

# PUNJAB PUBLIC SERVICE COMMISSION

Objective Type Test (April-2024) for Recruitment to the Post of Planning Officer (Group A)  
in the Department of Town and Country Planning, Government of Punjab

READ INSTRUCTIONS BEFORE FILLING ANY DETAILS OR ATTEMPTING TO ANSWER THE QUESTIONS.

Total Questions: 120  
Time Allowed: 2 Hours

Candidate's Name \_\_\_\_\_

Father's Name \_\_\_\_\_

Date of Birth     
DD MM YYYY

OMR Response Sheet No. \_\_\_\_\_

Roll No. \_\_\_\_\_

Candidate's Signature (Please sign in the box)

Question  
Booklet Set

A

Booklet Series

## INSTRUCTIONS

1. The candidate shall NOT open this booklet till the time told to do so by the Invigilation Staff. However, in the meantime, the candidate can read these instructions carefully and subsequently fill the appropriate columns given above in CAPITAL letters. The candidate may also fill the relevant boxes 1 to 9 of the Optical Mark Reader (OMR) response sheet, supplied separately.
2. Use only blue or black **ball point pen** to fill the relevant columns on this page as well as in OMR sheet. Use of Ink pen or any other pen is not allowed.
3. Other than filling credentials/information in specific space allotted above, do not write anything else on the Test Booklet. Space for rough work is provided at the end. The candidate shall be liable for any adverse effect if the information given above is wrong or illegible or incomplete.
4. Each candidate is required to attempt 120 questions in 120 minutes, except for orthopedically/visually impaired candidates, who would be given 40 extra minutes, for marking correct responses on the OMR sheet.
5. The question paper booklet has 22 pages.
6. The candidates, when allowed to open the question paper booklet, must first check the entire booklet to confirm that the booklet has complete number of pages, the pages are printed correctly and there are no blank or torn pages. In case there is any such error in the question paper booklet then the candidate should IMMEDIATELY bring this fact to the notice of the Invigilation Staff and obtain a new booklet of the same series as given earlier.
7. The serial number of the new Question booklet, if issued for some reason, should be entered in the relevant column of the OMR. The Invigilation Staff must make necessary corrections in their record regarding the change in the serial no. of Question booklet.
8. The paper consists of total 480 Marks. Each question shall carry 4 marks. There are four options for each question and the candidate has to mark the MOST APPROPRIATE answer on the OMR response sheet.
9. There is **negative marking** (1 mark for each question) for questions wrongly answered by the candidate.
10. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers is correct. There will be same penalty, as above, to that question.
11. If Question is left blank, i.e. question remains unattempted, there will be no penalty for that question.
12. Use of Electronic/Manual Calculator is prohibited.
13. The candidate **MUST READ INSTRUCTIONS BEHIND THE OMR SHEET** before answering the questions and check that two carbon copies attached to the OMR sheet are intact.

- 1 Which medieval city in India is famous for its urban design that reflects the principles of cosmology, with nine sectors representing the nine planets (ancient astrological zodiac) and a central palace complex?
  - a) Delhi
  - b) Jaipur
  - c) Chennai
  - d) Lucknow
- 2 Which of the following is correct regarding devolution of functions (under 12th Schedule of Indian Constitution) to Urban Local Bodies (74th Constitutional Amendment Act)?
  - a) There is uniform mandatory devolution of functions to all ULBs of North India, but their devolution is optional for South Indian States
  - b) 'Water Supply' and 'Roads' have been compulsorily devolved to all ULBs
  - c) Devolution of functions to ULBs under the 12th Schedule is optional
  - d) Town Planning has been compulsorily devolved to all ULBs in India under the Act
- 3 Which of the following is correct about TOD (Transit Oriented Development)?
  - a) It focuses on encouraging car-centric transportation and isolation of residential areas from commercial areas
  - b) It aims to promote development around public transport hubs
  - c) It discourages medium to high density housing and mixed-income development
  - d) It primarily intends to promote large shopping malls and exclusive office complexes, apart from promoting sub-urban sprawl
- 4 "The volume of migration is proportional to the population of the origin and destination centres and inversely proportional to the distance between them." Which of the following models is best reflected in this statement?
  - a) Stouffer's Model of Migration
  - b) Cost Benefit Model
  - c) Zipf's Gravity Model
  - d) Input-Output model
- 5 Which of the following programmes/schemes was launched for development of heritage cities like Amritsar and Ajmer?
  - a) HRIDAY
  - b) SPARSH
  - c) Vibrant Villages Programme
  - d) PM AASHA
- 6 Length of a Vehicle affects
  - a) Width of Traffic Lanes only
  - b) Extra width of Pavement and minimum turning radius
  - c) Width of Shoulders and parking facilities only
  - d) Clearance to be provided under structures such as overbridges and underbridges

- 7 The "Miyawaki method" is known for the:
  - a) Restoration of coral-reef ecosystems
  - b) Harvesting wind energy on coastal areas and on sea surfaces
  - c) Development of gardens along Himalayan slopes using genetically modified flora
  - d) Creation of mini forests in urban areas
- 8 What is objective of Real Estate Regulatory Authority (RERA) Act, 2017?
  - a) To displace or annul the Real Estate Regulatory Authority and entrust the ULBs with exclusive power to regulate and promote real estate sector
  - b) Deregulating Real Estate Sector and entrusting the Supreme Court with power to hear direct appeals rather than an Appellate Tribunal to increase efficiency of justice delivery
  - c) Protecting the Interests of Buyers in the Real Estate Sector
  - d) Providing land to Real Estate Agents and enabling profiteering by promoters
- 9 The Slump recommended for mass concrete is
  - a) 25 mm to 50 mm
  - b) 75 mm to 100 mm
  - c) 100 cm to 125 cm
  - d) 125 cm to 150 cm
- 10 What is the legal term used to describe the government's authority to take private property for public use, provided that just compensation is paid to the property owner?
  - a) Eminent domain
  - b) Exclusionary zoning
  - c) Indusionary zoning
  - d) Orwellian authority
- 11 In which ancient civilization could you find the iconic structure known as the "Parthenon", a classical example of Doric architecture?
  - a) Ancient Egypt
  - b) Ancient India
  - c) Ancient Greece
  - d) Ancient China
- 12 National Building Code of India is prepared by:
  - a) Bureau of Indian Standards
  - b) Ministry of Housing and Urban Affairs
  - c) Town and Country Planning Organisation
  - d) NITI Aayog
- 13 Who designed Virasat-e-Khalsa located in Anandpur Sahib?
  - a) Raj Rewal
  - b) Chandrajit Singh Shah
  - c) Ranjit Sabiki
  - d) Moshe Safdie
- 14 What is/are a software modeling process/processes that architects, engineers, and contractors commonly use to collaborate on a building's design, construction and operation?

- a) ChatGPT
  - b) CIBMS and BOLD-QIT
  - c) Bus Schedule System
  - d) Building Information Modelling (BIM)
- 15 What does GRIHA rating system evaluate over building's life cycle?
- a) Environment Performance
  - b) Space Utilisation
  - c) Infrastructure and Manpower Requirement
  - d) Building Safety and serviceability
- 16 Which of the following is not a part of Kevin Lynch's performance dimensions?
- a) Vitality and Fit
  - b) Control and Access
  - c) Scale and Size
  - d) Efficiency and Justice
- 17 What standard unit may be used for measuring the brightness of light emitted by a source?
- a) Lumens
  - b) Watts
  - c) Parsec
  - d) Weber
- 18 Which of the following concepts was crucially emphasized by Lewis Mumford in urban planning?
- a) Rapid industrialization and urbanization
  - b) The unrestricted expansion of transport infrastructure
  - c) Human scale, walkable communities and cultural context in urban design
  - d) Segregation of urban neighbourhood based on income
- 19 Aerial/remote sensing and GIS (Geographic Information System) are primarily used in urban planning for:
- a) Conducting socioeconomic surveys including current employment status and housing demand
  - b) Collecting demographic data including sex ratio, worker population ratio and fertility ratio
  - c) Mapping and analyzing spatial data, including land use and environmental factors
  - d) Designing uniform architectural blueprints for specific seismic zones
- 20 Which surveying equipment is commonly used to measure distances accurately over land?
- a) A barometer
  - b) A pacemaker
  - c) A total station
  - d) An electroencephalogram
- 21 A town has 16,000 existing dwelling units of which 10% are dilapidated. If the housing need is 8,700 dwelling units and the average household size is 4.5, then what is the population of the town

- a) 1,11,150
  - b) 1,18,350
  - c) 64,800
  - d) 1,03,950
- 22 Which of the following represents the correct sequence of the mentioned stages in the Environmental Impact Assessment (EIA) process?
- a) Screening, Impact analysis, Decision-making, Reporting, Scoping, Mitigation, Post monitoring
  - b) Screening, Scoping, Impact analysis, Mitigation, Reporting, Decision-making, Post monitoring
  - c) Decision-making, Scoping, Reporting, Mitigation, Impact analysis, Screening and post monitoring
  - d) Scoping, Decision-making, Screening, Impact analysis, Reporting, Mitigation, Post monitoring
- 23 Which of the following statement is/are correct:
1. The overall density of the population of a settlement is the ratio between Adult population to total built- up area.
  2. The overall density of the population of a settlement is the ratio between total population to total area
  3. Sex ratio in India is defined as number of Males to 100 females
  4. Sex ratio in India is defined as number of Females to 1000 males
- a) 1 and 3
  - b) 1 and 4
  - c) 2 and 3
  - d) 2 and 4
- 24 Which Ministry is responsible for implementing the NUTP in India?
- a) Ministry of Electronics and Information Technology
  - b) Ministry of Housing and Urban Affairs
  - c) Ministry of Power
  - d) Ministry of Road Transport & Highways
- 25 What is a common feature of neighbourhood structure in traditional societies that promotes community cohesion and social interaction?
- a) High-rise apartment buildings
  - b) Gated communities with limited access
  - c) Shared public spaces and courtyards
  - d) High-density single-family homes
- 26 What is the primary objective of Special Economic Zones (SEZs) in India?
- a) Promoting domestic consumption and increasing current account deficit
  - b) Encouraging foreign direct investment (FDI)
  - c) Restricting international trade
  - d) Supporting agriculture over industry
- 27 The term 'COP', often heard in context of Climate Change, refers to

- a) Conference of the Parties.
  - b) Convention of Pacific nations
  - c) Convention of Official Partners
  - d) Conference of People for Planet
- 28 According to Manual of Water Supply and Treatment, 1999 by the Ministry of Urban Development, recommended water supply level for designing schemes for cities with piped water supply where sewerage system is existing/contemplated is 135 \_\_\_\_\_
- a) million litre per capita per day
  - b) litre per capita per day
  - c) million litre per day
  - d) m<sup>3</sup> per capita per day
- 29 Which of the following cities in Punjab is being developed as a smart city under Smart Cities Mission?
- a) Patiala
  - b) Jalandhar
  - c) SBS Nagar
  - d) Moga
- 30 What is the minimum width of passage required for crutch users according to design requirements?
- a) 500 mm
  - b) 900 mm
  - c) 750 mm
  - d) 300 cm
- 31 Winders are
- a) Vertical posts that hold up the hand rails
  - b) Supports on either side of treads and risers
  - c) Steps with equal tread and rise
  - d) Angular steps used for changing direction of the stairs
- 32 As per National Building Code of India 2016, the function of an Automatic Rescue Device is to
- a) bring a stuck lift to the nearest landing level.
  - b) control fire in electrical system at plenum level.
  - c) regulate the escape route lighting system.
  - d) trigger fire sprinkler system.
- 33 'Gopuram' refers to
- a) Water tank in South Indian temples
  - b) Entrance tower or gateway
  - c) Villages along the coast, constructed by Pallavas
  - d) Brick dome in North Indian tombs
- 34 Choose the correct option:
- 1) Punjab Municipal Act- 1911
  - 2) Punjab Regional and Town Planning and Development Act- 1995
  - 3) 74th Constitutional (Amendment) Act- 1986

