

M. Arch. (Sustainable Architecture)

1. Which of the following commands in AutoCAD is used to create 3D solid between various cross sections ?
(A) LOFT (B) MESH
(C) XEDGES (D) PFACE
2. The operational guidelines on Credit Linked Subsidy Scheme for Low Income Group (LIG), January 2017, by the erstwhile Ministry of Housing and Urban Poverty Alleviation, Government of India, defines LIG households as those having an annual income up to.....(in Indian Rupees).
(A) 6,00,000 (B) 3,00,000
(C) 4,00,000 (D) 6,50,000
3. Which of the following is a Vector Graphics Software ?
(A) Adobe Dream Weaver (B) Odeon
(C) Inkscape (D) EcoTect
4. The Golden Ratio refers to :
(A) 16 : 9 (B) 1 : 1
(C) 2 : (1 + $\sqrt{5}$) (D) 1 : $\sqrt{2}$
5. Which of the following sites were added to Ramsar List in the year 2020 ?
(A) Ashtamudi Wetland (B) Chilika Lake
(C) Sunderbans Wetland (D) Lonar Lake
6. Hogarth's Line of Beauty is a :
(A) Zigzag line (B) Horizontal straight line
(C) Serpentine line (D) Vertical straight line

7. 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-4 (B) SDG-1
(C) SDG-11 (D) SDG-6
8. According to NBC (2016), a helipad is necessary for high rise buildings aboveheight.
- (A) 200 m (B) 90 m
(C) 150 m (D) 60 m
9. How to calculate the relative humidity ? (Where, RH-Relative Humidity, AH-Absolute Humidity, SH-Saturation Point Humidity)
- (A) $RH = (AH/SH) \times 100$
(B) $RH = (SH/AH) \times 100$
(C) $RH = (AH/AH + SH) \times 100$
(D) $RH = (AH/100) \times SH$
10. Shatterproof Glass is manufactured by adding :
- (A) Iron oxides (B) Ethylene-vinyl Acetate
(C) Silver halides (D) Polyvinyl Butyral
11. What is the S.I. unit of moment of inertia ?
- (A) mm^4 (B) mm^2
(C) N-mm (D) $kg\ m^2$
12. Which was the first iron bridge built ?
- (A) Brooklyn Bridge (B) Clifton Bridge
(C) Coalbrookdale Bridge (D) Vizkaya Bridge

13. The concept of linear city was proposed by :
- (A) Ian McHarg (B) Soria Y Mata
(C) Patrick Geddes (D) Louis Sullivan
14. Minimum thickness required for a RCC slab to have a half hour fire rating according to National Building Code, 2016 is :
- (A) 100 mm (B) 95 mm
(C) 75 mm (D) 85 mm
15. Which is India's first high rise building ?
- (A) Express Tower in Mumbai
(B) Crescent Bay in Mumbai
(C) Imperial Towers in Mumbai
(D) LIC Building in Chennai
16. A highrise building can be defined as any building above.....m height.
- (A) 15 (B) 20
(C) 12 (D) 18
17. The shear walls are provided in tall buildings to with stand :
- (A) Live load (B) Lateral load
(C) Dead load (D) Tangent load
18. Maximum bending moment for a cantilever beam subjected to uniformly distributed load over the entire span of the beam occurs at :
- (A) Mid-span (B) Fixed end
(C) Free end (D) 1/3rd span

