

1. Tactile Ground Surface Indicators (TGSI) OR Tactile Guiding and Warning Tiles are used to
(a) Protect people who use wheel chairs
(b) Discourage a user, particularly a child, from climbing on it
(c) Aid blind and vision impaired pedestrians negotiate the built environment
(d) Manoeuvre wheel chairs at turnings with minimum radius
2. Match the architectural features in Group I with the corresponding architectural styles from Group II

Group I
P. Hanging gardens
Q. Arches and pendentives
R. Orders and pediments
S. Pagodas
(a) P-4, Q-3, R-1, S-2
(b) P-3, Q-1, R-2, S-4
(c) P-4, Q-3, R-2, S-5
(d) P-2, Q-1, R-3, S-4

## Group II

1. Greek
2. Japanese
3. Byzantine
4. West Asiatic
5. Romans
6. In classical architecture, the term Crepidoma refers to
(a) Top step of the stepped platform upon which colonnades of temple column are placed
(b) Major horizontal structural element supporting the roof
(c) The entablature supporting a triangular structure
(d) Multilevel platform on which the super structure of the building is erected

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4. As per National Building Code of India 2016, match the statements about Podium in Group I with True or False in Group II

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| P. | Podium may be used for parking of vehicles |
| Q. | Podium shall not be permitted in required minimum <br> front open space |
| R. | Podium used for fire and building services/ utilities <br> shall be counted towards FAR |

## Group II

1. True
2. False
S. A podium may be permitted in a plot of area 1500 sqm or more
(a) P-1, Q-2, R-1, S-2
(b) P-1, Q-1; R-2, S-1
(c) P-2, Q-2, R-1, S-1
(d) P-2, Q-1, R-1, S-2
3. Usonian middle income family homes were designed by
(a) Alvar Aalto
(b) Le Corbusier
(c) Frank Lloyd Wright
(d) Balkrishna Vithaldas Doshi
4. Indian architect who has been named the 2018 laureate of the Pritzker prize, architecture's most illustrious award is
(a) Charles Correa
(b) Hafeez Contractor
(c) Achyut Kanvinde
(d) Balkrishna Vithaldas Doshi
5. Jawahar Kala Kendra in Jaipur, India, merging the mystic power of the nava grahas and the modernity of science was designed by
(a) Raj Rewal
(b) Charles Correa
(c) Balkrishna Vithaldas Doshi
(d) Laurie Baker

6. As per National Building Code of India 2016, requirements for accessibility in built environment for elders and persons with disabilities, match the statement in Group I with True or False in Group II

## Group I

P. Minimum width of parking space for a car including transfer area shall be 5000 mm
Q. The minimum unobstructed width of corridor shall be 1500 mm
R. The minimum size of the lift shall be 1800 mm wide and 2500 mm deep
S. If only one toilet is decided to be provided, it shall be type A unisex accessible toilet
(a) P-1, Q-1, R-2, S-1
(b) P-2, Q-1, R-1, S-1
(c) $\mathrm{P}-2, \mathrm{Q}-2, \mathrm{R}-1, \mathrm{~S}-2$
(d) P-2, Q-1, R-2, S-1
9. Under fire and life safety for high rise buildings as per National Building Code of India 2016, match the statement in Group I with True or False in Group II

Group I
P. Refuge area shall be provided in buildings of height more than 15 m
Q. Horizontal exit shall be through fire door of 120 minutes rating in a fire resistant wall
R. Automatic sprinkler systems are required for residential building above 45 m in height
S. Automatic detection and alarm system are required for institutional buildings of height 15 m and above
(a) P-2, Q-1, R-1, S-1
(b) P-1, Q-2, R-1, S-2
(c) P-2, Q-2, R-1, S-2
(d) P-2, Q-1, R-2, S-1
10. Which of the following is not located in Fatehpur Sikri?
(a) Dargah of Saleem chisti
(b) Akbar's Tomb
(c) Panch Mahal
(d) Buland Darwaza

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11. Which of the following Temples in Odisha, India has a Khakhara type of Shikara?
(a) Linga Raja Temple
(b) Raja Rani Temple
(c) Baitala Deula Temple
(d) Jagannath Temple
12. Which architect practiced Prairie style of architecture?
(a) I. M.Pei
(b) Le Corbusier
(c) Ludwig Mies VandeRohe
(d) Frank Lloyd Wright
13. In Auto CAD, which of the following is not a property of an object
(a) Elevation
(b) Hyperlink
(c) Measure
(d) Line weight
14. Units command of AutoCAD is not used to set
(a) Direction in which angle is to be measured
(b) Limits of drawing
(c) Units for linear measurement
(d) Units for angular measurement
15. Ayaka pillars form architectural feature of the Stupa at
(a) Amaravati
(b) Bharhut
(c) Sanchi
(d) Sarnath
16. Flying Butresses is an architectural element of
(a) Islamic architecture
(b) Byzantine architecture
(c) Roman architecture
(d) Gothic architecture
17. Hagia Sophia museum in Istanpul, Turkey is the most famous and spectacular example of
(a) Renaissance architecture
(b) Islamic architecture
(c) Byzantine architecture
(d) Greek architecture