- a) 1 & 2 only
  - b) 2 & 3 only
  - c) 1 & 3 only
  - d) None of the above
- 35 The measurement of a damp proof course (DPC) is usually worked out in
- a)  $m^3$
  - b)  $m^2$
  - c) m
  - d)  $m^4$
- 36 Polyvinyl Chloride (PVC) is
- a) A Thermosetting material
  - b) Soluble in all solvents, and hence has wide range of applications in construction and sanitation
  - c) A Thermoplastic material
  - d) A natural ductile polymer with pungent smell and high electrical conductivity
- 37 Toothing is a construction technique used primarily in
- a) Wood construction
  - b) Steel construction
  - c) Under water RCC construction
  - d) Brick Masonry
- 38 Which among the following acronyms represents a thermal comfort index?
- a) PMV (Predicted Mean Vote)
  - b) NDVI (Normalized Difference Vegetation Index)
  - c) DEM (Digital Elevation Model)
  - d) PCA (Principal Component Analysis)
- 39 The relationship between young's modulus of elasticity E, bulk modulus K and Poisson's ratio  $\mu$  is given by
- a)  $E = 2K (1 - 2\mu)$
  - b)  $E = 3K (1 + 2\mu)$
  - c)  $E = 3K (1 - 2\mu)$
  - d)  $E = 2K (1 + \mu)$
- 40 Which of the following cities was the capital of the Vijayanagara Empire from around early 14<sup>th</sup> c. to mid 16<sup>th</sup> c. and is known for its extensive network of water supply and drainage systems, temples, palaces and markets?
- a) Hampi
  - b) Mohenjodaro
  - c) Thanjavur
  - d) Warangal
- 41 Which architectural style is characterized by its use of pointed arches, ribbed vaults, and flying buttresses, and is often associated with medieval European cathedrals. Sainte chapelle & Notre Dame de Paris are prominent examples.
- a) Neoclassical
  - b) Gothic
  - c) Baroque
  - d) Renaissance

- 42 What term refers to the inbuilt self-regulating mechanism in natural ecosystems?
- a) Allelopathy
  - b) Homeostatic mechanism
  - c) Ecological niche
  - d) Symbiosis
- 43 Brasília, the capital city of Brazil, is known for its modernist urban design and was planned by which architect?
- a) Oscar Niemeyer
  - b) Buckminster Fuller
  - c) Frank Lloyd Wright
  - d) Le Corbusier
- 44 The roadway portion designed and constructed for vehicular movement is specifically called:
- a) Right of Way
  - b) Carriage Way
  - c) Kerb
  - d) Culvert
- 45 Which of the following urban theorists proposed the Concentric Zone Theory in 1925, based on his observation of the spatial patterns of Chicago?
- a) Ernest Burgess
  - b) Homer Hoyt
  - c) Chauncy Harris
  - d) Peter Calthorpe
- 46 Which of the following is a type of physical survey that involves measuring the dimensions, boundaries and features of a land parcel or a building?
- a) Topographic survey
  - b) Cadastral survey
  - c) Bathymetric survey
  - d) Environmental survey
- 47 Which of the following is/are example/examples of Land use – Transport Integration Model
- a) Gravity and Logit Models
  - b) Logit and Henry Models
  - c) Lowry Model
  - d) Gravity and Henry Models
- 48 As per the IRC Standards, grade separated intersection is justified when the total traffic of all the arms of intersection exceeds
- a) 10,000 PCU/Hr
  - b) 1,00,000 PCU/Hr
  - c) 1,000 PCU/Hr
  - d) 100 PCU/Hr
- 49 What is the number of conflict points in a four arm non signalized intersection?



- a) 24
  - b) 36
  - c) 32
  - d) 12
- 50 Which of the following is incorrect?
- a) Intersection Design does not depend upon Land Use and Right of way
  - b) Intersection Design depends only on Socio-Economic profile of users
  - c) Accident Frequency does not affect Intersection Design at all
  - d) All of the above
- 51 The Concept of 'Ekistics' was propagated by
- a) Michelangelo
  - b) Constantine Doxiadis
  - c) Patrick Geddes
  - d) Alberti
- 52 V7 concept given by Le Corbusier refers to
- a) Blue green infrastructure (Wetlands, lakes, etc)
  - b) Housing typologies
  - c) Earthquake resistant architecture
  - d) Hierarchy of roads
- 53 Theory of Urbanism as a way of life was propounded by
- a) Louis Wirth
  - b) Lewis Mumford
  - c) Louis Cassello
  - d) Lewis Walter
- 54 Constitution of a 'District Planning Committee' has been provided in
- a) Article 243 ZD of Indian Constitution
  - b) Part IV of Indian Constitution
  - c) Article 239 AA of Indian Constitution
  - d) Schedule 9 of Indian Constitution
- 55 World Happiness Report is published by \_\_\_\_\_
- a) 'UN High Commissioner for Refugees' in association with 'OECD'
  - b) 'Institute for Economics and Peace' in association with 'World Bank'
  - c) 'Human Rights First' in association with 'Reporters without Borders'
  - d) UN Sustainable Development Solutions Network
- 56 The author of the book Regional Sociology (1926) is
- a) Charles J. Galpin
  - b) Radhakamal Mukerjee
  - c) John H. von Thunen
  - d) Rupert B. Vance
- 57 Wastewater from different sources like kitchens, wash basins and bathrooms is called \_\_\_\_\_

- a) C & D waste
  - b) Garbage
  - c) Sullage
  - d) Radioactive discharge
- 58 When the organic matter present in the sanitary landfill decomposes, it primarily generates –
- a) Chlorofluorocarbons
  - b) Nitrogen and Neon
  - c) Hydrogen and Helium
  - d) Methane
- 59 Urban Roadways in India are classified as:
- a) Arterial, Sub- arterial, collector and local streets
  - b) Primary, Secondary and Tertiary roads
  - c) NH, SH, ODR, MDR
  - d) Paved roads, Unpaved Roads and Expressways
- 60 A base map of a city is drawn at a 1:10,000 scale. If a road on the map measures 5 centimeters, what is the actual road length?
- a) 500 meters
  - b) 5,000 meters
  - c) 50,000 meters
  - d) 2,000 meters
- 61 When designing a building in 'Kutch' or 'Kashmir', what is the primary purpose of a base isolator?
- a) To increase the height of the building in "Flash flood and cloud burst" vulnerable zones
  - b) To reduce the overall weight of the super structure in earthquake prone area as compared to the substructure
  - c) To limit lateral movement of building during an earthquake by decoupling superstructure & substructure
  - d) To enhance natural ventilation in the building and reduce the potential seepage of rain water or ground water into the superstructure & substructure
- 62 Which of the following is most obvious implication of India's Net Zero commitment for urban transportation?
- a) Encouraging fossil fuel-powered vehicles in villages but grey hydrogen powered vehicles in cities
  - b) Bullet trains in all Tier 2 cities by 2030
  - c) Incentivizing the adoption of electric vehicles and sustainable public transportation
  - d) Diverging funds from Smart Cities Mission to AMRUT scheme
- 63 What is the primary purpose of standards and codes in architecture?
- a) To encourage unrestricted creativity in design
  - b) To establish minimum safety, health, and environmental requirements for construction
  - c) To enforce a singular architectural style for all building types to cut cost
  - d) To regulate the prices of imported construction materials

- 64 In contemporary architectural design, what is the concept of designing structures to naturally capture, store and distribute solar energy for heating, cooling and lighting?
- a) The passive approach to sustainability
  - b) The active use of fire ice / calthrates
  - c) The Global Heat Budget
  - d) Radiative Forcing
- 65 AAC (Autoclaved Aerated Concrete) is a lightweight precast concrete product. What is the primary gas-forming agent used in its production?
- a) Cinnabar
  - b) Nitrogen
  - c) Radon
  - d) Aluminum powder
- 66 In timber frame construction, what is the primary purpose of diagonal bracing or sheathing?
- a) To provide insulation
  - b) To improve soundproofing
  - c) To increase structural stability
  - d) To enhance fire resistance
- 67 During construction planning, "float" or "slack" in a project's schedule refers to:
- a) The time wasted by team members to relax and recharge
  - b) The time for materials to be delivered to the site
  - c) The free time available for team building activities
  - d) The extra time that can be allocated to each task without delaying the project
- 68 In the context of structural design, what is the significance of Hooke's Law?
- a) It defines the modulus of elasticity for steel during its 'necking' and 'buckling'
  - b) It relates stress and strain within the elastic limit for linearly elastic materials
  - c) It describes the plastic deformation of materials like rubber
  - d) It governs the design of reinforced concrete structures, especially when ultimate stresses are reached
- 69 In reinforced concrete construction, what is the primary function of stirrups or ties used in beams?
- a) To provide vertical support to the beam and promote torsion in beams
  - b) To resist shear forces in the beam
  - c) To increase the beam's flexural strength at extent of shear strength
  - d) To increase the beam's fire resistance
- 70 What does the acronym "ECBC" stand for in the context of green building design?
- a) Environmental Certification of Building Construction
  - b) Energy Conservation Building Code
  - c) Ecological Code of Building Construction
  - d) Environmentally Conscious Building Compliance
- 71 In urban design, what does the term "urban grain" refer to?

- a) The size and shape of individual buildings
  - b) The pattern of green spaces within a city
  - c) The texture of materials used in construction of ancient Indus Valley cities
  - d) The arrangement and organization of streets and blocks
- 72 In a proposed urban development project, the total land area is 10,000 square meters. The maximum allowable FAR for the area is 2.5. Calculate the maximum floor area that can be built on this land
- a) 25,000 square meters
  - b) 40,000 square meters
  - c) 4,000 square meters
  - d) 15,000 square meters
- 73 In elevator terminology, what is the "hoistway"?
- a) The automated system to tune the voltage between 24 to 44 V
  - b) The machine room at the top of the elevator shaft
  - c) The shaft or well in which the elevator car and counterweight move
  - d) The safety mechanism that stops the elevator in an emergency
- 74 In a hot and arid climate, what architectural feature/features is/are effective for providing shade and cooling the interior of a building?
- a) Large south-facing windows in place of 'jaalis'
  - b) Exposed concrete surfaces
  - c) A deep, shaded eave or overhang
  - d) All of the above
- 75 In the context of building security, what is the primary function of a "mantrap" or "sally port" system?
- a) To manage access control at a building's entrances and exits
  - b) To provide shelter and food for building occupants during emergencies
  - c) To detect fires and initiate suppression systems
  - d) Both (b) & (c)
- 76 "Shadow cities" are typically characterized by:
- a) Well-planned infrastructure and modern amenities modelled on metro cities
  - b) Informal settlements with limited or no access to essential services
  - c) High-rise skyscrapers and a dense urban fabric
  - d) Advanced transportation networks
- 77 When preparing base maps for urban planning, what is the purpose of a "contour map"?
- a) Representing land use patterns
  - b) Showing transportation and water supply networks
  - c) Depicting elevation changes in the terrain
  - d) Indicating public and private property boundaries
- 78 In road design, what is the primary purpose of a "superelevation" or "banking" of a curve on a road?
- a) To use the excavated earth locally and thus minimize the project cost
  - b) To improve drainage
  - c) To provide a smoother and safer curve for vehicles
  - d) To reduce the width of the road