19. Who developed Ekistics the science of human settlements ?
(A) C.A. Doxiadis (B) Ebenezer Howard
(C) Patrick Geddes (D) Lewis Mumford
20. Indian satellite sensor that can be used for very high resolution mapping of urban areas is :
(A) CARTOSAT (B) LANDSAT
(C) MODIS (D) RESOURCESAT
21. A neighbourhood with a total area of 200 hectares has been planned for a gross density of 300 pph. If the residential area is 60% of the total area, then net density of the neighbourhood will be :
(A) 300 pph (B) 450 pph
(C) 500 pph (D) 750 pph
22. Calculate the number of light fixtures required in an office room of $20\text{ m} \times 10\text{ m}$, requiring an illumination level of 250 lux on the desk. Each light fixture has twin lamp 32 watt CFL luminaires and each lamp has a rated output of 85 lumens. Assume a utilization factor of 0.69 and a maintenance factor of 0.63 :
(A) 21 (B) 15
(C) 10 (D) 18
23. The optimum reverberation time for speech is how many second/seconds ?
(A) 1.2 (B) 1.0
(C) 1.5 (D) 2.0
24. The concentric circles in a sun-path diagram represent :
(A) Azimuth angle (B) Altitude angle
(C) Hour of the day (D) Day of the year

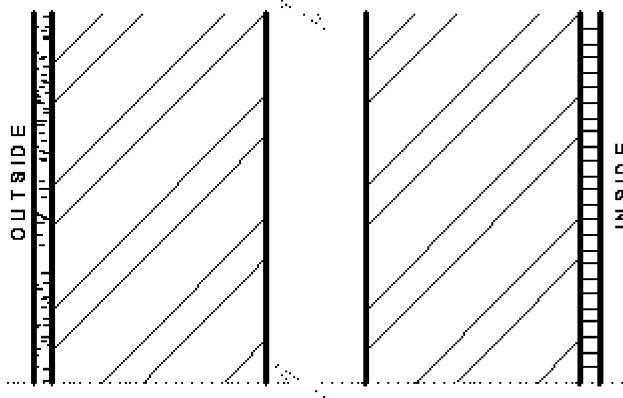
25. What is the total heat transferred through the unit area of the given wall ?

Inside temperature = 28°C

Outside temperature = 45°C

Temperature difference = $45 - 28 = 17\text{ K}$

Wall U value = $1.87\text{ W/m}^2/\text{K}$



- (A) 31.8 W/m^2 (B) 18.7 W/m^2
(C) 17.0 W/m^2 (D) 35.8 W/m^2
26. A building site has a plot of 500 sqm, maximum allowable height G + 7, areas to be utilized for paved access roads is 10%, maximum ground coverage 40%, runoff coefficient for paved surface is 0.9, maximum allowable FAR 2.0, runoff coefficient for unpaved surface is 0.3. If it rains for 30 min. with an intensity of 10 cm/hr, minimum volume of rain water that can be harvested will be :
- (A) 16 cum (B) 14 cum
(C) 12.75 cum (D) 15 cum
27. The non-binding action plan of UN made as an outcome of the Earth Summit of Rio in 1992 is called :
- (A) Article 21 (B) Agenda 19
(C) Article 19 (D) Agenda 21

28. The actual roof area of a building is 3,60,000 sqm, which on a site plan measure 25 sqcm. The scale of the site plan is 1 :

- (A) 12000 (B) 1200
(C) 10000 (D) 1000

29. The Standard AVAILABLE Thickness of Gypsum Board conforming to International Standards EN-520 to give more than 90 minutes fire-resistance rating is :

