

Q1) Hogarth's Line of Beauty is a _____.

- (A) Horizontal straight line
- (B) Zigzag line
- (C) Vertical straight line
- (D) Serpentine line

Q2) As per the United Nations Transforming our world: The 2030 agenda for sustainable development, 2015, which of the following Sustainable Development Goals (SDGs) directly address water related issues?

- (A) SDG-1
- (B) SDG-4
- (C) SDG-6
- (D) SDG-14

Q3) A building site measures 96 sq.cm on a scale of 1:12500. The actual area it represents (in hectare, in integer) is _____.

Q4) The correct sequence of the following Construction Project Development stages, as per the National Building Code of India 2016 is _____.

- (P) Resource Planning
 - (Q) Project Inception
 - (R) Commissioning and Handing over
 - (S) Tendering
 - (T) Site Survey and Soil Investigation
 - (U) Selection of Construction Methodology
- (A) P-Q-R-T-U-S
 - (B) T-Q-R-U-S-P
 - (C) Q-T-U-P-S-R
 - (D) Q-T-P-S-U-R

Q4) Match the States in Group I with the corresponding Vernacular Building Typologies in Group II

Group I		Group II	
(P)	Kerala	(1)	Morung
(Q)	Jharkhand	(2)	Pol
(R)	Nagaland	(3)	Dhumkuria
(S)	Gujarat	(4)	Nalukettu
		(5)	Ghotul

- (A) P-4, Q-5, R-3, S-2
 (B) P-5, Q-1, R-2, S-4
 (C) P-5, Q-3, R-1, S-4
 (D) P-4, Q-3, R-1, S-2

Q5) Match the Place(s)/Event(s) in Group I with the corresponding Heritage Significance/Characteristics in Group II.

Group I		Group II	
(P)	Chhatrapati Shivaji Terminus, Mumbai	(1)	A long interaction between people and the landscape
(Q)	Kumbh Mela	(2)	Cultural routes
(R)	Walled City of Jaipur	(3)	Victorian Gothic revival and traditional Indian features
(S)	Rock Shelters of Bhimbetka	(4)	Intangible cultural heritage
		(5)	Traditional human settlement, land use reflecting an interchange of ancient Hindu and Mughal ideas

- (A) P-1, Q-4, R-3, S-2
- (B) P-3, Q-4, R-5, S-1
- (C) P-2, Q-3, R-4, S-1
- (D) P-3, Q-2, R-5, S-4

Q6) As per the URDPFI Guidelines 2015, match the type of Health Care Facilities in Group I to the corresponding population served per unit in Group II.

Group I		Group II	
(P)	Multi-Speciality Hospital	(1)	15,000
(Q)	Dispensary	(2)	50,000
(R)	Veterinary Hospital	(3)	1,00,000
(S)	General Hospital	(4)	2,50,000
		(5)	5,00,000

- (A) P-1, Q-2, R-3, S-4
- (B) P-3, Q-1, R-5, S-4
- (C) P-4, Q-3, R-5, S-2
- (D) P-5, Q-1, R-2, S-3

Q7) As per the Central Pollution Control Board's National Air Quality Index (AQI) of India 2014, which of the following statement(s) is/are true?


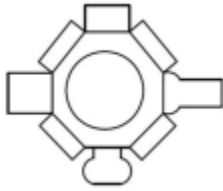


- (A) AQI is computed considering 8-hourly value of CO
- (B) AQI is computed considering 2-hourly value of PM 2.5
- (C) AQI considers the O3 concentrations
- (D) AQI considers the CO2 concentrations

Q8) In traditional Persian context, qanat system refers to

- (A) An underground water-way, tunnelled and channelled
- (B) A system where water is raised by a series of scoops fixed to a moving belt stretched between two wheels