- 79 What is the name of the influential book written by Jane Jacobs in 1961, which criticized the modernist planning approach and advocated for mixed-use, diverse and vibrant urban neighbourhoods?
- a) The Death and Life of Great American Cities
  - b) The City in History
  - c) The Image of the City
  - d) The Urban Revolution
- 80 In the context of housing planning, what does "housing stress identification" involve?
- a) Identifying architectural design flaws in housing projects for improving aesthetics
  - b) Assessing the psychological stress levels of residents during/before/after a disaster
  - c) Evaluating the hazard risk and vulnerability of housing to environmental disasters
  - d) Identifying areas where there is a high demand for housing but limited supply
- 81 How does the concept of "imageability" relate to urban form?
- a) Imageability refers to the physical characteristics of buildings, ignoring their functionality
  - b) It is unrelated to urban form and is more about cultural identity
  - c) Imageability is about the visual and functional aspects of a city, creating a memorable urban form
  - d) Imageability is only concerned with the aesthetics of natural assets in urban areas
- 82 What is the primary goal of "watershed management"?
- a) Promoting urban infrastructural development within watersheds
  - b) Ensuring equitable piped water distribution in cities
  - c) Promoting discharges into water bodies by point sources and banning discharge from non-point sources
  - d) Preserving the quality and quantity of water resources within a specific geographic area
- 83 What does "topographic analysis" primarily involve in the context of environmental planning?
- a) Studying the effects of air pollution on topography
  - b) Analyzing the cultural and historical significance of landscapes
  - c) Evaluating the shape and elevation of the land surface
  - d) Assessing the behavior of societies in different topographic regions from 'Sustainability' perspective
- 84 What is the primary focus of the field of "demography"?
- a) The study of population genetics and heredity; including the evolution of homosapiens from the primitive man
  - b) The study of population size and distribution, as well as the factors that influence these patterns
  - c) The study of cultural practices within different populations, including art and architecture
  - d) The study of international relations and diplomacy, in context of Public Health Emergencies of International Concern

- 85 In population studies, what does "dependency ratio" indicate about a population?
- a) The percentage of the population that is seasonally employed (and contributing to the economy), to the total population
  - b) The ratio of children and elderly individuals to the working-age population
  - c) The percentage of the population that depends on government subsidy for food and fuel
  - d) The ratio of unindustrialized rural population to industrialized urban population
- 86 In urban planning, what does "land use zoning" refer to in the context of planning urban networks and services?
- a) Allocating land for parks and recreational facilities on the outskirts of cities
  - b) Designating areas for residential, commercial, industrial or other specific land uses
  - c) Identifying areas with high potential for natural disasters and taking measures for enhanced resilience
  - d) Regulating the density of the population in unplanned unauthorized societies
- 87 What is the primary goal of an effective "storm water drainage system" in urban planning?
- a) Maximizing the sewage treatment by promoting addition of reactive chemicals
  - b) Controlling water pollution from industrial sources
  - c) Managing excess rainwater and preventing flooding
  - d) Promoting water conservation in urban areas using microirrigation techniques
- 88 When planning for fire protection, what does "defensible space" refer to?
- a) A space where residents can hide during a fire
  - b) An area that is not accessible by firefighters and hence needs automatic mechanical defense
  - c) Creating a space around a structure that reduces the risk of spreading of fire
  - d) A space that is free from all vegetation in rural settings
- 89 In infrastructure planning, what does the term "smart grid" typically refer to?
- a) An advanced road network with automated traffic control
  - b) A sophisticated urban water supply system based on perpendicular distribution pipelines
  - c) An intelligent electrical grid that uses digital technology for efficient energy distribution
  - d) A network of smart transportation hubs along Industrial Corridors and Dedicated Freight Corridors
- 90 Which of the following subjects may be seen in 12th schedule of Indian Constitution?
- a) Urban Planning including Town Planning
  - b) Fire Services
  - c) Cattle Pounds
  - d) All of the above
- 91 'Harrod Domar' model and 'Mahalanobis model' were related to
- a) Green Revolution
  - b) Monetary policy framework for inflation targeting
  - c) Five year plans
  - d) Nationalization of banks

- 92 The power of the supreme court of India to decide disputes between the Centre and the states fall under its  
a) Advisory jurisdiction  
b) Appellate jurisdiction  
c) Writ Jurisdiction  
d) Original jurisdiction
- 93 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R  
Assertion A: In most cases, invasive species take advantage of opportunities in ecosystems that are disturbed by human activity  
Reason R: Unlike invasive species, the native species show traits, such as high reproductive rates, high dispersal rates, and high genetic variability  
In the light of the above statements, choose the most appropriate answer from the options given below  
a) Both A and R are correct and R is the correct explanation of A  
b) Both A and R are correct but R is not the correct explanation of A  
c) A is correct but R is not correct  
d) A is incorrect but R is correct
- 94 'AIRAWAT', 'Pratyush' and 'Mihir', often heard in news, are  
a) Cheetahs translocated from South Africa to India.  
b) Elephants designated as official Mascots for 2036 Olympics  
c) India's fastest Supercomputers  
d) Platinum rated buildings constructed recently using 3-D printing
- 95 Which of the following events of Indian history was last to happen (chronologically)  
a) Komagatamaru incident  
b) Announcement of partition of Bengal by Lord Curzon  
c) Formation of Naujawan Bharat Sabha  
d) Founding of Arya Samaj by Dayanand Saraswati
- 96 Which of the following initiatives taken by the government may help in reducing air pollution:  
(1) PM Ujjwala Yojana  
(2) International Solar Alliance  
(3) Mission Shakti and Swadhar Greh  
(4) National Action Plan on climate change  
a) 2, 3, and 4 only  
b) 1, 2, and 4 only  
c) 3 and 4 only  
d) 1 and 2 only
- 97 The compositions of which of the following bhakts/saints is/are part of Sri Guru Granth Sahib?  
a) Kabir  
b) Farid  
c) Surdas  
d) All of the above

- 98 Which one of the following pair is correctly matched?
- | National park         | Location                    |
|-----------------------|-----------------------------|
| a) Sangalila -----    | Punjab                      |
| b) Keibul Lamjao----- | Manipur                     |
| c) Dudhwa-----        | Andaman and Nicobar islands |
| d) Dachigam-----      | Chattisgarh                 |
- 99 With respect to art and culture of India, 'Ravana Chhaya', 'Kundhei', 'Gombeyatta' and 'Putul Nautch' are forms/styles of \_\_\_\_\_
- Martial Dances
  - Traditional Theatre
  - Puppetry
  - Indo-Islamic Architecture
- 100 Consider the following statements:
- Thomas Cup is awarded to the champions of One Day International Cricket.
  - 2024 Summer Olympics is scheduled to take place in Sharm-el-Sheikh, Egypt.
  - Dhanraj Pillay is known as the 'Wizard of Hockey' because of his remarkable performance at 1924 and 1928 Olympics.
- Which of the above statements are correct?
- 1 and 2 only
  - 3 only
  - 1, 2 and 3
  - None of the above
- 101 In the following question, the symbols @, &, \$, # and \* are used with the following meaning as illustrated below:
- 'P \$ Q' means 'P is neither smaller than nor equal to Q'
- 'P@Q' means 'P is not greater than Q'
- 'P\* Q' means 'P is neither greater than nor smaller than Q'
- 'P& Q' means 'P is neither greater nor equal to Q'
- 'P # Q' means 'P is not smaller than Q'
- Assuming the given statements to be true, find which of the following conclusions I, II, III and IV given below is/are definitely true.
- Statements:
- Z # H, B & H, K \$ B
- Conclusions:
- K \$ Z
  - K \* Z
  - K \$ H
  - Z \$ B
- Only I is true
  - Only II is true
  - Only I and III are true
  - Only IV is true
- 102 A cube is painted blue on all faces and is then cut into 125 cubes of equal size. Answer the following question based on the statement.



How many cubes are not painted on any face?

- a) 8
- b) 16
- c) 27
- d) 36

103 What is the value of x when  
 $81 \times [16/25]^{x+2} \div [3/5]^{2x+4} = 144$ ?

- a) 1
- b) 0
- c) -2
- d) -1

104 If 7 times the 7th term of an AP is equal 11 times its 11th term, then the 18th term of the AP is

- a) 1
- b) 2
- c) 0
- d) 18

**Directions for Q 105 & 106:** For answering the following questions, use the data given in the Table below and choose the most appropriate option:

Brand	Revenue in 2011 (Rs Cr)	Growth (from 2010 to 2011)
HTC	450	99.1%
Karbonn	1,004	25.5%
LG	1,834	14.6%
Micromax	2,289	42.9%
Nokia	12,929	0.2%
RIM (Blackberry)	1,950	61.2%
Samsung	5,720	21.7%
Spice	920	-11.5%
Others	2,761	48.5%

105 What was the revenue of Spice in the year 2010?

- a) 825 Cr.
- b) 1040 Cr.
- c) 1022.22 Cr.
- d) 1033.33 Cr.

106 What is value of ratio of 2010 Revenues to 2011 Revenues for Samsung?

- a) 0.217
- b) 4.608
- c) 2.304
- d) 0.822

- 107 January 3, 2008 was Thursday. What day of the week fell on January 3, 2009?  
 a) Tuesday  
 b) Friday  
 c) Thursday  
 d) Saturday
- 108 If 4 bulbs are there in a box each of which can be defective or non defective then what is the probability that at least one bulb is non defective ?  
 a)  $15/16$   
 b)  $1/16$   
 c)  $3/4$   
 d)  $1/4$
- 109 Consider three sets: Set A, Set B and Set C. The following information is given:  
 Set A contains prime numbers from 1 to 10.  
 Set B contains even numbers from 1 to 10.  
 Set C contains multiples of 3 from 1 to 10.  
 Based on this information, answer the following question:  
 Which of the following statements is/are correct?  
 1. There are 3 elements in Set A  
 2. There are 4 elements in Set A  
 3. There are 5 elements in Set A  
 4. There is 1 element in intersection of Sets A, B and C  
 5. There is no element in intersection of Sets A, B and C  
 a) 1 & 4  
 b) 2 & 5  
 c) 3 & 4  
 d) 3 & 5
- 110 Find the sum of  $0.40 + 0.43 + 0.46 + \dots + 1$   
 a) 16.7  
 b) 13.7  
 c) 12.7  
 d) 14.7
- 111 ਸੁੱਧ ਸ਼ਬਦਾਂ ਦੇ ਜੋੜੇ ਨੂੰ ਪਛਾਣੋ:  
 a) ਡੂੰਗਾ, ਸੱਭਿਯਤਾ, ਏਡੀਟਰ  
 b) ਭਿੱਝ, ਯਗ, ਅਨਬਨ  
 c) ਘਭਰਾਉਣਾ, ਵੋਹਟੀ, ਨਿਰਭਯ  
 d) ਕਾਫ਼ੀ, ਸ਼ਖ਼ਸੀਅਤ, ਚੁੰਢੀ
- 112 ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜਾ ਪਿਛੇਤਰ ਸਹੀ ਪਛਾਣਿਆ ਗਿਆ ਹੈ ?  
 a) ਸ਼ਬਦਾਵਲੀ- ਆਵਲੀ  
 b) ਬਣਾਵਟ- ਟ  
 c) ਹਮਲਾਵਰ- ਆਵਰ  
 d) ਦਿਆਲੂ-ਆਲੂ