- (A) 12 mm (B) 12.5 mm
(C) 13 mm (D) 13.5 mm

30. In the given project, what would be the minimum duration of the project ?

Activity	Predecessor Activity	Duration (days)
A	-	5
B	-	6
C	A, B	4
D	B	3

- (A) 14 days (B) 9 days
(C) 18 days (D) 10 days

31. COP26, Glasgow, India will achieve the target of Net Zero by the year :

- (A) 2050 (B) 2070
(C) 2030 (D) 2060

32. Beam radiations are measured with the instrument :

- (A) Thermometer (B) Pyrheliometer
(C) Sunshine recorder (D) Anemometer

33. What is the max. height of parapet walls and handrails to be provided on the edges of roof terrace, balcony etc ?
- (A) 1.5 m (B) 0.5 m
(C) 0.9 m (D) 1.2 m
34. Minimum area and width of a room in single-room tenement in housing scheme for EWS and LIG is.....and.....
- (A) 7.4 sqm and 2 m (B) 12.5 sqm and 3 m
(C) 9.5 sqm and 2.4 m (D) 6.5 sqm and 2.1 m
35. The three Stainless-steel Grades commonly used in our industry are :
- (A) 304 – 316 – 430 (B) 304 – 314 – 404
(C) 304 – 330 – 416 (D) 304 – 317 – 404
36. Global radiation is equivalent to :
- (A) Beam radiation – Diffuse radiation
(B) Beam radiation + Diffuse radiation
(C) Beam radiation/Diffuse radiation
(D) Beam radiation \times Diffuse radiation
37. Which of the following buildings is *not* designed by Frank Gehry ?
- (A) Hearst Tower (B) Dancing House
(C) Guggenheim Museum (D) Walt Disney Concert Hall
38. Alhambra palace in Granada, Spain is an example of which style of architecture?
- (A) Moorish architecture (B) Persian architecture
(C) Sasanian architecture (D) Palladian architecture

39. Which of the following is *not* a planned city in India ?
- (A) Gandhinagar (B) Navi Mumbai
(C) Puducherry (D) Lavasa
40. Who designed the Habitat 67, Montreal ?
- (A) Norman Foster
(B) Moshe Safdi
(C) Frank Lloyd Wright
(D) Kohn Peterson Fox
41. The red series of the modular man developed by Le Corbusier is based on the height of the :
- (A) Hip (B) Navel
(C) Shoulder (D) Man
42. The combined effect of radiation, air temperature and air velocity is assessed by :
- (A) Helix thermometer
(B) Spiral thermometer
(C) Globe thermometer
(D) Dry bulb thermometer
43. The cause of short column effect, during seismic occurrence, is due to :
- (A) Centralized rupture of the column
(B) Tearing of reinforcement bars
(C) Buckling of column
(D) Stress concentration

44. A colony of 50 people is served by a septic tank. The rate of water supply is 90 lpcd in the colony and 40% of it is going to the septic tank. The retention period of the tank is 24 hours. The length of the septic tank is.....meter. (rounded off to two decimal places)

Assume, storage capacity/person = 0.085 m^3 (3 years)

Space for digestion = 0.0425 m^3 /person

Depth of tank = 1.4 m

Length Width = 2 : 1

- (A) 3.4 (B) 4.2
(C) 3.2 (D) 3.8
45. The spherical surface of the geodesic dome comprises of :
- (A) Equilateral triangles of various sizes
(B) Isosceles triangles of various sizes
(C) Equilateral triangles of uniform size
(D) Isosceles triangles of uniform size
46. Cross staff is used in which type of survey ?
- (A) Traversing (B) Contour survey
(C) Plane table survey (D) Chain survey
47. An office has an area of 60 sqm with floor height of 3 m and occupancy of 5 persons. If 20 lit/sec/person of air is extracted from the office, calculate the ventilation rate in terms of air changes/hour.
- (A) 2.0 (B) 4.0
(C) 20.0 (D) 0.4

48. 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) Q-T-P-S-U-R (B) P-Q-R-T-U-S
(C) Q-T-U-P-S-R (D) T-Q-R-U-S-P
49. Which one of the following is *not* classified as the Principles of Universal Design ?
- (A) Occult Balance (B) Tolerance for Error
(C) Simple and intuitive use (D) Perceptible Information
50. The key factors in which the Government of India introduced several initiatives to boost 'Self-reliant India' (Atma Nirbhar Bharat Abhiyan) mission are :
- (A) Land and Label, Liquidity and Laws
(B) Land and Labour, Liquidity and Label
(C) Land and Labour, Liquidity and Laws
(D) Land and Labour, Label and Laws
51. The author of 'A Pattern Language' book is :
- (A) Rem Koolhaas (B) Christopher Alexander
(C) Robert Venturi (D) Christopher Alexander
52. "Sabka Saath, Sabka Vikaas" is the motto of :
- (A) National Policy on Skill Development and Entrepreneurship
(B) Integrated Rural Development Programme (IRDP)
(C) National Family Benefit Scheme (NFBS)
(D) Mahatma Gandhi National Rural Employment Guarantee Act