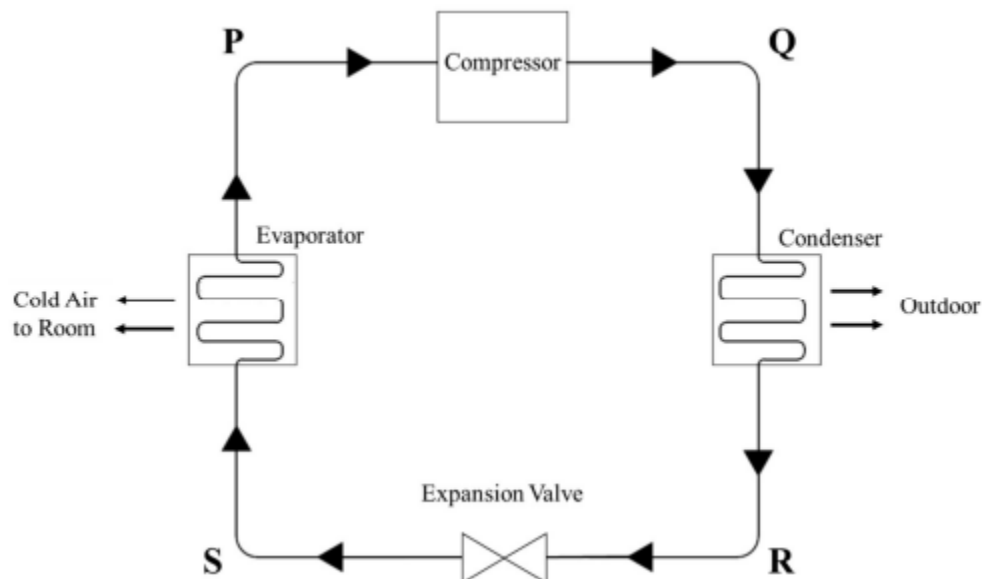
- (C) A method of conducting water from a source-well rather than raising it
 (D) A system where water is conducted from enclosure to enclosure by straightforward gravity fall

Q9) Match the plan forms in Group I with their corresponding project names in Group II.

Group I		Group II	
(P)		(1)	New Parliament of Egypt, Cairo
(Q)		(2)	Apple Park Campus, California
(R)		(3)	Commerzbank, Frankfurt
(S)		(4)	30 St. Mary Axe, London
		(5)	Parliament Building, Dhaka

- (A) P-3, Q-5, R-4, S-2
 (B) P-4, Q-2, R-1, S-5
 (C) P-1, Q-2, R-3, S-4
 (D) P-3, Q-5, R-1, S-2

Q10) In an ideal air-conditioning cycle shown below, which of the following statement(s) is/are true in the segments P, Q, R, S?



- (A) P: Vapour at low pressure
- (B) Q: Vapour at low pressure
- (C) R: Liquid at high pressure
- (D) S: Liquid-Vapour mixture at low pressure

Q11) BEES is an acronym for

- (A) Building for Environmental and Economic Sustainability
- (B) Built Environment and Ecological Society
- (C) Building for Energy and Environment Sustainability
- (D) Built Environment and Engineering Services

Q12) 'Finger Plan' concept of urban planning was initially adopted in

- (A) Canberra
- (B) Paris
- (C) Copenhagen
- (D) Tokyo

Q13) Match the bridges in Group I with their structure type in Group II

Group I		Group II	
(P)	Harbour Bridge, Sydney	(1)	Simply Supported
(Q)	Golden Gate Bridge, San Francisco	(2)	Cable Stayed
(R)	Howrah Bridge, Kolkata	(3)	Arch
(S)	Millau Viaduct, Millau	(4)	Suspension
		(5)	Cantilever

- (A) P-3, Q-4, R-5, S-2
- (B) P-5, Q-1, R-4, S-3
- (C) P-2, Q-3, R-4, S-5
- (D) P-1, Q-2, R-3, S-4

Q14) From the following cost components of a building construction project which is not a direct cost combination?

- P. Labour cost
- Q. Equipment cost
- R. Material cost
- S. Establishment cost
- T. Supervision cost

- (A) P and Q
- (B) Q and R
- (C) P and R
- (D) S and T

Q15) Arrange the following in ascending order of width

- P. Collector Street
- Q. Arterial Road
- R. Local Street

S. Sub-Arterial Road

- (A) P, Q, S, R
- (B) R, P, S, Q
- (C) Q, S, R, P
- (D) Q, S, P, R

Q16) Horizontally Wedge-shaped Treads in stairways are termed as

- (A) Stringers
- (B) Winders
- (C) Scotia
- (D) Newel

Q17) The term 'Zeitgist', used in contemporary architecture, refers to

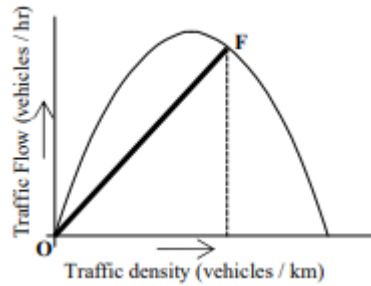
- (A) Iconicity
- (B) Spirit of Times
- (C) Kinesthetics
- (D) Semantic Associations

Q18) The correct arrangement of the height of towers given below in descending order is

- P. Burj Khalifa, Dubai
- Q. Petronas Tower, Kuala Lumpur
- R. Taipei 101, Taiwan
- S. Bank of China Tower, Hong Kong