- 113 ਯੂਨੈਸਕੋ ਵਲੋਂ ਮਾਨਤਾ ਪ੍ਰਾਪਤ ਜੰਡਿਆਲਾ ਗੁਰੂ ਦਾ ਸਬੰਧ ਹੈ \_\_\_\_\_
- ਵਣਜਾਰਿਆਂ ਨਾਲ
  - ਕਾਲਬੇਲੀਆਂ ਨਾਲ
  - ਠਠੇਰਿਆਂ ਨਾਲ
  - ਘੁਮਿਆਰਾਂ ਨਾਲ
- 114 ਅਖਾਣ ਪੂਰੀ ਕਰੋ: "ਉੱਠ ਨੀ ਨੂੰਹੇ ਨਿੱਸਲ ਹੋ, \_\_\_\_\_ ਛੱਡ ਤੇ ਚੱਕੀ ਝੋ"
- ਰੋਟੀ
  - ਚਾਟੀ
  - ਝਾੜੂ
  - ਚਰਖਾ
- 115
- ਕਸਾਈ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਕਸਾਇਣ ਹੈ।
  - ਖੱਤਰੀ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਖੱਤਰਨ ਹੈ।
  - ਪੇਂਡੂ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਪੇਂਡੀ ਹੈ।
  - ਗਾਂ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਗਾਂਵਾ ਹੈ।
  - ਜੁਗਨੂੰ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਇੱਜੜ ਹੈ।
- ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿੰਨੇ ਵਾਕ ਸਹੀ ਅਤੇ ਸੁੱਧ ਹਨ?
- ਕੋਈ ਨਹੀਂ
  - 1
  - 3
  - 4
- 116 'Coffee is produced in Brazil.' ਦਾ ਸਹੀ ਪੰਜਾਬੀ ਰੂਪ ਹੈ:
- ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ।
  - ਕੋਫੀ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
  - ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
  - ਕੋਫੀ ਦਾ ਨਿਰਮਾਣ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਹੁੰਦਾ ਹੈ।
- 117 ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਬੁਨਿਆਦੀ ਪ੍ਰਸ਼ਨ ਪਰਮ-ਸੱਚ ਅਤੇ ਪਰਮਾਰਥ ਦੀ ਵਿਆਖਿਆ ਨਾਲ ਸੰਬੰਧ ਰੱਖਦੇ ਹਨ। ਇਨ੍ਹਾਂ ਦੋਹਾਂ ਦਾ ਆਪਸ ਵਿੱਚ ਗੂੜ੍ਹਾ ਸੰਬੰਧ ਹੈ। ਸਾਡੀਆਂ ਨਜ਼ਰਾਂ ਦੇ ਸਾਮ੍ਹਣੇ ਫੈਲਿਆ ਹੋਇਆ ਇਹ ਦ੍ਰਿਸ਼ਟਮਾਨ ਸੰਸਾਰ ਕੀ ਹੈ? ਇਸਦੀ ਹਸਤੀ ਅਤੇ ਹੋਂਦ ਦਾ ਪਰਮ-ਸੱਚ ਕੀ ਹੈ? ਇਸ ਪਰਮ-ਸੱਚ ਦਾ ਪਰਮਾਣਿਕ ਗਿਆਨ ਕਿਵੇਂ ਪ੍ਰਾਪਤ ਹੋ ਸਕਦਾ ਹੈ? ਮਨੁੱਖ ਕੀ ਹੈ? ਉਸ ਦੇ ਜੀਵਨ ਦਾ ਪਰਮ-ਮਨੋਰਥ ਕੀ ਹੈ? ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੇ ਇਸ ਦੇ ਤਿੰਨ ਉਪ-ਅਨੁਸ਼ਾਸਨਾਂ ਨੂੰ ਜਨਮ ਦਿੱਤਾ ਹੈ – ਤੱਤ-ਮੀਮਾਂਸਾ (metaphysics); ਗਿਆਨ-ਮੀਮਾਂਸਾ (epistemology) ਅਤੇ ਨੀਤੀ-ਮੀਮਾਂਸਾ (ethics)। ਭਾਰਤ ਦੀਆਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਨੇ, ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੂੰ ਆਪੇ ਆਪਣੇ ਢੰਗ ਨਾਲ ਅਤੇ ਆਪੇ ਆਪਣੇ ਦ੍ਰਿਸ਼ਟੀਕੋਣ ਤੋਂ, ਸੰਬੋਧਿਤ ਹੋਣ ਦਾ ਉਪਰਾਲਾ ਕੀਤਾ ਹੈ। ਇਨ੍ਹਾਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ

ਸੰਪ੍ਰਦਾਵਾਂ ਦਾ ਆਪੋ ਆਪਣਾ ਵਿਵੇਕ ਅਤੇ ਤਾਰਕਿਕ ਆਧਾਰ ਹੈ। ਇੱਥੇ ਇੱਕ ਗੱਲ ਸਪਸ਼ਟ ਕਰ ਲੈਣੀ ਬਣਦੀ ਹੈ ਕਿ ਭਾਰਤੀ ਦਰਸ਼ਨ ਤੋਂ ਭਾਵ ਭਾਰਤ ਦੀ ਕੋਈ ਇੱਕ ਪਰੰਪਰਾ ਨਹੀਂ ਸਗੋਂ ਇਸ ਦੇ ਅੰਤਰਗਤ ਇਸ ਧਰਤੀ ਉੱਤੇ ਵਿਕਸਿਤ ਹੋਈਆਂ ਸਮੂਹ ਦਾਰਸ਼ਨਿਕ ਪਰੰਪਰਾਵਾਂ ਆ ਜਾਂਦੀਆਂ ਹਨ। ਇਸ ਵਿੱਚ ਸਨਾਤਨ ਹਿੰਦੂ ਪਰੰਪਰਾ, ਬੌਧ, ਜੈਨ ਅਤੇ ਸਿੱਖ ਪਰੰਪਰਾ ਨਾਲ ਸੰਬੰਧਿਤ ਸਮੁੱਚਾ ਦਾਰਸ਼ਨਿਕ ਚਿੰਤਨ ਸ਼ਾਮਿਲ ਹੈ। ਦਰਸ਼ਨ-ਸ਼ਾਸਤਰ ਦੀਆਂ ਇਹ ਸਾਰੀਆਂ ਪਰੰਪਰਾਵਾਂ ਸਮੁੱਚੇ ਤੌਰ ਤੇ ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੀ ਵਿਰਾਟ ਪਰੰਪਰਾ ਦਾ ਨਿਰਮਾਨ ਕਰਦੀਆਂ ਹਨ।

ਉਪਰੋਕਤ ਪੈਰ੍ਹੇ ਦੇ ਆਧਾਰ 'ਤੇ ਸਹੀ ਵਿਕਲਪ ਚੁਣੋ:

ਭਾਰਤੀ ਦਰਸ਼ਨ ਵਿੱਚ ਪਰਮ-ਸੱਚ ਤੋਂ ਕੀ ਭਾਵ ਹੈ:

- a) ਸਦਾ ਸੱਚ ਬੋਲਣਾ
- b) ਜੀਵਨ ਦੇ ਮੂਲ ਦਾ ਸੱਚ
- c) ਇੱਕ ਰੱਬ
- d) ਬਹੁਗਿਣਤੀ ਵਾਲੇ ਧਰਮਾਂ ਦੀਆਂ ਪਰੰਪਰਾਵਾਂ

118 ਜੇਕਰ ਇਨ੍ਹਾਂ ਇਤਿਹਾਸਕ ਘਟਨਾਵਾਂ ਨੂੰ ਕ੍ਰਮਵਾਰ (ਸਮੇਂ ਦੇ ਅਧਾਰ ਤੇ) ਲਗਾਇਆ ਜਾਵੇ, ਤਾਂ ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜੀ ਘਟਨਾ ਆਖੀਰ ਵਿੱਚ ਆਵੇਗੀ?

I ਭੰਗਾਈ ਦੀ ਯੁੱਧ

II ਪਹਿਲਾ ਐਂਗਲੋ-ਸਿੱਖ ਯੁੱਧ

III ਅਨੰਦਪੁਰ ਸਾਹਿਬ ਦੀ ਪਹਿਲੀ ਲੜਾਈ

IV ਚਮਕੌਰ ਸਾਹਿਬ ਦੀ ਲੜਾਈ

- a) I
- b) II
- c) III
- d) IV

119 ਯੋਜਕ ਚੁਣੋ:

- a) ਦਾ, ਦੀ
- b) ਨੂੰ, ਨੇ
- c) ਅਤੇ, ਪਰ
- d) ਉੱਤੇ, ਕੋਲ

120 ਕਿਹੜਾ ਸ਼ਬਦ ਸਵਰ-ਲੇਪ ਦੀ ਮਿਸਾਲ ਨਹੀਂ ਹੈ -

- a) ਮਰੂਦ
- b) ਸ਼ਨਾਨ
- c) ਖੰਡਪਾਠ
- d) ਇਤਰਾਜ਼

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# **SPACE FOR ROUGH WORK**

# **SPACE FOR ROUGH WORK**

# PUNJAB PUBLIC SERVICE COMMISSION

Objective Type Test (April-2024) for Recruitment to the Post of Planning Officer (Group A)  
in the Department of Town and Country Planning, Government of Punjab

READ INSTRUCTIONS BEFORE FILLING ANY DETAILS OR ATTEMPTING TO ANSWER THE QUESTIONS.

Total Questions: 120  
Time Allowed: 2 Hours

Candidate's Name \_\_\_\_\_

Father's Name \_\_\_\_\_

Date of Birth     
DD MM YYYY

OMR Response Sheet No. \_\_\_\_\_

Roll No. \_\_\_\_\_

Candidate's Signature (Please sign in the box)

Question  
Booklet Set

B

Booklet Series

## INSTRUCTIONS

1. The candidate shall NOT open this booklet till the time told to do so by the Invigilation Staff. However, in the meantime, the candidate can read these instructions carefully and subsequently fill the appropriate columns given above in CAPITAL letters. The candidate may also fill the relevant boxes 1 to 9 of the Optical Mark Reader (OMR) response sheet, supplied separately.
2. Use only blue or black **ball point pen** to fill the relevant columns on this page as well as in OMR sheet. Use of Ink pen or any other pen is not allowed.
3. Other than filling credentials/information in specific space allotted above, do not write anything else on the Test Booklet. Space for rough work is provided at the end. The candidate shall be liable for any adverse effect if the information given above is wrong or illegible or incomplete.
4. Each candidate is required to attempt 120 questions in 120 minutes, except for orthopedically/visually impaired candidates, who would be given 40 extra minutes, for marking correct responses on the OMR sheet.
5. The question paper booklet has 22 pages.
6. The candidates, when allowed to open the question paper booklet, must first check the entire booklet to confirm that the booklet has complete number of pages, the pages are printed correctly and there are no blank or torn pages. In case there is any such error in the question paper booklet then the candidate should IMMEDIATELY bring this fact to the notice of the Invigilation Staff and obtain a new booklet of the same series as given earlier.
7. The serial number of the new Question booklet, if issued for some reason, should be entered in the relevant column of the OMR. The Invigilation Staff must make necessary corrections in their record regarding the change in the serial no. of Question booklet.
8. The paper consists of total 480 Marks. Each question shall carry 4 marks. There are four options for each question and the candidate has to mark the MOST APPROPRIATE answer on the OMR response sheet.
9. There is **negative marking** (1 mark for each question) for questions wrongly answered by the candidate.
10. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers is correct. There will be same penalty, as above, to that question.
11. If Question is left blank, i.e. question remains unattempted, there will be no penalty for that question.
12. Use of Electronic/Manual Calculator is prohibited.
13. The candidate **MUST READ INSTRUCTIONS BEHIND THE OMR SHEET** before answering the questions and check that two carbon copies attached to the OMR sheet are intact.

- 1 ਸ਼ੁੱਧ ਸ਼ਬਦਾਂ ਦੇ ਜੋੜੇ ਨੂੰ ਪਛਾਣੋ:
  - a) ਡੂੰਗਾ, ਸੱਭਿਯਤਾ, ਟੈਡੀਟਰ
  - b) ਭਿੱਝ, ਯਗ, ਅਨਬਨ
  - c) ਘਭਰਾਉਣਾ, ਵੋਹਟੀ, ਨਿਰਭਯ
  - d) ਕਾਫੀ, ਸ਼ਖ਼ਸੀਅਤ, ਚੁੰਢੀ
- 2 ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜਾ ਪਿਛੇਤਰ ਸਹੀ ਪਛਾਣਿਆ ਗਿਆ ਹੈ ?
  - a) ਸ਼ਬਦਾਵਲੀ- ਆਵਲੀ
  - b) ਬਣਾਵਟ- ਟ
  - c) ਹਮਲਾਵਰ- ਆਵਰ
  - d) ਦਿਆਲੂ-ਆਲੂ
- 3 ਯੂਨੈਸਕੋ ਵਲੋਂ ਮਾਨਤਾ ਪ੍ਰਾਪਤ ਜੰਡਿਆਲਾ ਗੁਰੂ ਦਾ ਸਬੰਧ ਹੈ \_\_\_\_\_
  - a) ਵਣਜਾਰਿਆਂ ਨਾਲ
  - b) ਕਾਲਬੇਲੀਆਂ ਨਾਲ
  - c) ਠਠੇਰਿਆਂ ਨਾਲ
  - d) ਘੁਮਿਆਰਾਂ ਨਾਲ
- 4 ਅਖਾਣ ਪੂਰੀ ਕਰੋ: "ਉੱਠ ਨੀ ਨੂੰਹੇ ਨਿੱਸਲ ਹੇ, \_\_\_\_\_ ਛੱਡ ਤੇ ਚੱਕੀ ਝੋ"
  - a) ਰੋਟੀ
  - b) ਚਾਟੀ
  - c) ਝਾੜੂ
  - d) ਚਰਖਾ
- 5
  1. ਕਸਾਈ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਕਸਾਇਣ ਹੈ।
  2. ਖੱਤਰੀ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਖੱਤਰਨ ਹੈ।
  3. ਪੇਂਡੂ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਪੇਂਡੀ ਹੈ।
  4. ਗਾਂ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਗਾਂਵਾ ਹੈ।
  5. ਜੁਗਨੂੰ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਇੱਜੜ ਹੈ।

ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿੰਨੇ ਵਾਕ ਸਹੀ ਅਤੇ ਸ਼ੁੱਧ ਹਨ?

