regulations (CGDCR) states that for buildings with height above 21 m, one of the required lifts shall be a:
A) Service lift
B) Goods lift
C) Fire lift
D) Hospital stretcher lift only

89. According to Comprehensive General Development Control Regulations (CGDCR), the minimum clear door opening width of a lift door should be:
A) 700 mm
B) 800 mm
C) 900 mm
D) 1000 mm

90. NBC Table 7 (Part 4) for residential buildings (A 1, A 3, A 4) generally requires first aid hose reel in buildings:
A) For many residential occupancies from low heights upwards
B) Only if height exceeds 45 m
C) Never in residential buildings
D) Only in single storey houses

91. As per Comprehensive General Development Control Regulations (CGDCR) fire provisions, all exits, corridors and staircases in commercial buildings and special buildings should have:
A) Red painted walls only
B) Auto glow exit signs and floor guide marks
C) Only loudspeakers
D) CCTV cameras

92. For non residential buildings with height more than 15 m and basement area more than 200 m^2, Comprehensive General Development Control Regulations (CGDCR) requires:
A) Only portable fire extinguishers
B) Automatic sprinkler system in the basement
C) No special system
D) Only smoke detectors

93. According to Comprehensive General Development Control Regulations (CGDCR), at least two yard hydrants and one fire service inlet are required so that for every 1000 m^2 floor area there is:
A) One hydrant outlet and one hose reel inside the building
B) Only one extinguisher
C) Only one yard hydrant
D) Only a fire alarm panel

94. Which of the following is a common Indian avenue tree with the scientific name Azadirachta indica?
A) Banyan
B) Neem
C) Gulmohar
D) Mango

95. The commonly used ornamental tree “Gulmohar”, popular in Indian roads and campuses, has which scientific name?
A) Delonix regia
B) Ficus religiosa
C) Mangifera indica
D) Polyalthia longifolia

96. “Polyalthia longifolia”, often planted along Indian streets and institutional campuses, is commonly known as:
A) Ashoka or Mast tree
B) Peepal tree
C) Teak tree
D) Coconut palm

97. Which plant is a common Indian flowering shrub, with scientific name Hibiscus rosa sinensis, often used in residential gardens?
A) Bougainvillea
B) Hibiscus
C) Nerium
D) Ixora

98. Bougainvillea, widely used on Indian compound walls and pergolas, is especially valued in landscape design because it:
A) Needs heavy shade and water
B) Has colourful bracts and is drought tolerant
C) Grows only in waterlogged soil
D) Is a slow growing indoor plant

99. In sustainable landscape design, "native species" are usually preferred because they:
A) Require only artificial fertilisers
B) Are better adapted to local climate and soil and support local biodiversity
C) Always have brightly coloured flowers
D) Grow only in pots indoors

100. In site planning, the term "hardscape" generally refers to:
A) Only lawns and shrubs
B) Built, non-plant elements such as paving, walls and decks
C) Only water bodies
D) Only interior finishes

101. In site planning, "soft landscape" usually refers to:
A) Only lighting fixtures
B) Soil, grass, groundcovers, shrubs and trees used in planting design
C) Interior furniture
D) Building façades

102. A stone pathway used to connect different parts of a garden is best described as:
A) A soft element providing shade
B) A hard element for circulation
C) A water feature
D) A type of street furniture

103. Trees, shrubs and ground covers in a garden mainly contribute to:
A) Soil sealing and heat gain
B) Visual softness, shade and ecological benefits
C) Structural stability of walls
D) Only noise increase

104. “Street furniture” mainly means:
A) Indoor furniture sold on streets
B) Only billboards and hoardings
C) Only trees along the street
D) Objects placed in public spaces to provide comfort, direction and safety

105. Which of the following is NOT typically classified as street furniture?
A) Benches
B) Dustbins
C) Overhead high voltage transmission tower
D) Bus shelters