53. Bio toilet is used in Indian Railways work on the principle of :
(A) aerobic respiration (B) anaerobic respiration
(C) chemical decomposition (D) drying the solid
54. 'Pol' is Traditional Building Typologies of which state in India ?
(A) Gujarat (B) Kerala
(C) Tamil Nadu (D) Nagaland
55. Weep hole is a term used to describe :
(A) Holes dug in earth to recharge ground water
(B) Perforations in the cast iron pipe used for boring
(C) Holes in retaining wall for draining water
(D) Holes in the cover plate of floor traps
56. Which of these lists the three types of 'Heat Energy Transfer' ?
(A) Earth, Wind and Fire
(B) Sensible heat, Latent heat and Radiant heat
(C) Radiation, Transmission, Reflectance
(D) Conduction, Radiation, Convection
57. What is Heritage Significance/Characteristics of Chhatrapati Shivaji Terminus, Mumbai ?
(A) Victorian Gothic revival and traditional Indian features
(B) Art Deco features
(C) Colonial features
(D) Art and crafts movement

58. Busway, Busduct and Raceway are components of :
- (A) Security system (B) Air conditioning systems
(C) Electrical systems (D) Water supply systems
59. The load on a RCC column is 150 kN. The soil bearing capacity is 80 kN/m². Assuming factor of safety of 1.2, the side of the square column footing ismeter (rounded off to one decimal place) :
- (A) 1.0 (B) 1.4
(C) 1.5 (D) 1.6
60. Auditorium building, Wainwright building and Reliance building are examples of:
- (A) Expressionism (B) De Stijl
(C) Art Deco (D) Chicago Style
61. The First LEED Platinum rated building of India is :
- (A) CII, Godrej, GBC Hyderabad
(B) United Commercial Tower, Chandigarh
(C) Suzlon One Earth, Pune
(D) Logix Cyber Park, UP
62. Which of the following parameters is essential to estimate the Envelope Performance Factor (EPF) of a building as per the Energy Conservation Building Code (ECBC), 2017 ?
- (A) Wind velocity
(B) Maximum humidity
(C) Maximum and minimum monthly temperature
(D) Building occupancy duration

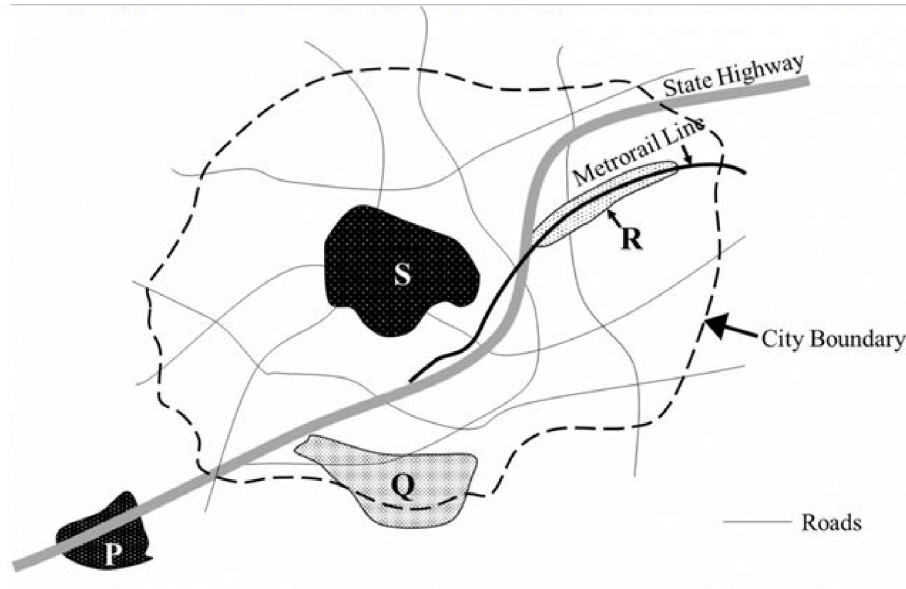
- 63.** A Government of India Scheme which aims at enhancing food security through wage employment ?
- (A) Food for Work Programme
(B) Annapurna
(C) National Food Security Mission
(D) Jawahar Gram Samridhi Yojana
- 64.** Arrange the following road types in descending order of accessibility :
(P) Arterial Road (Q) Expressway (R) Collector Road (S) Local Street
- (A) S-R-P-Q (B) S-P-R-Q
(C) P-Q-S-R (D) Q-P-R-S
- 65.** Which of the following processes is used for surface treatment of metals ?
- (A) Riveting (B) Soldering
(C) Thermoplasting (D) Extrusion
- 66.** Which of the following is/are example(s) of Tomb Architecture of Ancient Egypt?
- (A) Temple of Khons, Karnak (B) Mastabas of Gizeh
(C) Great Temple of Abu-Simbel (D) Great Temple of Amon
- 67.** Indian Institute of Management, Bengaluru is designed by :
- (A) Rewathi Kamath (B) B. V. Doshi
(C) Brinda Somaya (D) Roger Anger
- 68.** A room measuring 5 m \times 3.5 m enclosed by brick wall has a ceiling at 3 m height. The room has a door and a window opening of 1 m \times 2 m and 1 m \times 1 m respectively. The quantity of plastering required for interior walls (in sqm) is:
- (A) 48.0 (B) 46.5
(C) 51.0 (D) 68.5