  - a) ਕੋਈ ਨਹੀਂ
  - b) 1
  - c) 3
  - d) 4
- 6 'Coffee is produced in Brazil.' ਦਾ ਸਹੀ ਪੰਜਾਬੀ ਰੂਪ ਹੈ:
  - a) ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ।
  - b) ਕੋਫੀ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
  - c) ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
  - d) ਕੋਫੀ ਦਾ ਨਿਰਮਾਣ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਹੁੰਦਾ ਹੈ।



- 7 ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਬੁਨਿਆਦੀ ਪ੍ਰਸ਼ਨ ਪਰਮ-ਸੱਚ ਅਤੇ ਪਰਮਾਰਥ ਦੀ ਵਿਆਖਿਆ ਨਾਲ ਸੰਬੰਧ ਰੱਖਦੇ ਹਨ। ਇਨ੍ਹਾਂ ਦੋਹਾਂ ਦਾ ਆਪਸ ਵਿੱਚ ਗੂੜ੍ਹਾ ਸੰਬੰਧ ਹੈ। ਸਾਡੀਆਂ ਨਜ਼ਰਾਂ ਦੇ ਸਾਮ੍ਹਣੇ ਫੈਲਿਆ ਹੋਇਆ ਇਹ ਦ੍ਰਿਸ਼ਟਮਾਨ ਸੰਸਾਰ ਕੀ ਹੈ? ਇਸਦੀ ਹਸਤੀ ਅਤੇ ਹੋਂਦ ਦਾ ਪਰਮ-ਸੱਚ ਕੀ ਹੈ? ਇਸ ਪਰਮ-ਸੱਚ ਦਾ ਪਰਮਾਣਿਕ ਗਿਆਨ ਕਿਵੇਂ ਪ੍ਰਾਪਤ ਹੋ ਸਕਦਾ ਹੈ? ਮਨੁੱਖ ਕੀ ਹੈ? ਉਸ ਦੇ ਜੀਵਨ ਦਾ ਪਰਮ-ਮਨੋਰਥ ਕੀ ਹੈ? ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੇ ਇਸ ਦੇ ਤਿੰਨ ਉਪ-ਅਨੁਸ਼ਾਸਨਾਂ ਨੂੰ ਜਨਮ ਦਿੱਤਾ ਹੈ – ਤੱਤ-ਮੀਮਾਂਸਾ (metaphysics); ਗਿਆਨ-ਮੀਮਾਂਸਾ (epistemology) ਅਤੇ ਨੀਤੀ-ਮੀਮਾਂਸਾ (ethics)। ਭਾਰਤ ਦੀਆਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਨੇ, ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੂੰ ਆਪੇ ਆਪਣੇ ਢੰਗ ਨਾਲ ਅਤੇ ਆਪੇ ਆਪਣੇ ਦ੍ਰਿਸ਼ਟੀਕੋਣ ਤੋਂ, ਸੰਬੋਧਿਤ ਹੋਣ ਦਾ ਉਪਰਾਲਾ ਕੀਤਾ ਹੈ। ਇਨ੍ਹਾਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਦਾ ਆਪੇ ਆਪਣਾ ਵਿਵੇਕ ਅਤੇ ਤਾਰਕਿਕ ਆਧਾਰ ਹੈ। ਇੱਥੇ ਇੱਕ ਗੱਲ ਸਪਸ਼ਟ ਕਰ ਲੈਣੀ ਬਣਦੀ ਹੈ ਕਿ ਭਾਰਤੀ ਦਰਸ਼ਨ ਤੋਂ ਭਾਵ ਭਾਰਤ ਦੀ ਕੋਈ ਇੱਕ ਪਰੰਪਰਾ ਨਹੀਂ ਸਗੋਂ ਇਸ ਦੇ ਅੰਤਰਗਤ ਇਸ ਧਰਤੀ ਉੱਤੇ ਵਿਕਸਿਤ ਹੋਈਆਂ ਸਮੂਹ ਦਾਰਸ਼ਨਿਕ ਪਰੰਪਰਾਵਾਂ ਆ ਜਾਂਦੀਆਂ ਹਨ। ਇਸ ਵਿੱਚ ਸਨਾਤਨ ਹਿੰਦੂ ਪਰੰਪਰਾ, ਬੌਧ, ਜੈਨ ਅਤੇ ਸਿੱਖ ਪਰੰਪਰਾ ਨਾਲ ਸੰਬੰਧਿਤ ਸਮੁੱਚਾ ਦਾਰਸ਼ਨਿਕ ਚਿੰਤਨ ਸ਼ਾਮਿਲ ਹੈ। ਦਰਸ਼ਨ-ਸ਼ਾਸਤਰ ਦੀਆਂ ਇਹ ਸਾਰੀਆਂ ਪਰੰਪਰਾਵਾਂ ਸਮੁੱਚੇ ਤੌਰ ਤੇ ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੀ ਵਿਰਾਟ ਪਰੰਪਰਾ ਦਾ ਨਿਰਮਾਨ ਕਰਦੀਆਂ ਹਨ।

ਉਪਰੋਕਤ ਪੈਰ੍ਹੇ ਦੇ ਆਧਾਰ 'ਤੇ ਸਹੀ ਵਿਕਲਪ ਚੁਣੋ:

ਭਾਰਤੀ ਦਰਸ਼ਨ ਵਿੱਚ ਪਰਮ-ਸੱਚ ਤੋਂ ਕੀ ਭਾਵ ਹੈ:

- ਸਦਾ ਸੱਚ ਬੋਲਣਾ
  - ਜੀਵਨ ਦੇ ਮੂਲ ਦਾ ਸੱਚ
  - ਇੱਕ ਰੱਬ
  - ਬਹੁਗਿਣਤੀ ਵਾਲੇ ਧਰਮਾਂ ਦੀਆਂ ਪਰੰਪਰਾਵਾਂ
- 8 ਜੇਕਰ ਇਨ੍ਹਾਂ ਇਤਿਹਾਸਕ ਘਟਨਾਵਾਂ ਨੂੰ ਕ੍ਰਮਵਾਰ (ਸਮੇਂ ਦੇ ਅਧਾਰ ਤੇ) ਲਗਾਇਆ ਜਾਵੇ, ਤਾਂ ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜੀ ਘਟਨਾ ਆਖੀਰ ਵਿੱਚ ਆਵੇਗੀ?
- ਭੰਗਾਈ ਦੀ ਯੁੱਧ
  - ਪਹਿਲਾ ਐਂਗਲੋ-ਸਿੱਖ ਯੁੱਧ
  - ਅਨੰਦਪੁਰ ਸਾਹਿਬ ਦੀ ਪਹਿਲੀ ਲੜਾਈ
  - ਚਮਕੌਰ ਸਾਹਿਬ ਦੀ ਲੜਾਈ
- I
  - II
  - III
  - IV
- 9 ਯੋਜਕ ਚੁਣੋ:
- ਦਾ, ਦੀ
  - ਨੂੰ, ਨੇ
  - ਅਤੇ, ਪਰ
  - ਉੱਤੇ, ਕੋਲ
- 10 ਕਿਹੜਾ ਸ਼ਬਦ ਸਵਰ-ਲੇਪ ਦੀ ਮਿਸਾਲ ਨਹੀਂ ਹੈ -
- ਮਰੂਦ
  - ਸ਼ਨਾਨ
  - ਖੰਡਪਾਠ
  - ਇਤਰਾਜ਼

- 11 A town has 16,000 existing dwelling units of which 10% are dilapidated. If the housing need is 8,700 dwelling units and the average household size is 4.5, then what is the population of the town
- 1,11,150
  - 1,18,350
  - 64,800
  - 1,03,950
- 12 Which of the following represents the correct sequence of the mentioned stages in the Environmental Impact Assessment (EIA) process?
- Screening, Impact analysis, Decision-making, Reporting, Scoping, Mitigation, Post monitoring
  - Screening, Scoping, Impact analysis, Mitigation, Reporting, Decision-making, Post monitoring
  - Decision-making, Scoping, Reporting, Mitigation, Impact analysis, Screening and post monitoring
  - Scoping, Decision-making, Screening, Impact analysis, Reporting, Mitigation, Post monitoring
- 13 Which of the following statement is/are correct:
- The overall density of the population of a settlement is the ratio between Adult population to total built-up area.
  - The overall density of the population of a settlement is the ratio between total population to total area
  - Sex ratio in India is defined as number of Males to 100 females
  - Sex ratio in India is defined as number of Females to 1000 males
- 1 and 3
  - 1 and 4
  - 2 and 3
  - 2 and 4
- 14 Which Ministry is responsible for implementing the NUTP in India?
- Ministry of Electronics and Information Technology
  - Ministry of Housing and Urban Affairs
  - Ministry of Power
  - Ministry of Road Transport & Highways
- 15 What is a common feature of neighbourhood structure in traditional societies that promotes community cohesion and social interaction?
- High-rise apartment buildings
  - Gated communities with limited access
  - Shared public spaces and courtyards
  - High-density single-family homes
- 16 What is the primary objective of Special Economic Zones (SEZs) in India?
- Promoting domestic consumption and increasing current account deficit
  - Encouraging foreign direct investment (FDI)
  - Restricting international trade
  - Supporting agriculture over industry

- 17 The term 'COP', often heard in context of Climate Change, refers to  
a) Conference of the Parties.  
b) Convention of Pacific nations  
c) Convention of Official Partners  
d) Conference of People for Planet
- 18 According to Manual of Water Supply and Treatment, 1999 by the Ministry of Urban Development, recommended water supply level for designing schemes for cities with piped water supply where sewerage system is existing/contemplated is 135 \_\_\_\_\_  
a) million litre per capita per day  
b) litre per capita per day  
c) million litre per day  
d) m<sup>3</sup> per capita per day
- 19 Which of the following cities in Punjab is being developed as a smart city under Smart Cities Mission?  
a) Patiala  
b) Jalandhar  
c) SBS Nagar  
d) Moga
- 20 What is the minimum width of passage required for crutch users according to design requirements?  
a) 500 mm  
b) 900 mm  
c) 750 mm  
d) 300 cm
- 21 Winders are  
a) Vertical posts that hold up the hand rails  
b) Supports on either side of treads and risers  
c) Steps with equal tread and rise  
d) Angular steps used for changing direction of the stairs
- 22 As per National Building Code of India 2016, the function of an Automatic Rescue Device is to  
a) bring a stuck lift to the nearest landing level.  
b) control fire in electrical system at plenum level.  
c) regulate the escape route lighting system.  
d) trigger fire sprinkler system.
- 23 'Gopuram' refers to  
a) Water tank in South Indian temples  
b) Entrance tower or gateway  
c) Villages along the coast, constructed by Pallavas  
d) Brick dome in North Indian tombs