106. Benches in a street or park are mainly provided to:
A) Block pedestrian movement
B) Provide resting and social interaction spaces
C) Support street lighting poles
D) Carry electrical cables

107. In street design, which element is primarily installed to physically protect pedestrians and buildings from vehicle impact at the edge of carriageways or plazas?
A) Bollards
B) Benches
C) Tree guards
D) Dustbins

108. In Indian cities, which of the following combinations is commonly used as street furniture along footpaths?
A) Sofa sets and dining tables
B) Benches, dustbins and streetlights
C) Almirahs and cupboards
D) Study tables and chairs

109. Signage used on streets and in parks mainly serves which function?
A) Providing water supply
B) Guiding people and giving information
C) Supporting trees
D) Reducing air pollution directly

110. Why is it generally recommended to include both hard and soft elements in a well designed landscape?
A) To make maintenance impossible
B) Because hard elements alone are enough
C) To balance structure (paths, walls) with living elements (plants) for function and beauty
D) To avoid any change in the site

111. Which of the following materials is generally strongest in compression but weakest in tension?
A) Mild steel
B) Timber
C) Plain concrete
D) Aluminium

112. Which structural material among the following is characterized by high tensile strength, ductility and good weldability?
A) Brick masonry
B) Mild structural steel
C) Plain cement concrete
D) Timber

113. In a traditional load bearing masonry wall system, loads from floors and roof are transferred primarily:
A) Directly to beams
B) Through columns only
C) Through the masonry walls to the foundation
D) Through trusses only

114. A “post and beam” structural system mainly consists of:
A) Slabs and domes only
B) Columns (posts) and horizontal beams
C) Only bearing walls
D) Only trusses

115. Which of the following is a rigid frame system used in buildings?
A) Simple support of a plank on two bricks
B) Beam and column joints fixed to resist bending
C) A rope tied between two posts
D) A simply supported steel truss

116. Which three basic performance requirements are commonly considered in structural design?
A) Strength, stiffness, stability
B) Colour, texture, cost
C) Strength, colour, acoustics
D) Flexibility, cost, ventilation

117. Which type of roof structure is commonly used in industrial sheds for longer spans with triangulated members?
A) Flat slab
B) Steel truss
C) Load bearing brick vault
D) Timber joist floor

118. In a simply supported beam carrying uniformly distributed load, which internal force mainly resists the tendency of the beam to bend?
A) Axial tensile force only
B) Shear force only
C) Bending moment
D) Torsion only

119. Compression force in a structural member tends to:
A) Stretch the member and increase its length
B) Shorten or crush the member
C) Rotate the member without length change
D) Cause only twisting

120. Factor of Safety in structural design is defined as the ratio of:
A) Working load to ultimate load
B) Ultimate strength to working or allowable stress
C) Live load to dead load
D) Dead load to live load

121. In the limit state method used in Indian concrete design codes, the factor of safety on material strength is introduced mainly by:
A) Using partial safety factors for materials
B) Increasing service loads
C) Ignoring wind loads
D) Reducing section size

122. Which of the following Indian standards specifically deals with criteria for earthquake resistant design of structures?
A) IS 456
B) IS 800
C) IS 1893
D) IS 875

123. A key practice for making a building more earthquake resistant is to:
A) Make the structure very heavy
B) Provide regular, symmetrical layout and proper reinforcement anchorage
C) Avoid any reinforcement in masonry
D) Use only very slender columns

124. Retrofitting of an existing RCC building to enhance its earthquake resistance may include:
A) Adding RC jacketing around columns and beams
B) Removing shear walls
C) Reducing reinforcement in beams
D) Increasing unsupported slender columns

125. Which type of foundation is commonly used for multi storey buildings where good soil is available at shallow depth?
A) Isolated spread footing
B) Pile foundation only
C) Well foundation
D) Caisson foundation in water

126. Pile foundations are generally preferred when:
A) The soil near the surface is very strong
B) The loads are very small
C) The strong soil layer is at considerable depth
D) The building is only single storey