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18. Ogee arches were a feature of
(a) English Gothic architecture
(b) Roman architecture
(c) Renaissance architecture
(d) Byzantine architecture
19. The Council of architecture (COA) has been constituted by the Govt. Of India in the year
(a) 1965
(b) 1970
(c) 1972
(d) 1973
20. Match the statements about Transferable Development Rights (TDR) in Group I with True or False in Group II

## Group I

P. TDR is a compensation in the form of money
Q. TDR may be granted for development or construction of amenity building in reserved land
R. The Floor Area Ratio (FAR) shall be issued in a certificate called Development Right Certificate (DRC)
S. Development Right Certificate is non- transferable
(a) P-2, Q-1, R-1, S-2
(b) P-1, Q-1, R-2, S-2
(c) $\mathrm{P}-2, \mathrm{Q}-2, \mathrm{R}-1, \mathrm{~S}-1$
(d) P-2, Q-1, R-2, S-1
21. Plywood has the advantage of
(a) Same tensile strength in all directions
(b) Greater tensile strength in longer direction
(c) Greater tensile strength in shorter direction
(d) None of the above
22. The brick work is not measured in cubic metre in the case of
(a) Reinforced brick work
(b) Half brick wall
(c) Brick work in arches
(d) Brick work in foundation

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23. The load bearing capacity of a water logged soil can be improved by
(a) Increasing the depth of the foundation
(b) Grouting
(c) Compacting the soil
(d) Draining the soil
24. Which of the following statements regarding project management is true?
(a) Crash cost depends upon the variance of the activity to be crashed
(b) Both PERT and CPM require that net work tasks have un changing durations
(c) Shortening the project by assigning more resources to one or more of the critical tasks is called project crashing
(d) Crashing need not consider the importance of crashing an activity on other parts in the network
25. Which of the following is the advantage of the bar chart?
(a) Uncertainties
(b) Inter dependencies of activities
(c) Project progress
(d) None of the above
26. In Critical Path Method total float for any activity is defined as the difference between
(a) Its latest start time and earliest finish time
(b) Its latest start time and earliest start time
(c) Its earliest finish time and its earliest start time for its successor activity
(d) Its latest finish time and earliest start time for its successor activity
27. The entrained concrete is used in lining walls and roofs for making them
(a) Sound insulated
(b) Damp proof
(c) Structurally sound
(d) None of the above

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28. The angular steps used for changing direction of the stairs are called
(a) Winders
(b) Radial steps
(c) Angular steps
(d) Round steps
29. Pick up the incorrect statement from the following
(a) No timbering is required for the shallow trenches
(b) Shallow foundations can be constructed on made up soil
(c) Grillage foundations is classified as a shallow foundation
(d) Black cotton soil is very good for foundation bed
30. In building estimation, the trapezoidal formula for calculating volumes is based on the assumption that
(a) The mid area of a pyramid is equal to area of the ends
(b) The end sections are non parallel planes
(c) The volume of the prismoidal is over estimated and hence a prismoidal correction is applied
(d) None of the above
31. Pick up the incorrect statement from the following
(a) In pre fabricated components joints are leak proof
(b) Prefabrication is used to speed up construction since no curing is required
(c) Pre fabricated structures are used for sites which are not suitable for normal construction methods such as hilly region
(d) None of the above
32. In chain surveying, the field work is limited to
(a) Angular measurements only
(b) Linear measurements only
(c) Both linear and angular measurements
(d) None of the above

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33. A UNESCO world heritage site "Alhambra" is classified example of
(a) Mudejar architecture
(b) Mozarabic architecture
(c) Tudor architecture
(d) Moorish architecture
34. The set of entities representing vector data type in Geographic Information System (GIS) is
(a) DEM, DSM, DTM
(b) Point, line polygon, TIN
(c) Pixel, Voxel
(d) Co-ordinates, Elevation, Slope
35. For earth quake resistant buildings what should be the type of foundation for concrete and masonry buildings
(a) Shallow foundation
(b) Isolated foundation
(c) Continuous foundation
(d) Discontinuous foundation
36. The compressive strength of concrete decreases with
(a) Increase of workability
(b) Decrease in water cement ratio
(c) Decrease in cement aggregate ratio
(d) Increase in water cement ratio
37. In steel structures purlins are generally placed at the panel point so as to avoid
(a) Shear force in rafter
(b) Bending moment in rafter
(c) Axial force in rafter
(d) Deflection of rafter
38. An rcc lintel is spanning an opening of 2.5 m span in brick wall. The height of the opening is 2.5 m above the floor level and the height of the room is 3.6 m above the floor level. The rcc lintel is to be designed for
(a) Triangular load+ load from the roof
(b) Self weight + Uniformly distributed load of wall + load from the roof
(c) Triangular load of the wall + self weight
(d) Self weight + uniformly distributed load of wall