- 24 Choose the correct option:  
1) Punjab Municipal Act- 1911  
2) Punjab Regional and Town Planning and Development Act- 1995  
3) 74th Constitutional (Amendment) Act- 1986  
a) 1 & 2 only  
b) 2 & 3 only  
c) 1 & 3 only  
d) None of the above
- 25 The measurement of a damp proof course (DPC) is usually worked out in  
a)  $m^3$   
b)  $m^2$   
c) m  
d)  $m^4$
- 26 Polyvinyl Chloride (PVC) is  
a) A Thermosetting material  
b) Soluble in all solvents, and hence has wide range of applications in construction and sanitation  
c) A Thermoplastic material  
d) A natural ductile polymer with pungent smell and high electrical conductivity
- 27 Toothing is a construction technique used primarily in  
a) Wood construction  
b) Steel construction  
c) Under water RCC construction  
d) Brick Masonry
- 28 Which among the following acronyms represents a thermal comfort index?  
a) PMV (Predicted Mean Vote)  
b) NDVI (Normalized Difference Vegetation Index)  
c) DEM (Digital Elevation Model)  
d) PCA (Principal Component Analysis)
- 29 The relationship between young's modulus of elasticity E, bulk modulus K and Poisson's ratio  $\mu$  is given by  
a)  $E = 2K (1 - 2\mu)$   
b)  $E = 3K (1 + 2\mu)$   
c)  $E = 3K (1 - 2\mu)$   
d)  $E = 2K (1 + \mu)$
- 30 Which of the following cities was the capital of the Vijayanagara Empire from around early 14<sup>th</sup> c. to mid 16<sup>th</sup> c. and is known for its extensive network of water supply and drainage systems, temples, palaces and markets?  
a) Hampi  
b) Mohenjodaro  
c) Thanjavur  
d) Warangal
- 31 When designing a building in 'Kutch' or 'Kashmir', what is the primary purpose of a base isolator?

- a) To increase the height of the building in "Flash flood and cloud burst" vulnerable zones
  - b) To reduce the overall weight of the super structure in earthquake prone area as compared to the substructure
  - c) To limit lateral movement of building during an earthquake by decoupling superstructure & substructure
  - d) To enhance natural ventilation in the building and reduce the potential seepage of rain water or ground water into the superstructure & substructure
- 32 Which of the following is most obvious implication of India's Net Zero commitment for urban transportation?
- a) Encouraging fossil fuel-powered vehicles in villages but grey hydrogen powered vehicles in cities
  - b) Bullet trains in all Tier 2 cities by 2030
  - c) Incentivizing the adoption of electric vehicles and sustainable public transportation
  - d) Diverging funds from Smart Cities Mission to AMRUT scheme
- 33 What is the primary purpose of standards and codes in architecture?
- a) To encourage unrestricted creativity in design
  - b) To establish minimum safety, health, and environmental requirements for construction
  - c) To enforce a singular architectural style for all building types to cut cost
  - d) To regulate the prices of imported construction materials
- 34 In contemporary architectural design, what is the concept of designing structures to naturally capture, store and distribute solar energy for heating, cooling and lighting?
- a) The passive approach to sustainability
  - b) The active use of fire ice / calthrates
  - c) The Global Heat Budget
  - d) Radiative Forcing
- 35 AAC (Autoclaved Aerated Concrete) is a lightweight precast concrete product. What is the primary gas-forming agent used in its production?
- a) Cinnabar
  - b) Nitrogen
  - c) Radon
  - d) Aluminum powder
- 36 In timber frame construction, what is the primary purpose of diagonal bracing or sheathing?
- a) To provide insulation
  - b) To improve soundproofing
  - c) To increase structural stability
  - d) To enhance fire resistance
- 37 During construction planning, "float" or "slack" in a project's schedule refers to:
- a) The time wasted by team members to relax and recharge
  - b) The time for materials to be delivered to the site
  - c) The free time available for team building activities
  - d) The extra time that can be allocated to each task without delaying the project

- 38 In the context of structural design, what is the significance of Hooke's Law?
- a) It defines the modulus of elasticity for steel during its 'necking' and 'buckling'
  - b) It relates stress and strain within the elastic limit for linearly elastic materials
  - c) It describes the plastic deformation of materials like rubber
  - d) It governs the design of reinforced concrete structures, especially when ultimate stresses are reached
- 39 In reinforced concrete construction, what is the primary function of stirrups or ties used in beams?
- a) To provide vertical support to the beam and promote torsion in beams
  - b) To resist shear forces in the beam
  - c) To increase the beam's flexural strength at extent of shear strength
  - d) To increase the beam's fire resistance
- 40 What does the acronym "ECBC" stand for in the context of green building design?
- a) Environmental Certification of Building Construction
  - b) Energy Conservation Building Code
  - c) Ecological Code of Building Construction
  - d) Environmentally Conscious Building Compliance
- 41 In urban design, what does the term "urban grain" refer to?
- a) The size and shape of individual buildings
  - b) The pattern of green spaces within a city
  - c) The texture of materials used in construction of ancient Indus Valley cities
  - d) The arrangement and organization of streets and blocks
- 42 In a proposed urban development project, the total land area is 10,000 square meters. The maximum allowable FAR for the area is 2.5. Calculate the maximum floor area that can be built on this land
- a) 25,000 square meters
  - b) 40,000 square meters
  - c) 4,000 square meters
  - d) 15,000 square meters
- 43 In elevator terminology, what is the "hoistway"?
- a) The automated system to tune the voltage between 24 to 44 V
  - b) The machine room at the top of the elevator shaft
  - c) The shaft or well in which the elevator car and counterweight move
  - d) The safety mechanism that stops the elevator in an emergency
- 44 In a hot and arid climate, what architectural feature/features is/are effective for providing shade and cooling the interior of a building?
- a) Large south-facing windows in place of 'jaalis'
  - b) Exposed concrete surfaces
  - c) A deep, shaded eave or overhang
  - d) All of the above

- 45 In the context of building security, what is the primary function of a "mantrap" or "sally port" system?
- a) To manage access control at a building's entrances and exits
  - b) To provide shelter and food for building occupants during emergencies
  - c) To detect fires and initiate suppression systems
  - d) Both (b) & (c)
- 46 "Shadow cities" are typically characterized by:
- a) Well-planned infrastructure and modern amenities modelled on metro cities
  - b) Informal settlements with limited or no access to essential services
  - c) High-rise skyscrapers and a dense urban fabric
  - d) Advanced transportation networks
- 47 When preparing base maps for urban planning, what is the purpose of a "contour map"?
- a) Representing land use patterns
  - b) Showing transportation and water supply networks
  - c) Depicting elevation changes in the terrain
  - d) Indicating public and private property boundaries
- 48 In road design, what is the primary purpose of a "superelevation" or "banking" of a curve on a road?
- a) To use the excavated earth locally and thus minimize the project cost
  - b) To improve drainage
  - c) To provide a smoother and safer curve for vehicles
  - d) To reduce the width of the road
- 49 What is the name of the influential book written by Jane Jacobs in 1961, which criticized the modernist planning approach and advocated for mixed-use, diverse and vibrant urban neighbourhoods?
- a) The Death and Life of Great American Cities
  - b) The City in History
  - c) The Image of the City
  - d) The Urban Revolution
- 50 In the context of housing planning, what does "housing stress identification" involve?
- a) Identifying architectural design flaws in housing projects for improving aesthetics
  - b) Assessing the psychological stress levels of residents during/before/after a disaster
  - c) Evaluating the hazard risk and vulnerability of housing to environmental disasters
  - d) Identifying areas where there is a high demand for housing but limited supply
- 51 Which medieval city in India is famous for its urban design that reflects the principles of cosmology, with nine sectors representing the nine planets (ancient astrological zodiac) and a central palace complex?
- a) Delhi
  - b) Jaipur
  - c) Chennai
  - d) Lucknow
- 52 Which of the following is correct regarding devolution of functions (under 12th Schedule of Indian Constitution) to Urban Local Bodies (74th Constitutional Amendment Act)?

- a) There is uniform mandatory devolution of functions to all ULBs of North India, but their devolution is optional for South Indian States
  - b) 'Water Supply' and 'Roads' have been compulsorily devolved to all ULBs
  - c) Devolution of functions to ULBs under the 12th Schedule is optional
  - d) Town Planning has been compulsorily devolved to all ULBs in India under the Act
- 53 Which of the following is correct about TOD (Transit Oriented Development)?
- a) It focuses on encouraging car-centric transportation and isolation of residential areas from commercial areas
  - b) It aims to promote development around public transport hubs
  - c) It discourages medium to high density housing and mixed-income development
  - d) It primarily intends to promote large shopping malls and exclusive office complexes, apart from promoting sub-urban sprawl
- 54 "The volume of migration is proportional to the population of the origin and destination centres and inversely proportional to the distance between them." Which of the following models is best reflected in this statement?
- a) Stouffer's Model of Migration
  - b) Cost Benefit Model
  - c) Zipf's Gravity Model
  - d) Input-Output model
- 55 Which of the following programmes/schemes was launched for development of heritage cities like Amritsar and Ajmer?
- a) HRIDAY
  - b) SPARSH
  - c) Vibrant Villages Programme
  - d) PM AASHA
- 56 Length of a Vehicle affects
- a) Width of Traffic Lanes only
  - b) Extra width of Pavement and minimum turning radius
  - c) Width of Shoulders and parking facilities only
  - d) Clearance to be provided under structures such as overbridges and underbridges
- 57 The "Miyawaki method" is known for the:
- a) Restoration of coral-reef ecosystems
  - b) Harvesting wind energy on coastal areas and on sea surfaces
  - c) Development of gardens along Himalayan slopes using genetically modified flora
  - d) Creation of mini forests in urban areas
- 58 What is objective of Real Estate Regulatory Authority (RERA) Act, 2017?
- a) To displace or annul the Real Estate Regulatory Authority and entrust the ULBs with exclusive power to regulate and promote real estate sector
  - b) Deregulating Real Estate Sector and entrusting the Supreme Court with power to hear direct appeals rather than an Appellate Tribunal to increase efficiency of justice delivery
  - c) Protecting the Interests of Buyers in the Real Estate Sector
  - d) Providing land to Real Estate Agents and enabling profiteering by promoters
- 59 The Slump recommended for mass concrete is
- a) 25 mm to 50 mm
  - b) 75 mm to 100 mm
  - c) 100 cm to 125 cm
  - d) 125 cm to 150 cm



- 60 What is the legal term used to describe the government's authority to take private property for public use, provided that just compensation is paid to the property owner?
- a) Eminent domain
  - b) Exclusionary zoning
  - c) Indusionary zoning
  - d) Orwellian authority
- 61 In which ancient civilization could you find the iconic structure known as the "Parthenon", a classical example of Doric architecture?
- a) Ancient Egypt
  - b) Ancient India
  - c) Ancient Greece
  - d) Ancient China
- 62 National Building Code of India is prepared by:
- a) Bureau of Indian Standards
  - b) Ministry of Housing and Urban Affairs
  - c) Town and Country Planning Organisation
  - d) NITI Aayog
- 63 Who designed Virasat-e-Khalsa located in Anandpur Sahib?
- a) Raj Rewal
  - b) Chandrajit Singh Shah
  - c) Ranjit Sabiki
  - d) Moshe Safdie
- 64 What is/are a software modeling process/processes that architects, engineers, and contractors commonly use to collaborate on a building's design, construction and operation?
- a) ChatGPT
  - b) CIBMS and BOLD-QIT
  - c) Bus Schedule System
  - d) Building Information Modelling (BIM)
- 65 What does GRIHA rating system evaluate over building's life cycle?
- a) Environment Performance
  - b) Space Utilisation
  - c) Infrastructure and Manpower Requirement
  - d) Building Safety and serviceability
- 66 Which of the following is not a part of Kevin Lynch's performance dimensions?
- a) Vitality and Fit
  - b) Control and Access
  - c) Scale and Size
  - d) Efficiency and Justice
- 67 What standard unit may be used for measuring the brightness of light emitted by a source?