127. In a steel truss, the top chord members under a uniformly distributed roof load on the bottom chord are usually in:
A) Tension
B) Compression
C) Pure shear
D) Torsion

128. A total station used in site survey is basically a combination of:
A) Level and plumb bob only
B) Electronic theodolite and electronic distance meter
C) Compass and chain only
D) Plane table and alidade

129. In a total station survey, the instrument is usually set up:
A) On bare ground without any point
B) On a moving vehicle
C) Only inside a building
D) Over a known station point or with sight to known points

130. What does a total station directly measure in the field?
A) Only area of the plot
B) Horizontal and vertical angles and slope distance
C) Wind speed and rainfall
D) Soil bearing capacity

131. After field measurement with a total station, the recorded point data are commonly transferred to computer software to:
A) Change units only
B) Generate maps, site plans and 3D models
C) Only check instrument battery
D) Print bills

132. For preparing a detailed site drawing using total station, field observations should normally include:
A) Boundary points and important features like buildings, roads and trees
B) Only boundary corners
C) Only one random point
D) Only contour points on a grid, nothing else

133. Which Indian government organization is mainly responsible for preparation of topographical maps of India that are used as a base for contour and site plans?
A) Indian Meteorological Department
B) Survey of India
C) Geological Survey of India
D) Archaeological Survey of India

134. A contour line on a topographic map represents points of:
A) Same magnetic bearing
B) Same plan distance from origin
C) Same elevation above a reference level
D) Same coordinate (Easting)

135. Closely spaced contour lines on a map indicate that the ground slope is:
A) Very gentle
B) Nearly flat
C) Steep
D) Completely horizontal

136. Which of the following is NOT a common use of contour maps in site planning?
A) Locating suitable routes for roads
B) Estimating earthwork quantities
C) Designing water flow and drainage
D) Measuring concrete strength in laboratory

137. A contour model made using thermocol or clay based on survey data helps mainly to:
A) Show underground water table
B) Visually understand the three dimensional shape of the site
C) Measure wind speed
D) Test soil strength

138. For contouring by indirect (grid) method, the ground is divided into:
A) Only random triangles
B) A series of squares or rectangles and levels are taken at grid points
C) Circular rings of equal radius
D) One single triangle

139. Which one of the following is a typical first step when conducting a total station survey on a site?
A) Pouring concrete cubes
B) Running a compression test on soil
C) Drawing contours directly on paper
D) Leveling the instrument on the tripod over a survey station

140. In total station work, the reflector (prism) is generally held at:
A) The instrument station
B) The point whose coordinates are to be measured
C) The permanent benchmark only
D) The center of the earth

141. Which coordinate components are typically computed for each surveyed point in a total station survey?
A) Rainfall, temperature and humidity
B) Latitude, longitude and time zone only
C) Easting, northing and elevation (X, Y, Z)
D) Soil type, vegetation and land use

142. When drawing contours from survey data, lines should:
A) Cross each other frequently
B) Never cross each other except in cases like overhanging cliffs
C) Always be drawn straight and parallel
D) Be numbered randomly

143. Which method is normally used to obtain contour lines directly in the field without plotting spot levels first?
A) Direct method of contouring
B) Grid leveling method
C) Cross section method
D) Compass traverse only

144. In site planning, contour maps are especially useful because they:
A) Show only legal boundaries
B) Help understand slope for drainage design and building placement
C) Provide information about concrete mix
D) Are used only to mark tree positions

145. The main purpose of an approximate estimate of a building project is to:
A) Prepare reinforcement drawings
B) Get a quick idea of probable cost for feasibility and sanction
C) Design foundations in detail
D) Prepare bar bending schedule

146. Which of the following is NOT a common method of approximate estimation for buildings?
A) Plinth area method
B) Cubic (volume) method
C) Unit base (per bed, per seat) method
D) Ultrasonic pulse velocity method