- (A) P, Q, R, S
- (B) P, Q, S, R
- (C) P, R, S, Q
- (D) P, R, Q, S

Q19) In a theoretical traffic flow relationship, as shown in the figure given below, the slope of line OF joining point F on the curve and the origin O represents



- (A) Corresponding space mean speed
- (B) Speed at maximum flow
- (C) Travel time at corresponding density
- (D) Average headway at corresponding flow

Q20) Match the buildings in Group I with their corresponding structural feature in Group II

Group I		Group II	
(P)	Yokohama Port Terminal, Yokohama	(1)	Geodesic Dome
(Q)	Stansted Airport, London	(2)	Shell Structure
(R)	TWA Terminal, New York	(3)	Space Frame
(S)	Montreal Biosphere, Montreal	(4)	Folded Steel Plate Structure
		(5)	Pneumatic Structure

- (A) P-4, Q-3, R-2, S-1
- (B) P-2, Q-1, R-3, S-4
- (C) P-4, Q-3, R-5, S-2
- (D) P-5, Q-3, R-4, S-2

Q21) Identify which is NOT a green building rating system

- (A) LEED
- (B) CASBEE
- (C) ENERGY BUILD
- (D) BREEAM

Q22) Match the theories in Group I with their corresponding propagators in Group II

Group I		Group II	
(P)	Choice Theory Of Planning	(1)	Paul Davidoff and T.A. Reiner
(Q)	Connurbation	(2)	Patrick Geddes
(R)	Classical Theory Of Land Use	(3)	Homer Hoyt
(S)	Central Place Theory	(4)	Richard L. Meier
		(5)	Walter Christaller

- (A) P-2, Q-3, R-5, S-1
- (B) P-1, Q-2, R-4, S-5
- (C) P-4, Q-3, R-5, S-2
- (D) P-5, Q-4, R-3, S-2

Q23) Match the landscape designers listed under Group I with their appropriate contribution from Group II

Group I		Group II	
(P)	Lancelot 'Capability' Brown	(1)	The Well-tempered Garden
(Q)	Andre Le Notre	(2)	Kew Garden
(R)	Joseph Paxton	(3)	Versailles Garden
(S)	Frederick Law Olmstead	(4)	Crystal Palace

		(5)	Central Park
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- (A) P-3,Q-1, R-4, S-2
- (B) P-5, Q-3, R-4, S-2
- (C) P-3,Q-1, R-2, S-5
- (D) P-2,Q-3, R-4, S-5

Q24) Geographic Information System (GIS) combines maps with

- (A) Computer Automation, Statistics And Topology
- (B) Computer Graphics, Databases And Analytical Tools
- (C) Computer Graphics, Informatics And Quantitative Tools
- (D) Computer Informatics, Databases And Qualitative Tools

Q25) Match the concepts in Group I with the personalities in Group II

Group I		Group II	
(P)	Linear City	(1)	Le Corbusier
(Q)	Radiant City	(2)	Paolo Soleri
(R)	Garden City	(3)	Louis Kahn
(S)	Arcology	(4)	Soria Y Mata
		(5)	Ebenezer Howard

- (A) P-4, Q-3, R-5, S-1
- (B) P-3, Q-1, R-4, S-2
- (C) P-4, Q-1, R-5, S-2
- (D) P-1, Q-5, R-2, S-4

Q25) Match the alignment of the rotating prisms in wall sections in Group I with their corresponding acoustic function in Group II.

Group I		Group II	
(P)		(1)	Moderate diffusion
(Q)		(2)	Moderate absorption
(R)		(3)	Specular diffusion
(S)		(4)	Specular reflection

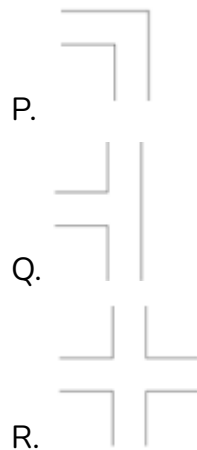
(A) P - 4, Q - 1, R - 2, S - 3

(B) P - 4, Q - 3, R - 1, S - 2

(C) P - 2, Q - 3, R - 4, S - 1

(D) P - 2, Q - 1, R - 3, S - 4

Q26) Identify the hierarchy, from highest to lowest, of the number of potential conflict points at the unmanaged traffic intersections given below.



S.



- (A) P, Q, R, S
- (B) R, Q, S, P
- (C) R, S, Q, P
- (D) P, R, S, Q

Q27) Match the historical buildings in Group I with their styles in Group II.