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39. In steel structures, the most economical section for a steel column is
(a) Solid round
(b) Rectangular
(c) Flat strip
(d) Tubular section
40. Shell structures does not have any
(a) Bending moment
(b) Tensile stress
(c) Compressive stress
(d) Shear stress
41. The slenderness effect of a wall is considered if the effective height of the wall exceeds the thickness by
(a) 6 times
(b) 8 times
(c) 12 times
(d) 15 times
42. The phenomenon of slow growth of strain under a steady tensile stress is called
(a) Creeping
(b) Yielding
(c) Breaking
(d) None of the above
43. Young's modulus of elasticity is defined as the ratio of
(a) Shear stress to shear strain
(b) Longitudinal stress and longitudinal strain
(c) Volumetric stress and volumetric strain
(d) Lateral stress and lateral strain
44. The pre stressing members have better ability of absorbing energy when the structures are subjected to
(a) Axial loads
(b) Bending loads
(c) Tensile loads
(d) Impact loads

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45. Most commonly used pump for lifting water in water supply mains is
(a) Reciprocating pump
(b) Axial flow pump
(c) Rotary type pump
(d) None of the above
46. Bio chemical oxygen demand of treated water should be
(a) 10 parts per million
(b) 20 parts per million
(c) 25 parts per million
(d) Nil
47. Pick up the correct statement from the following
(a) The surface of water table surrounding a well during pumping, does not form a cone of depression
(b) The difference between water table level and the water level in a well after pumping is called depression head
(c) The water level in a still well in no way represents the ground water table level
(d) None of the above
48. For house drainage minimum gradient is
(a) 1 in 40
(b) 1 in 50
(c) 1 in 60
(d) 1 in 100
49. The rate of flow of sewage is generally around
(a) At 100 litres per capita
(b) At 150 litres per capita
(c) At 200 litres per capita
(d) At 300 litres per capita
50. Depletion of ozone layer in the outer atmosphere may cause
(a) Bronchitis
(b) Heart disorder
(c) Lung cancer
(d) Skin cancer

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51. As per the Indian Road Congress, for roads in plains the ruling gradient is
(a) 1 in 15
(b) 1 in 30
(c) 1 in 50
(d) 1 in 100
52. Pick up the correct statement for, In a single - stack system of plumbing
(a) Only the stack is vented above the branch connection at each floor
(b) Anti - siphonage pipes are omitted
(c) All the appliances and traps are fully ventilated
(d) Only the branches are connected with anti-siphonage pipes
53. Please choose the word with the closest in meaning to Roughness or harshness as of surface, sound or climate
(a) Bedlam
(b) Asperity
(c) Seminal
(d) Concoction
54. Select the option that completes the given para in most appropriate way

> The
$\qquad$ science of seismology has grown just enough so that the first overly bold theories have been
(a) Predictive. $\qquad$ .protected
(b) Magnetic...........accepted
(c) Tentative. .analyze
(d) Fledgling. $\qquad$ .refuted
55. Antonym of CACOPHONOUS is
(a) Sonorous
(b) Harsh
(c) Melodious
(d) Loud
56. The angle of elevation of the sun, when the length of the shadow of a tree $\sqrt{3}$ times the height of the tree, is;
(a) $90^{\circ}$
(b) $60^{\circ}$
(c) $45^{\circ}$
(d) $30^{\circ}$

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57. A hollow iron pipe is 21 cm long and its external diameter is 8 cm . If the thickness of the pipe is 1 cm and iron weighs $8 \mathrm{gm} / \mathrm{cm}^{3}$, then the weight of the pipe is
(a) 36.9 kg
(b) 36 kg
(c) 3.696 kg
(d) 3.6 kg
58. A wheel that has 6 cogs is meshed with a larger wheel of 14 cogs. When the smaller wheel has made 21 revolutions, then the number of revolution made by the larger wheel is
(a) 9
(b) 12
(c) 49
(d) 4
59. If $P, Q$, and $R$ are the 3 consecutive odd integers, which of the following statements is not true?
(a) $P+Q+R$ is an odd integer
(b) $P+Q$ is an even integer
(c) $\quad(P+R) / 2$ is an even integer
(d) $\quad(P+Q) / 2$ is an even integer
60. A alone can do a piece of work in 6 days and B alone in 8 days. A \& B under took to do it for Rs. 3200, with the help of C. They completed the work in 3 days. How much is to be paid to C?
(a) Rs. 800
(b) Rs. 600
(c) Rs. 400
(d) Rs. 375
61. How many times are the hands of a clock is at right angle in a day?
(a) 44
(b) 24
(c) $\quad 22$
(d) 48