147. In detailed estimating, the process of taking out measurements from drawings and listing them item wise is called:
A) Rate analysis
B) Quantity surveying or taking out quantities
C) Valuation
D) Tendering

148. The “abstract of cost” in an estimate mainly contains:
A) Only drawings of the building
B) Item wise quantities, rates and total cost of each item
C) Soil test results
D) Structural design calculations

149. A schedule of quantities, often called BOQ (Bill of Quantities), is primarily used to:
A) Record daily labour attendance
B) Obtain structural design approval
C) Store test results of materials
D) Invite tenders by giving standardized description and quantity of each item

150. While preparing a schedule of quantities for a building, the description of each item should be:
A) Vague and very short
B) Clear, standard and include material, workmanship and unit of measurement
C) Only in local language without units
D) Written without referring to any standard

151. Rate analysis of an item of work is done mainly to:
A) Work out the unit rate considering materials, labour, plant, overheads and profit
B) Check soil bearing capacity
C) Finalize architectural drawings only
D) Design reinforcement details

152. Which of the following is generally NOT included in the basic cost of materials during rate analysis?
A) Invoice (ex factory) cost of material
B) Transportation and loading–unloading
C) Wastage, handling and taxes
D) Contractor's net profit percentage

153. In tendering, "specification" mainly means:
A) Structural drawings only
B) A detailed written description of materials, workmanship and quality standards
C) Only bar bending schedule
D) Only cost of materials

154. "General specifications" for a building project usually describe:
A) Very detailed requirements for each item
B) Only electrical items
C) Broad nature and class of work, materials and standards for major items
D) Only dimensions of foundations

155. In public works in India, the most commonly used system of inviting competitive bids for normal building works is:
A) Single negotiated tender
B) Open tender
C) Limited tender always
D) Direct work without tender

156. Which one of the following is normally a constituent of a tender document?
A) Only soil investigation report
B) Notice inviting tender, instructions to tenderers, form of tender, conditions, specifications and schedule of quantities
C) Only architect's bio data
D) Only bar bending schedule

157. A lump sum contract is one in which:
A) Payment is made per day of labour only
B) Contractor is paid a fixed total price for the complete work as per drawings and specifications
C) Every small item is measured and paid separately at different rates
D) Contract has no written conditions

158. In an item rate contract for building works:
A) Contractor quotes rate for each item of work in BOQ and payment is made for actual measured quantities
B) Only total cost is quoted
C) No measurements are taken
D) Rates are fixed only by department

159. Which of the following is generally considered an essential element of a valid contract as per the Indian Contract Act, 1872?
A) Verbal promise only
B) Lawful consideration and free consent of parties
C) Use of local language only
D) Presence of a notary always

160. During execution of a contract between client and contractor, regular "running account bills" are used mainly to:
A) Change contract conditions
B) Make interim payments based on measured work done
C) Pay for only material on site
D) Finalize extra items

161. Contract management during construction should normally include:
A) Ignoring site records
B) Only supervising labour attendance
C) Proper communication, recording of measurements, handling variations and ensuring payments as per contract conditions
D) Only testing concrete cubes

162. Which central law provides for the registration of architects in India and creates the Council of Architecture?
A) The Gujarat Town Planning and Urban Development Act, 1976
B) The Architects Act, 1972
C) The Indian Contract Act, 1872
D) The Town and Country Planning Act, 1956

163. Under which section of the Architects Act, 1972 is the Council of Architecture constituted?
A) Section 2
B) Section 3
C) Section 10
D) Section 21

164. What is one of the important functions of the Council of Architecture under the Architects Act, 1972?
A) To prescribe minimum standards of architectural education
B) To sanction town planning schemes
C) To collect property tax from buildings
D) To approve state development plans

165. Which provision of the Architects Act empowers the Council of Architecture to frame a code of professional conduct and ethics for architects?
A) Section 10
B) Section 18
C) Section 22
D) Section 35