Group I		Group II	
(P)	Pantheon, Rome	(1)	Baroque
(Q)	St. Paul's Cathedral, London	(2)	Roman
(R)	St. Peter's Basilica, Rome	(3)	Romanesque
(S)	Notre Dame, Paris	(4)	Renaissance
		(5)	Gothic

- (A) P-3, Q-2, R-1, S-4
- (B) P-2, Q-5, R-3, S-1
- (C) P-2, Q-1, R-4, S-5
- (D) P-3, Q-4, R-2, S-1

Q28) For a pin jointed steel truss system, which of the following statements is TRUE?

- (A) Bending moment resisting capacity at any section is zero as members carry axial forces only.
- (B) Forces in members at any section align in appropriate combination of tension and compression to develop moment resisting capacity.
- (C) Forces in members at any section align in such a manner as to develop zero moment resisting capacity.
- (D) Shear resisting capacity at any section is zero as members carry axial forces only

Q29) 'Glazing stop' is used

- (A) as a bearing support for glass
- (B) to seal the glass against water and air infiltration
- (C) to provide lateral support to glass
- (D) to provide a cushion between the glass and the glazing pocket

Q30) 'Villa Savoye', Paris is an example of

- (A) Modernism
- (B) Post Modernism
- (C) Deconstructivism
- (D) Eclecticism

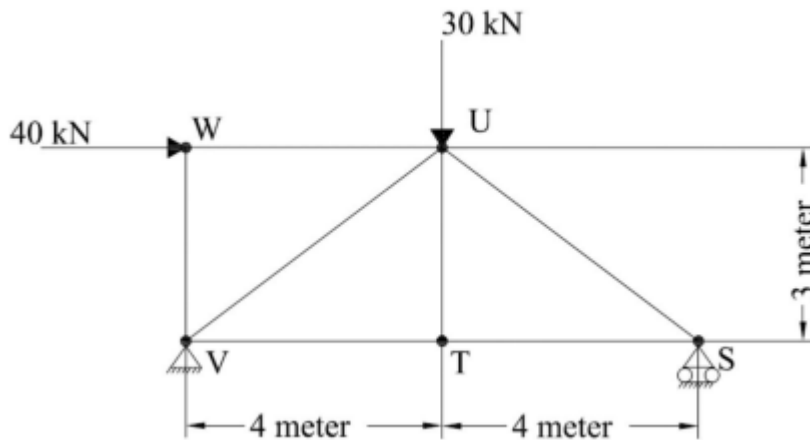
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Q31) An Ultrasonic Pulse Velocity (UPV) test was done on a hardened concrete element using a direct transmission method as per IS 516 (Part 5/Section 1): 2018. The distance between the transducer and receiver was 600 mm. The time taken for the induced wave to travel this distance is measured as 0.18 milliseconds. Based on the following Table, the concrete quality grading is _____.

Velocity (km/s) – cross probing	Concrete quality grading
Above 4.4	Excellent
3.75 – 4.4	Good
3.0 – 3.75	Doubtful
Less than 3.0	Poor

- (A) Excellent
- (B) Good
- (C) Doubtful
- (D) Poor

Q32) A hypothetical truss comprising of weightless members is shown in the following Figure. Assuming tension to be positive and compression to be negative, the value of force in member TU (in kN, rounded off to one decimal place) is _____.



Q33) In traditional Indian temple architecture, which of the following statement(s) is/are true?

- (A) Jagamohana refers to a dancing hall
- (B) Gopuram refers to an entrance tower
- (C) Char-chala refers to a roof composed of four triangular segments
- (D) Vimana refers to the structure over the Garbhagriha


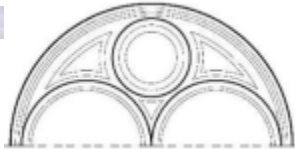

Q34) Match the architectural projects in Group I with their corresponding architects in Group II.

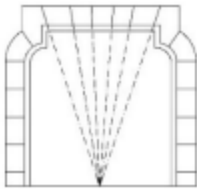
Group I		Group II	
(P)	Indian Institute of Management Bangalore	(1)	Revathi Kamath
(Q)	Osho International Meditation Resort, Pune	(2)	Brinda Somaya
(R)	Nalanda International School, Vadodara	(3)	Roger Anger
(S)	Matrimandir, Auroville	(4)	B. V. Doshi

		(5)	Hafeez Contractor
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- (A) P-4, Q-5, R-2, S-3
- (B) P-4, Q-1, R-5, S-2
- (C) P-2, Q-4, R-5, S-1
- (D) P-3, Q-5, R-1, S-2

Q35) Match the illustrations of Arch Types in Group I with their corresponding names in Group II.