- a) Lumens
  - b) Watts
  - c) Parsec
  - d) Weber
- 68 Which of the following concepts was crucially emphasized by Lewis Mumford in urban planning?
- a) Rapid industrialization and urbanization
  - b) The unrestricted expansion of transport infrastructure
  - c) Human scale, walkable communities and cultural context in urban design
  - d) Segregation of urban neighbourhood based on income
- 69 Aerial/remote sensing and GIS (Geographic Information System) are primarily used in urban planning for:
- a) Conducting socioeconomic surveys including current employment status and housing demand
  - b) Collecting demographic data including sex ratio, worker population ratio and fertility ratio
  - c) Mapping and analyzing spatial data, including land use and environmental factors
  - d) Designing uniform architectural blueprints for specific seismic zones
- 70 Which surveying equipment is commonly used to measure distances accurately over land?
- a) A barometer
  - b) A pacemaker
  - c) A total station
  - d) An electroencephalogram
- 71 How does the concept of "imageability" relate to urban form?
- a) Imageability refers to the physical characteristics of buildings, ignoring their functionality
  - b) It is unrelated to urban form and is more about cultural identity
  - c) Imageability is about the visual and functional aspects of a city, creating a memorable urban form
  - d) Imageability is only concerned with the aesthetics of natural assets in urban areas
- 72 What is the primary goal of "watershed management"?
- a) Promoting urban infrastructural development within watersheds
  - b) Ensuring equitable piped water distribution in cities
  - c) Promoting discharges into water bodies by point sources and banning discharge from non-point sources
  - d) Preserving the quality and quantity of water resources within a specific geographic area
- 73 What does "topographic analysis" primarily involve in the context of environmental planning?
- a) Studying the effects of air pollution on topography
  - b) Analyzing the cultural and historical significance of landscapes
  - c) Evaluating the shape and elevation of the land surface
  - d) Assessing the behavior of societies in different topographic regions from 'Sustainability' perspective

- 74 What is the primary focus of the field of "demography"?
- a) The study of population genetics and heredity; including the evolution of homosapiens from the primitive man
  - b) The study of population size and distribution, as well as the factors that influence these patterns
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- a) Allocating land for parks and recreational facilities on the outskirts of cities
  - b) Designating areas for residential, commercial, industrial or other specific land uses
  - c) Identifying areas with high potential for natural disasters and taking measures for enhanced resilience
  - d) Regulating the density of the population in unplanned unauthorized societies
- 77 What is the primary goal of an effective "storm water drainage system" in urban planning?
- a) Maximizing the sewage treatment by promoting addition of reactive chemicals
  - b) Controlling water pollution from industrial sources
  - c) Managing excess rainwater and preventing flooding
  - d) Promoting water conservation in urban areas using microirrigation techniques
- 78 When planning for fire protection, what does "defensible space" refer to?
- a) A space where residents can hide during a fire
  - b) An area that is not accessible by firefighters and hence needs automatic mechanical defense
  - c) Creating a space around a structure that reduces the risk of spreading of fire
  - d) A space that is free from all vegetation in rural settings
- 79 In infrastructure planning, what does the term "smart grid" typically refer to?
- a) An advanced road network with automated traffic control
  - b) A sophisticated urban water supply system based on perpendicular distribution pipelines
  - c) An intelligent electrical grid that uses digital technology for efficient energy distribution
  - d) A network of smart transportation hubs along Industrial Corridors and Dedicated Freight Corridors
- 80 Which of the following subjects may be seen in 12th schedule of Indian Constitution?

- a) Urban Planning including Town Planning
  - b) Fire Services
  - c) Cattle Pounds
  - d) All of the above
- 81 Which architectural style is characterized by its use of pointed arches, ribbed vaults, and flying buttresses, and is often associated with medieval European cathedrals. Sainte chapelle & Notre Dame de Paris are prominent examples.
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  - c) 32
  - d) 12
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- 100 A base map of a city is drawn at a 1:10,000 scale. If a road on the map measures 5 centimeters, what is the actual road length?  
 a) 500 meters  
 b) 5,000 meters  
 c) 50,000 meters  
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- 101 In the following question, the symbols @, &, \$, # and \* are used with the following meaning as illustrated below:  
 'P \$ Q' means 'P is neither smaller than nor equal to Q'  
 'P@Q' means 'P is not greater than Q'  
 'P\* Q' means 'P is neither greater than nor smaller than Q'  
 'P& Q' means 'P is neither greater nor equal to Q'  
 'P # Q' means 'P is not smaller than Q'  
 Assuming the given statements to be true, find which of the following conclusions I, II, III and IV given below is/are definitely true.  
 Statements:  
 Z # H, B & H, K \$ B  
 Conclusions:  
 I. K \$ Z  
 II. K \* Z  
 III. K \$ H  
 IV. Z \$ B  
 a) Only I is true  
 b) Only II is true  
 c) Only I and III are true  
 d) Only IV is true

- 102 A cube is painted blue on all faces and is then cut into 125 cubes of equal size. Answer the following question based on the statement.  
How many cubes are not painted on any face?  
a) 8  
b) 16  
c) 27  
d) 36
- 103 What is the value of x when  
 $81 \times [16/25]^{x+2} \div [3/5]^{2x+4} = 144$ ?  
a) 1  
b) 0  
c) -2  
d) -1
- 104 If 7 times the 7th term of an AP is equal 11 times its 11th term, then the 18th term of the AP is  
a) 1  
b) 2  
c) 0  
d) 18

**Directions for Q 105 & 106:** For answering the following questions, use the data given in the Table below and choose the most appropriate option:

Brand	Revenue in 2011 (Rs Cr)	Growth (from 2010 to 2011)
HTC	450	99.1%
Karbonn	1,004	25.5%
LG	1,834	14.6%
Micromax	2,289	42.9%
Nokia	12,929	0.2%
RIM (Blackberry)	1,950	61.2%
Samsung	5,720	21.7%
Spice	920	-11.5%
Others	2,761	48.5%

- 105 What was the revenue of Spice in the year 2010?  
a) 825 Cr.  
b) 1040 Cr.  
c) 1022.22 Cr.  
d) 1033.33 Cr.
- 106 What is value of ratio of 2010 Revenues to 2011 Revenues for Samsung?  
a) 0.217  
b) 4.608  
c) 2.304  
d) 0.822

- 107 January 3, 2008 was Thursday. What day of the week fell on January 3, 2009?  
a) Tuesday  
b) Friday  
c) Thursday  
d) Saturday
- 108 If 4 bulbs are there in a box each of which can be defective or non defective then what is the probability that at least one bulb is non defective?  
a)  $15/16$   
b)  $1/16$   
c)  $3/4$   
d)  $1/4$
- 109 Consider three sets: Set A, Set B and Set C. The following information is given:  
Set A contains prime numbers from 1 to 10.  
Set B contains even numbers from 1 to 10.  
Set C contains multiples of 3 from 1 to 10.  
Based on this information, answer the following question:  
  
Which of the following statements is/are correct?  
1. There are 3 elements in Set A  
2. There are 4 elements in Set A  
3. There are 5 elements in Set A  
4. There is 1 element in intersection of Sets A, B and C  
5. There is no element in intersection of Sets A, B and C  
a) 1 & 4  
b) 2 & 5  
c) 3 & 4  
d) 3 & 5
- 110 Find the sum of  $0.40 + 0.43 + 0.46 + \dots + 1$   
a) 16.7  
b) 13.7  
c) 12.7  
d) 14.7
- 111 'Harrod Domar' model and 'Mahalanobis model' were related to  
a) Green Revolution  
b) Monetary policy framework for inflation targeting  
c) Five year plans  
d) Nationalization of banks
- 112 The power of the supreme court of India to decide disputes between the Centre and the states fall under its  
a) Advisory jurisdiction  
b) Appellate jurisdiction  
c) Writ Jurisdiction  
d) Original jurisdiction



- 113 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R  
 Assertion A: In most cases, invasive species take advantage of opportunities in ecosystems that are disturbed by human activity  
 Reason R: Unlike invasive species, the native species show traits, such as high reproductive rates, high dispersal rates, and high genetic variability  
 In the light of the above statements, choose the most appropriate answer from the options given below
- Both A and R are correct and R is the correct explanation of A
  - Both A and R are correct but R is not the correct explanation of A
  - A is correct but R is not correct
  - A is incorrect but R is correct
- 114 'AIRAWAT', 'Pratyush' and 'Mihir', often heard in news, are
- Cheetahs translocated from South Africa to India.
  - Elephants designated as official Mascots for 2036 Olympics
  - India's fastest Supercomputers
  - Platinum rated buildings constructed recently using 3-D printing
- 115 Which of the following events of Indian history was last to happen (chronologically)
- Komagatamaru incident
  - Announcement of partition of Bengal by Lord Curzon
  - Formation of Naujawan Bharat Sabha
  - Founding of Arya Samaj by Dayanand Saraswati
- 116 Which of the following initiatives taken by the government may help in reducing air pollution:
- PM Ujjwala Yojana
  - International Solar Alliance
  - Mission Shakti and Swadhar Greh
  - National Action Plan on climate change
- 2, 3, and 4 only
  - 1, 2, and 4 only
  - 3 and 4 only
  - 1 and 2 only
- 117 The compositions of which of the following bhakts/saints is/are part of Sri Guru Granth Sahib?
- Kabir
  - Farid
  - Surdas
  - All of the above
- 118 Which one of the following pair is correctly matched?
- | National park         | Location                    |
|-----------------------|-----------------------------|
| a) Sangalila -----    | Punjab                      |
| b) Keibul Lamjao----- | Manipur                     |
| c) Dudhwa-----        | Andaman and Nicobar islands |
| d) Dachigam-----      | Chattisgarh                 |

- 119 With respect to art and culture of India, 'Ravana Chhaya', 'Kundhei', 'Gombeyatta' and 'Putul Nautch' are forms/styles of \_\_\_\_\_
- a) Martial Dances
  - b) Traditional Theatre
  - c) Puppetry
  - d) Indo-Islamic Architecture
- 120 Consider the following statements:
- 1. Thomas Cup is awarded to the champions of One Day International Cricket.
  - 2. 2024 Summer Olympics is scheduled to take place in Sharm-el-Sheikh, Egypt.
  - 3. Dhanraj Pillay is known as the 'Wizard of Hockey' because of his remarkable performance at 1924 and 1928 Olympics.
- Which of the above statements are correct?
- a) 1 and 2 only
  - b) 3 only
  - c) 1, 2 and 3
  - d) None of the above

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# **SPACE FOR ROUGH WORK**

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# PUNJAB PUBLIC SERVICE COMMISSION

Objective Type Test (April-2024) for Recruitment to the Post of Planning Officer (Group A)  
in the Department of Town and Country Planning, Government of Punjab

READ INSTRUCTIONS BEFORE FILLING ANY DETAILS OR ATTEMPTING TO ANSWER THE QUESTIONS.