69. Who is the proponent of Vertical Theory of Urban Design ?
- (A) Gordon Cullen (B) Ian Bentley
(C) Norman Pressman (D) Ken Yeang
70. Town planned for 'motor age' refer to :
- (A) Nassan shores, Long island
(B) Toronto, Ontalio
(C) Radburn, New Jersey
(D) Green belt, Maryland
71. Among the following monuments of ancient Greece, the only Octastyle Peripteral temple with eight towering Doric columns lining both east and west facades is :
- (A) The Parthenon (B) Temple of Apollo
(C) Temple of Athena (D) Temple of Horus
72. Pritzker Architecture Prize for 2022 was won by :
- (A) Shigeru Ban
(B) B. V. Doshi
(C) Anne Lacaton and Jean-Philippe Vassal
(D) Diébédo Francis Kéré
73. 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 considers the CO₂ concentrations
(C) AQI is computed considering 2-hourly value of PM_{2.5}
(D) AQI is computed considering 2-hourly value of PM₁₀

74. A wall made with external layer of glass and a high thermal capacity internal layer separated by a layer of air is called :
- (A) Diaphragm (B) Cavity
(C) Trombe (D) Gabion
75. Entablature consist of :
- (A) Architrave, Frieze, Cornice
(B) Architrave, Tenia, Cornice
(C) Frieze, Cornice, Triglyphs
(D) Cornice, Guttae, Tympanum
76. Common name for Lagerstreomia Speciosa :
- (A) Pride of India (B) Champa
(C) Shivani (D) Singapore Cherry
77. The sum of all the energy required to produce any goods or services :
- (A) Essential energy (B) Latent energy
(C) Embodied Energy (D) Operational energy
78. The primary components of steel are :
- (A) Iron and Manganese (B) Iron and Molybdenum
(C) Iron and Carbon (D) Iron and Copper
79. Which of the following does NOT fall true under “Site and Services” Scheme ?
- (A) This is usually designed/ made for middle-high income families
(B) All these sites fall in the fringe of the city
(C) To prevent illegal construction on a site
(D) Providing minimum infrastructure needed for habitation