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62. In how many different ways can the letters of the word OPTICAL be arranged, so that the vowels always come together?
(a) 2160
(b) 720
(c) 120
(d) 100
63. A can contains a mixture of two liquids $\mathrm{A} \& \mathrm{~B}$ in the ratio 7:5. When 9 litres of the mixture are drawn off and the can is filled with $B$, the ratio of $A \& B$ becomes 7:9. How many litres of liquid A was contained by the can Initially?
(a) 20
(b) 21
(c) 25
(d) 10
64. When the art work is experienced through reflected light, we are looking at
(a) Reflective colour
(b) Natural colour
(c) Additive colour
(d) Subtractive colour
65. The colour wheel, conceived by bending the colours of the spectrum and adding purple, was first conceived by
(a) Copernicus
(b) Michelangelo
(c) Isaac Newton
(d) Plato
66. The illumination level in houses is in the range of
(a) 100-140 lumen $/ \mathrm{m}^{2}$
(b) 40-75 lumen $/ \mathrm{m}^{2}$
(c) 200-250 lumen $/ \mathrm{m}^{2}$
(d) 300-400 lumen $/ \mathrm{m}^{2}$

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67. Which of the following lamp gives nearly monochromatic light?
(a) Mercury vapour lamp
(b) GLS lamp
(c) Tube light
(d) Sodium vapour lamp
68. Which of the following is not a characteristic of a musical sound?
(a) Loudness
(b) Quality
(c) Wave length
(d) Pitch
69. A human body feels comfortable when the heat produced by the metabolism of human body is equal to the
(a) Heat dissipated to the surroundings
(b) Heat stored in the human body
(c) Sum of (a) \& (b)
(d) Difference of (a) \& (b)
70. The difference of temperature between the outside air and inside air tends the deposition of moisture in the room surfaces known as
(a) Condensation
(b) Dissipation
(c) Diffusion
(d) Ventilation
71. Which of the following Green building in India has received a platinum LEED certification
(a) Dabur India, Chandigarh
(b) Unitech commercial tower, Chandigarh
(c) Suzlon one Earth, Pune
(d) Logix cyber park, UP

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72. The book "Architecture through Ages", was written by
(a) John Marshall
(b) Talbot \& Humlin
(c) Peter Wolf
(d) Christopher A
73. The Garden City concepts by Sir Ebenezer Howard consisted of
(a) Tower blocks to displace the population vertically and lease most of the available land as greenery
(b) Each privately owned house to have its own front and rear garden
(c) Six small towns surrounded by green belts and linked to a larger central city
(d) Planning cities to have plenty of trees, flowers, and public gardens
74. In the ancient major cities, Mohenjo-daro or Harappa, the streets were laid out in a perfect
(a) Zig-zag pattern
(b) Hexagonal pattern
(c) Grid pattern
(d) Circular pattern
75. Who has given the concept of "Urban Fringe"
(a) K M Kapadia
(b) S C Dube
(c) M N Srinivas
(d) Durkheim
76. Which among the following is closest in meaning to the term "Over Urbanisation".
(a) Urbanisation without the essential infrastructure
(b) Rapid urbanisation
(c) Emergence of megalopolis
(d) Urbanisation at the cost of village development

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77. Colonial urban economy of India is characterised by
(a) Encouragement of traditional handicrafts
(b) Destruction of modern Industries
(c) Growth of bourgeoisies
(d) None of the above
78. Match the botanical names of the trees in Group I with the corresponding common names in Group II

Group I

## Group II

P. Azadirachta Indica
Q. Jacaranda Mimosifolia
R. Polyalthia Longifolia
S. Ficus Religiosa
(a) P-5, Q-1, R-3, S-4
(b) P-4, Q-3, R-1, S-2
(c) P-4, Q-3, R-2, S-5
(d) P-3, Q-5, R-1, S-4
79. Amongst the following which one can be used for designing a smell sensory pathway?
(a) Bougain Villea
(b) Delonix Regia
(c) Jasminium Angustifolium
(d) Azadirachta Indica
80. Who designed the "Central Park"?
(a) Robert Wagner
(b) Frederick Law Olmstead
(c) Frank Lloyd Wright
(d) Kohn Peterson Fox

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