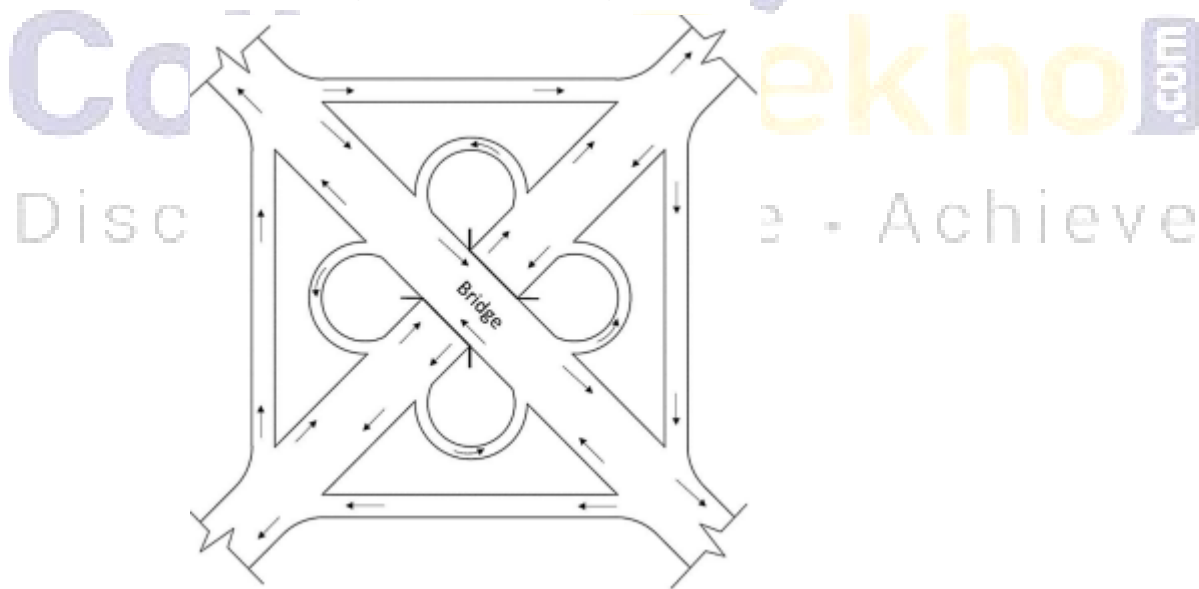
Group I		Group II	
(P)		(1)	Venetian Arch
(Q)		(2)	Ogee Arch
(R)		(3)	Moorish Multifoil Arch

(S)		(4)	Corbelled Arch
		(5)	Shouldered Arch

- (A) P-2, Q-3, R-1, S-4
- (B) P-3, Q-1, R-2, S-5
- (C) P-3, Q-2, R-5, S-4
- (D) P-5, Q-4, R-3, S-1

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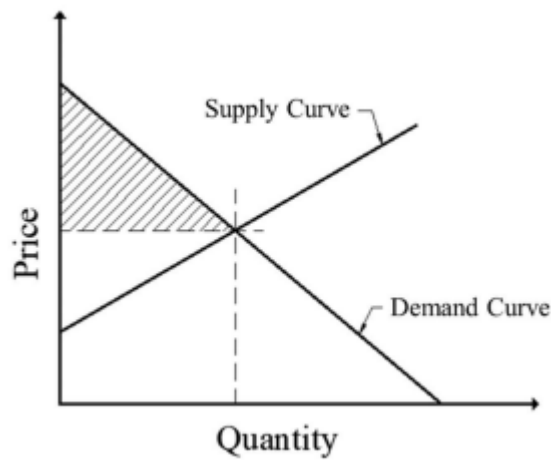
Q37) Identify the following traffic interchange.



- (A) Directional
- (B) Trumpet
- (C) Clover-Leaf
- (D) Diamond

Q38) In a township, the price of each house was 25,00,000 (in Indian Rupees) last month. The number of houses sold in a month (Q in thousands) is sensitive to the price of the house (P in Indian Rupees) and establishes a relationship as $Q = 6685 - 0.00158P$. If the price of each house increases by 20% in the current month, then the decrease in sale of the houses (in percentage, rounded off to two decimal places) compared to last month will be _____.

Q39) The shaded area in the following demand-supply graph is known as _____.



- (A) Consumer Surplus
- (B) Consumer Deficit
- (C) Producer Surplus
- (D) Producer Deficit

Q40) Which among the following is/are model(s) of Public-Private Partnership (PPP) used for infrastructure projects?

- (A) BOLD
- (B) BOLT
- (C) BOOT
- (D) BPOT