- 80.** Under which Act does RERA come under ?
- (A) The Real Estate (Regulation and Development) Act, 2016
 - (B) Town and Country Planning Act, 1998
 - (C) Urban Arts Commission Act, 1973
 - (D) Urban Land (Ceiling and Regulation) Act, 1976
- 81.** Which among the following is/are model(s) of Public-Private Partnership (PPP) used for infrastructure projects ?
- (A) BOOT
 - (B) BOLD
 - (C) BPOT
 - (D) Turn-Key
- 82.** Maximum height of the riser for a residential high rise building is :
- (A) 190 mm
 - (B) 150 mm
 - (C) 200 mm
 - (D) 180 mm
- 83.** Which of the following parameters can NOT be determined by comprehending a Psychrometric chart ?
- (A) Wind direction
 - (B) Dew point Temperature
 - (C) Humidity Ratio
 - (D) Wet-Bulb Temperature
- 84.** The arrangement of supporting an existing structure by providing supports underneath, is known as :
- (A) Underpinning
 - (B) Shoring
 - (C) Jacking
 - (D) Piling
- 85.** Maximum horizontal angle from the speaker in a seating area of a lecture theatre should be :
- (A) 90°
 - (B) 135°
 - (C) 120°
 - (D) 140°

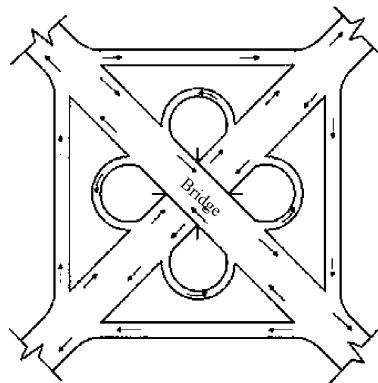
86. In the conceptual diagram of the city given below, P, Q, R and S refer to urban patterns. Among the choices given below, the correct association is :



- (A) P-Satellite town, Q-Urban fringe, R-TOD, S-Central Business District
(B) P-Central Business District, Q-Satellite town, R-TOD, S-Urban fringe
(C) P-Urban fringe, Q-TOD, R-Satellite town, S-Central Business District
(D) P-Satellite town, Q-Central Business District, R-TOD, S-Urban fringe
87. As per the URDPFI Guidelines 2015, one General Hospital (Health Care Facilities) serve the population of :
- (A) 50,000
(B) 1,00,000
(C) 2,50,000
(D) 5,00,000

- 88.** What was the principle of the contemporary urban design movement “New Urbanism” ?
- (A) Relationship between work and living, environmental sustainability
 - (B) Revival of the relationship between man and nature
 - (C) Self-contained, self-sufficient community surrounded by green belts
 - (D) Technical and socio-economic processes resulting in growth, energy production and waste elimination
- 89.** As per IS : 456-2000, the maximum area of tension reinforcement in a RCC beam shall not exceed x% of its cross-sectional area, where x is equal to :
- (A) 4
 - (B) 2
 - (C) 6
 - (D) 8
- 90.** Consistency of cement is measured by :
- (A) Slump cone
 - (B) Vicat’s apparatus
 - (C) Universal Testing Machine
 - (D) Pycometer
- 91.** Where is Bottle trap located in building/site Bottle trap ?
- (A) Junction of house drain and sewer
 - (B) Between septic tank and soak pit
 - (C) Below the wash basin
 - (D) Bathroom and kitchen floor
- 92.** If the optimistic estimate for an activity is 12 days, and the pessimistic estimate is 18 days, what is the standard deviation of this activity ?
- (A) 1.3
 - (B) 1
 - (C) 6
 - (D) 3
- 93.** Which map is made to understand different contours and range of contours ?
- (A) Mapping Plan
 - (B) Slope Analysis Plan
 - (C) Hydrological Plan
 - (D) Elevation Plan

94. Which of the following is NOT designed by Robert Venturi ?
- (A) The Guild House
 - (B) Sainsbury Wing, National Gallery
 - (C) The Dancing House
 - (D) Seattle Art Museum
95. Identify the name of architect who designed thin shell structure of Kresge auditorium, USA :
- (A) Felix Candela
 - (B) John Utzon
 - (C) Eero Saarinen
 - (D) Philip Johnson
96. Which of the following is the *National Electronic Toll Collection* System implemented by the National Payment Corporation of India ?
- (A) e-Pass
 - (B) E-ZPass
 - (C) HashTag
 - (D) FasTag
97. Identify the following traffic interchange :