166. The Gujarat Town Planning and Urban Development Act, 1976 has been enacted mainly to:
A) Regulate all Central Government buildings
B) Consolidate and amend laws for making and executing development plans and town planning schemes in Gujarat
C) Regulate architectural education at national level
D) Control labour welfare in construction industry

167. Which authority is responsible for preparing the development plan for a development area under the Gujarat Town Planning and Urban Development Act, 1976?
A) Council of Architecture
B) Central Public Works Department
C) Area Development Authority or Urban Development Authority
D) Indian Institute of Architects

168. After a draft development plan is published under section 13 of the Gujarat Town Planning and Urban Development Act, 1976, what must a person generally obtain before carrying out development?
A) Only approval of Council of Architecture
B) Written permission of the appropriate authority
C) Oral consent of neighbours
D) No permission is needed

169. Which section of the Gujarat Town Planning and Urban Development Act, 1976 deals with applications for development permission?
A) Section 20
B) Section 24
C) Section 27
D) Section 40

170. Which document lays down General Development Control Regulations, zoning and use wise permissible activities for urban areas in Gujarat?
A) The Indian Penal Code
B) Comprehensive General Development Control Regulations (GDCR)
C) Railway Act
D) Income Tax Act

171. In the Comprehensive GDCR, which part generally specifies the zoning and permissible uses in different zones (such as Residential, Commercial, Industrial etc.)?
A) Schedule 24 (Trees) only
B) Section C – Planning Regulations, including Tables 7.1 and 7.2
C) Only the Preamble of GDCR
D) Annexure on Fire Safety

172. According to the Comprehensive GDCR, development on any land shall be as per:
A) The owner's choice without reference to plan
B) Only the old city survey record
C) The zone and use conformity defined in the sanctioned development plan and regulations
D) Decisions of the local police station

173. Which Act in Gujarat provides for making Town Planning Schemes that reconstitute plots and reserve land for roads, open spaces and public purposes?
A) The Architects Act, 1972
B) The Gujarat Town Planning and Urban Development Act, 1976
C) The Environment Protection Act, 1986
D) The Indian Registration Act, 1908

174. Under the Gujarat Town Planning and Urban Development Act, 1976, which section empowers the appropriate authority to act against unauthorised development or use?
A) Section 12
B) Section 26 only
C) Sections 35 and 36
D) Section 100 only

175. In the Comprehensive GDCR, which authority normally grants Building Use (BU) permission after verifying compliance with sanctioned plans and regulations?
A) Council of Architecture
B) Competent Authority under the respective urban development or municipal law
C) District Education Officer
D) Registrar of Companies

176. Which law protects the professional title "architect" so that only registered architects or firms of architects can legally use it in India?
A) The Gujarat Town Planning and Urban Development Act, 1976
B) The Comprehensive GDCR
C) The Architects Act, 1972
D) The Companies Act, 2013

177. Which zones in the Comprehensive GDCR are mainly intended for residential use with related compatible activities like schools and small shops?
A) Residential Zones (R, R1, R2, R3 etc.)
B) Industrial Zone and Logistics Zone only
C) Defense Zone only
D) Agricultural Prime Zone only

178. According to the Architects Act, 1972, which level of government approves the regulations framed by the Council of Architecture (for example, on education standards and professional conduct)?
A) State Government only
B) Municipal Corporation
C) Central Government
D) District Collector

179. Computer Aided Design (CAD) in architecture mainly means:
A) Manual drafting on tracing paper
B) Using computers to create 2D drawings and 3D models of designs
C) Only physical model making with cardboard
D) Only writing project reports

180. Which of the following is a common use of CAD in architectural practice?
A) Drafting building plans and sections digitally
B) Calculating income tax
C) Recording attendance of workers only
D) Issuing land records

181. In architectural CAD software, 2D CAD is mainly used to:
A) Make only photo realistic renders
B) Create line drawings such as plans and elevations
C) Simulate construction schedule
D) Design structural steel connections only