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

98. A commercial plot measures 100 m × 80 m. If the permissible Floor Space Index (FSI) is 3.0 and 50% of the ground is covered, then the maximum number of floors that can be built is :

- (A) 6 (B) 8
(C) 3 (D) 5

99. Match the structural joining systems in Group I with the corresponding materials for which they are commonly used in Group II :

Group I

Group II

- | | |
|-----------------------|-------------|
| (P) Welding | (1) Glass |
| (Q) Spider connector | (2) Plastic |
| (R) Mortise and Tenon | (3) Brick |
| (S) Mortar | (4) Steel |
| | (5) Timber |

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

100. The chroma of a colour can be changed by adding.....to the colour.

- (A) Black
(B) Water
(C) Grey
(D) White

GENERAL APTITUDE

101. Direction : Read the given instructions carefully and answer the question given below :

$P + Q$ states that P is 2 m East of Q

$P \wedge Q$ states that P is 2 m South of Q

$P \& Q$ states that P is 4 m East of Q

$P - Q$ states that P is 2 m West of Q

P / Q states that P is 2 m North of Q

Read the following information carefully and answer the question below :

$U \& V \wedge W - X / Y \& Z$

What is the direction of W with respect to U ?

- | | |
|----------------|----------------|
| (A) South-east | (B) South-west |
| (C) North-east | (D) North-west |

102. Umbrage : Offense :: Elation : ?

- | | |
|----------------|-------------|
| (A) Jubilance | (B) Penance |
| (C) Decoration | (D) Meaning |

103. Direction : Read the following information carefully and answer the question given below :

In a certain code language,

‘lavish lifestyle high desires’ is coded as “@16f \$36i @9d \$16g”

‘humanity seldom exhibit mercy’ is coded as “@25h #16f @16g \$16e”

‘opinion matters heart felt’ is coded as “#9g \$25g %9e \$9d”

‘push yourself achieve goals’ is coded as “&9d \$25h \$9g %9e”

Find the code for “kanpur”.

- | | |
|----------|----------|
| (A) &16f | (B) %4g |
| (C) \$9h | (D) @16i |

104. Complete the series :

2, 2, 6, 10, 12, 30, 20, 68, 30, ?

- (A) 70
- (B) 100
- (C) 130
- (D) 150

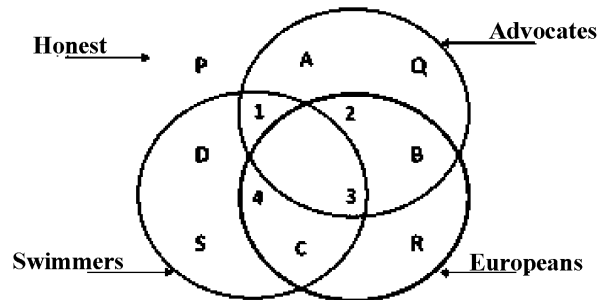
105. Direction : Study the following information carefully and answer the question given below :

The Hansraj family consists of eight members P, Q, R, S, T, U, V and W. Among these eight members, there are three generations in which there are four male and four female members. Among all, each off-spring has both the parents alive. The husband of R's sister has two daughters. The husband of T's daughter is married to V. V has only one sibling. U's father-in-law has two grand-daughters. W's brother has only one nephew and W is not V's mother. R is unmarried and Q has only one niece.

Which of the following is a combination of the couple discussed in the information part ?

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

106. What does the area marked 1 in the figure given below represent ?



- (A) All honest European swimmers
- (B) All honest advocates who are swimmers
- (C) All no-European advocates who are honest swimmers
- (D) All non-Europeans who are honest swimmers

107. In a row of 40 girls, when Kanika was shifted to her left by 4 places her number from the left end of the row became 10. What was the number of Swati from the left end of the row if Swati was three places to the right of Kanika's original position?

- (A) 16
- (B) 17
- (C) 18
- (D) 19

108. **Direction :** Study the following statement carefully and choose the right answer :

Statement : There has been a significant drop in the water level of all the lakes supplying water to the city.

Courses of action :

- I. The water supply authority should impose a partial cut in supply tackle the situation.
- II. The government should appeal to all the residents through mass media for minimal use of water.

- (A) Only I follows
- (B) Only II follows
- (C) Neither I nor II follows
- (D) Both I and II follow

109. Direction : Arrange the words given below in a meaningful manner :

1. Site 2. Plan 3. Rent 4. Money 5. Building 6. Construction

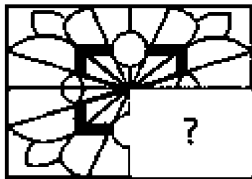
(A) 1, 2, 3, 6, 5, 4

(B) 4, 1, 2, 6, 5, 3

(C) 3, 4, 2, 6, 5, 1

(D) 2, 3, 6, 5, 1, 4

110. Direction : Which answer figure will complete the pattern of the given incomplete figure ?



GENERAL ENGLISH

- 111. Direction :** Which of the phrases (A), (B), (C) and (D) given below should replace the phrase given in bold in the following sentence to make the sentence grammatically correct ?

They **would have been appreciated** your efforts if you had informed them.

- (A) would have appreciated
- (B) would have appreciated of
- (C) would be appreciated
- (D) should have been appreciated

- 112.** The five sentences (labelled 1, 2, 3, 4 and 5) given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer :

1. Scientists have for the first time managed to edit genes in a human embryo to repair a genetic mutation, fueling hopes that such procedures may one day be available outside laboratory conditions.
2. The cardiac disease causes sudden death in otherwise healthy young athletes and affects about one in 500 people overall.
3. Correcting the mutation in the gene would not only ensure that the child is healthy but also prevents transmission of the mutation to future generations.
4. It is caused by a mutation in a particular gene and a child will suffer from the condition even if it inherits only one copy of the mutated gene.
5. In results announced in Nature this week, scientists fixed a mutation that thickens the heart muscle, a condition called hypertrophic cardiomyopathy.

- | | |
|-----------|-----------|
| (A) 15234 | (B) 15243 |
| (C) 15342 | (D) 15324 |

113. Fill in the blank :

She was vexed _____ her mother's illness.

- (A) with (B) from
(C) of (D) at

114. Direction : The given sentence has been broken up into four different parts. The error, if any, will be in any one part of the sentence. Select the option which contains the part of the sentence which has an error (spelling, grammatical or contextual) :

To an insurance company, (A)/the law relating to (B)/the principles of subrogation and (C)/contribution are of great importance. (D)

- (A) To an insurance company
(B) the law relating to
(C) the principles of subrogation and
(D) contribution are of great importance.

115. Direction : This question has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fits in the context of the sentence :

Partnerships with edtech firms help students _____ their skills and become _____ to the ecosystem.

- (A) hone, relevant (B) model, master
(C) polish, controlling (D) love, bigger

116. Find the correctly spelt word :

- (A) promiscous (B) promiscuous
(C) promiscuious (D) promisscuious

117. In this question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase :

To wrangle over an ass's shadow

- (A) To punish a person severely for his arrogance
- (B) To keep away from extreme poverty
- (C) To waste money over trifles
- (D) To quarrel over trifles

118. Out of the four alternatives choose the one which can be substituted for the given words/sentence in the question :

A small valley

- (A) Seethe
- (B) Dell
- (C) Hite
- (D) Blanch

119. Find the antonym of **EXPOUND** :

- | | |
|--------------|-------------|
| (A) Besmirch | (B) Confuse |
| (C) Confine | (D) Condemn |

120. Find the synonym of **QUALM** :

- | | |
|---------------|--------------|
| (A) Distress | (B) Impunity |
| (C) Preserved | (D) Scruple |