182. Which type of CAD is most suitable when realistic 3D models of buildings are needed for checking design problems early?
A) 2D CAD
B) Spreadsheet CAD
C) 3D CAD
D) Text based CAD

183. What is a simple advantage of CAD over manual drafting for architects?
A) Drawings cannot be edited
B) Drawings are slower to prepare
C) Drawings are easier to modify and update
D) Drawings cannot be printed

184. Building Information Modeling (BIM) is best described as:
A) Only a 2D drawing method
B) An intelligent 3D model based process for planning, design, construction and operation
C) A method of physical scale model making
D) Only a cost estimating software

185. In BIM, different building systems such as architecture, structure and MEPF are:
A) Kept in separate unconnected files
B) Not represented at all
C) Drawn only on tracing paper
D) Modelled together in a single coordinated 3D model

186. Which is one key benefit of using BIM in building projects?
A) Increases re work on site
B) Reduces coordination between disciplines
C) Improves coordination and reduces errors during design and construction
D) Makes drawings only in black and white

187. Which of the following is a widely used CAD/BIM workflow in architecture?
A) Hand drawn plan → photocopy → site
B) 2D CAD drawings only, without any model
C) 3D model in CAD/BIM software → automatic extraction of plans, sections and schedules
D) Site sketch → verbal instructions only

188. Three dimensional representation in architectural software generally uses:
A) Only handwritten notes
B) 3D models that represent objects with volume and position in space
C) Only scanned paper drawings
D) Only satellite images

189. Which term is commonly used for converting a 3D architectural model into realistic images or animations on screen?
A) Plotting
B) Scanning
C) Copying
D) Rendering

190. In architectural 3D modeling, which technique “stretches” a 2D shape upward to give it height and form walls or columns?
A) Lofting
B) Extrusion
C) Boolean subtraction
D) Texturing

191. Which 3D modeling operation is often used to cut openings like doors and windows or to join simple volumes into complex building forms?
A) Boolean operations
B) Hand drafting
C) UV mapping
D) Printing

192. Which of the following best describes the difference between CAD and BIM in building design?
A) CAD is always 3D, BIM always 2D
B) CAD focuses on drawing geometry, BIM includes both geometry and building information (materials, quantities, etc.)
C) CAD is used only for interiors, BIM only for exteriors
D) CAD is not used by architects

193. Which stage of the building life cycle can BIM support, apart from design and construction?
A) Only land acquisition
B) Only manual drafting
C) Only demolition
D) Operation and maintenance of the built facility

194. For architects, one common use of 3D CAD/BIM visualization is to:
A) Prepare legal contracts
B) Show clients realistic views of proposed buildings before construction
C) Calculate government taxes
D) Record attendance of students

195. In Indian architectural practice, which type of software is typically used for model based design and documentation following BIM processes?
A) Simple text editors only
B) BIM enabled tools such as Revit type platforms
C) Only web browsers
D) Only email clients

196. Which of the following is now a major priority in contemporary architectural design in India?
A) Sustainable and energy efficient design
B) Use of only imported materials
C) Buildings without natural light
D) Purely decorative facades without function

197. Which national initiative in India is encouraging architects and planners to focus on smart and efficient urban environments?
A) National Solar Mission only
B) Smart Cities Mission
C) Mid Day Meal Scheme
D) MNREGA

198. Which of the following best describes "biophilic design" as a current architectural trend?
A) Design based only on industrial forms
B) Design that removes all natural elements from buildings
C) Design that connects people with nature using elements like plants, natural light and water
D) Design that focuses only on car parking

199. Which technology is increasingly used by architects to create immersive 3D experiences so that clients can "walk through" a building before it is built?
A) Fax
B) Virtual Reality (VR)
C) Typewriter
D) Photocopy machine

200. Which combination represents two important technological trends now common in architectural design practice?
A) Chalk and blackboard
B) Typewriting and mailing
C) Only hand drafting and tracing paper
D) BIM and parametric design