Total Questions: 120  
Time Allowed: 2 Hours

Candidate's Name \_\_\_\_\_

Father's Name \_\_\_\_\_

Date of Birth     
DD MM YYYY

OMR Response Sheet No. \_\_\_\_\_

Roll No. \_\_\_\_\_

Candidate's Signature (Please sign in the box)

Question  
Booklet Set

C

Booklet Series

## INSTRUCTIONS

1. The candidate shall NOT open this booklet till the time told to do so by the Invigilation Staff. However, in the meantime, the candidate can read these instructions carefully and subsequently fill the appropriate columns given above in CAPITAL letters. The candidate may also fill the relevant boxes 1 to 9 of the Optical Mark Reader (OMR) response sheet, supplied separately.
2. Use only blue or black **ball point pen** to fill the relevant columns on this page as well as in OMR sheet. Use of Ink pen or any other pen is not allowed.
3. Other than filling credentials/information in specific space allotted above, do not write anything else on the Test Booklet. Space for rough work is provided at the end. The candidate shall be liable for any adverse effect if the information given above is wrong or illegible or incomplete.
4. Each candidate is required to attempt 120 questions in 120 minutes, except for orthopedically/visually impaired candidates, who would be given 40 extra minutes, for marking correct responses on the OMR sheet.
5. The question paper booklet has 22 pages.
6. The candidates, when allowed to open the question paper booklet, must first check the entire booklet to confirm that the booklet has complete number of pages, the pages are printed correctly and there are no blank or torn pages. In case there is any such error in the question paper booklet then the candidate should IMMEDIATELY bring this fact to the notice of the Invigilation Staff and obtain a new booklet of the same series as given earlier.
7. The serial number of the new Question booklet, if issued for some reason, should be entered in the relevant column of the OMR. The Invigilation Staff must make necessary corrections in their record regarding the change in the serial no. of Question booklet.
8. The paper consists of total 480 Marks. Each question shall carry 4 marks. There are four options for each question and the candidate has to mark the MOST APPROPRIATE answer on the OMR response sheet.
9. There is **negative marking** (1 mark for each question) for questions wrongly answered by the candidate.
10. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers is correct. There will be same penalty, as above, to that question.
11. If Question is left blank, i.e. question remains unattempted, there will be no penalty for that question.
12. Use of Electronic/Manual Calculator is prohibited.
13. The candidate **MUST READ INSTRUCTIONS BEHIND THE OMR SHEET** before answering the questions and check that two carbon copies attached to the OMR sheet are intact.

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a) 500 meters  
b) 5,000 meters  
c) 50,000 meters  
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- 21 Which medieval city in India is famous for its urban design that reflects the principles of cosmology, with nine sectors representing the nine planets (ancient astrological zodiac) and a central palace complex?  
a) Delhi  
b) Jaipur  
c) Chennai  
d) Lucknow
- 22 Which of the following is correct regarding devolution of functions (under 12th Schedule of Indian Constitution) to Urban Local Bodies (74th Constitutional Amendment Act)?  
a) There is uniform mandatory devolution of functions to all ULBs of North India, but their devolution is optional for South Indian States  
b) 'Water Supply' and 'Roads' have been compulsorily devolved to all ULBs  
c) Devolution of functions to ULBs under the 12th Schedule is optional  
d) Town Planning has been compulsorily devolved to all ULBs in India under the Act



- 23 Which of the following is correct about TOD (Transit Oriented Development)?
- a) It focuses on encouraging car-centric transportation and isolation of residential areas from commercial areas
  - b) It aims to promote development around public transport hubs
  - c) It discourages medium to high density housing and mixed-income development
  - d) It primarily intends to promote large shopping malls and exclusive office complexes, apart from promoting sub-urban sprawl
- 24 "The volume of migration is proportional to the population of the origin and destination centres and inversely proportional to the distance between them." Which of the following models is best reflected in this statement?
- a) Stouffer's Model of Migration
  - b) Cost Benefit Model
  - c) Zipf's Gravity Model
  - d) Input-Output model
- 25 Which of the following programmes/schemes was launched for development of heritage cities like Amritsar and Ajmer?
- a) HRIDAY
  - b) SPARSH
  - c) Vibrant Villages Programme
  - d) PM AASHA
- 26 Length of a Vehicle affects
- a) Width of Traffic Lanes only
  - b) Extra width of Pavement and minimum turning radius
  - c) Width of Shoulders and parking facilities only
  - d) Clearance to be provided under structures such as overbridges and underbridges
- 27 The "Miyawaki method" is known for the:
- a) Restoration of coral-reef ecosystems
  - b) Harvesting wind energy on coastal areas and on sea surfaces
  - c) Development of gardens along Himalayan slopes using genetically modified flora
  - d) Creation of mini forests in urban areas
- 28 What is objective of Real Estate Regulatory Authority (RERA) Act, 2017?
- a) To displace or annul the Real Estate Regulatory Authority and entrust the ULBs with exclusive power to regulate and promote real estate sector
  - b) Deregulating Real Estate Sector and entrusting the Supreme Court with power to hear direct appeals rather than an Appellate Tribunal to increase efficiency of justice delivery
  - c) Protecting the Interests of Buyers in the Real Estate Sector
  - d) Providing land to Real Estate Agents and enabling profiteering by promoters
- 29 The Slump recommended for mass concrete is
- a) 25 mm to 50 mm
  - b) 75 mm to 100 mm
  - c) 100 cm to 125 cm
  - d) 125 cm to 150 cm

- 30 What is the legal term used to describe the government's authority to take private property for public use, provided that just compensation is paid to the property owner?
- a) Eminent domain
  - b) Exclusionary zoning
  - c) Indusionary zoning
  - d) Orwellian authority
- 31 In which ancient civilization could you find the iconic structure known as the "Parthenon", a classical example of Doric architecture?
- a) Ancient Egypt
  - b) Ancient India
  - c) Ancient Greece
  - d) Ancient China
- 32 National Building Code of India is prepared by:
- a) Bureau of Indian Standards
  - b) Ministry of Housing and Urban Affairs
  - c) Town and Country Planning Organisation
  - d) NITI Aayog
- 33 Who designed Virasat-e-Khalsa located in Anandpur Sahib?
- a) Raj Rewal
  - b) Chandrajit Singh Shah
  - c) Ranjit Sabiki
  - d) Moshe Safdie
- 34 What is/are a software modeling process/processes that architects, engineers, and contractors commonly use to collaborate on a building's design, construction and operation?
- a) ChatGPT
  - b) CIBMS and BOLD-QIT
  - c) Bus Schedule System
  - d) Building Information Modelling (BIM)
- 35 What does GRIHA rating system evaluate over building's life cycle?
- a) Environment Performance
  - b) Space Utilisation
  - c) Infrastructure and Manpower Requirement
  - d) Building Safety and serviceability
- 36 Which of the following is not a part of Kevin Lynch's performance dimensions?
- a) Vitality and Fit
  - b) Control and Access
  - c) Scale and Size
  - d) Efficiency and Justice
- 37 What standard unit may be used for measuring the brightness of light emitted by a source?

- a) Lumens
  - b) Watts
  - c) Parsec
  - d) Weber
- 38 Which of the following concepts was crucially emphasized by Lewis Mumford in urban planning?
- a) Rapid industrialization and urbanization
  - b) The unrestricted expansion of transport infrastructure
  - c) Human scale, walkable communities and cultural context in urban design
  - d) Segregation of urban neighbourhood based on income
- 39 Aerial/remote sensing and GIS (Geographic Information System) are primarily used in urban planning for:
- a) Conducting socioeconomic surveys including current employment status and housing demand
  - b) Collecting demographic data including sex ratio, worker population ratio and fertility ratio
  - c) Mapping and analyzing spatial data, including land use and environmental factors
  - d) Designing uniform architectural blueprints for specific seismic zones
- 40 Which surveying equipment is commonly used to measure distances accurately over land?
- a) A barometer
  - b) A pacemaker
  - c) A total station
  - d) An electroencephalogram
- 41 How does the concept of "imageability" relate to urban form?
- a) Imageability refers to the physical characteristics of buildings, ignoring their functionality
  - b) It is unrelated to urban form and is more about cultural identity
  - c) Imageability is about the visual and functional aspects of a city, creating a memorable urban form
  - d) Imageability is only concerned with the aesthetics of natural assets in urban areas
- 42 What is the primary goal of "watershed management"?
- a) Promoting urban infrastructural development within watersheds
  - b) Ensuring equitable piped water distribution in cities
  - c) Promoting discharges into water bodies by point sources and banning discharge from non-point sources
  - d) Preserving the quality and quantity of water resources within a specific geographic area
- 43 What does "topographic analysis" primarily involve in the context of environmental planning?
- a) Studying the effects of air pollution on topography
  - b) Analyzing the cultural and historical significance of landscapes
  - c) Evaluating the shape and elevation of the land surface
  - d) Assessing the behavior of societies in different topographic regions from 'Sustainability' perspective

- 44 What is the primary focus of the field of "demography"?
- a) The study of population genetics and heredity; including the evolution of homosapiens from the primitive man
  - b) The study of population size and distribution, as well as the factors that influence these patterns
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  - b) Designating areas for residential, commercial, industrial or other specific land uses
  - c) Identifying areas with high potential for natural disasters and taking measures for enhanced resilience
  - d) Regulating the density of the population in unplanned unauthorized societies
- 47 What is the primary goal of an effective "storm water drainage system" in urban planning?
- a) Maximizing the sewage treatment by promoting addition of reactive chemicals
  - b) Controlling water pollution from industrial sources
  - c) Managing excess rainwater and preventing flooding
  - d) Promoting water conservation in urban areas using microirrigation techniques
- 48 When planning for fire protection, what does "defensible space" refer to?
- a) A space where residents can hide during a fire
  - b) An area that is not accessible by firefighters and hence needs automatic mechanical defense
  - c) Creating a space around a structure that reduces the risk of spreading of fire
  - d) A space that is free from all vegetation in rural settings
- 49 In infrastructure planning, what does the term "smart grid" typically refer to?
- a) An advanced road network with automated traffic control
  - b) A sophisticated urban water supply system based on perpendicular distribution pipelines
  - c) An intelligent electrical grid that uses digital technology for efficient energy distribution
  - d) A network of smart transportation hubs along Industrial Corridors and Dedicated Freight Corridors

- 50 Which of the following subjects may be seen in 12th schedule of Indian Constitution?
- Urban Planning including Town Planning
  - Fire Services
  - Cattle Pounds
  - All of the above
- 51 A town has 16,000 existing dwelling units of which 10% are dilapidated. If the housing need is 8,700 dwelling units and the average household size is 4.5, then what is the population of the town?
- 1,11,150
  - 1,18,350
  - 64,800
  - 1,03,950
- 52 Which of the following represents the correct sequence of the mentioned stages in the Environmental Impact Assessment (EIA) process?
- Screening, Impact analysis, Decision-making, Reporting, Scoping, Mitigation, Post monitoring
  - Screening, Scoping, Impact analysis, Mitigation, Reporting, Decision-making, Post monitoring
  - Decision-making, Scoping, Reporting, Mitigation, Impact analysis, Screening and post monitoring
  - Scoping, Decision-making, Screening, Impact analysis, Reporting, Mitigation, Post monitoring
- 53 Which of the following statement is/are correct:
- The overall density of the population of a settlement is the ratio between Adult population to total built-up area.
  - The overall density of the population of a settlement is the ratio between total population to total area.
  - Sex ratio in India is defined as number of Males to 100 females.
  - Sex ratio in India is defined as number of Females to 1000 males.
- 1 and 3
  - 1 and 4
  - 2 and 3
  - 2 and 4
- 54 Which Ministry is responsible for implementing the NUTP in India?
- Ministry of Electronics and Information Technology
  - Ministry of Housing and Urban Affairs
  - Ministry of Power
  - Ministry of Road Transport & Highways
- 55 What is a common feature of neighbourhood structure in traditional societies that promotes community cohesion and social interaction?
- High-rise apartment buildings
  - Gated communities with limited access
  - Shared public spaces and courtyards
  - High-density single-family homes

- 56 What is the primary objective of Special Economic Zones (SEZs) in India?  
a) Promoting domestic consumption and increasing current account deficit  
b) Encouraging foreign direct investment (FDI)  
c) Restricting international trade  
d) Supporting agriculture over industry
- 57 The term 'COP', often heard in context of Climate Change, refers to  
a) Conference of the Parties.  
b) Convention of Pacific nations  
c) Convention of Official Partners  
d) Conference of People for Planet
- 58 According to Manual of Water Supply and Treatment, 1999 by the Ministry of Urban Development, recommended water supply level for designing schemes for cities with piped water supply where sewerage system is existing/contemplated is 135 \_\_\_\_\_  
a) million litre per capita per day  
b) litre per capita per day  
c) million litre per day  
d) m<sup>3</sup> per capita per day
- 59 Which of the following cities in Punjab is being developed as a smart city under Smart Cities Mission?  
a) Patiala  
b) Jalandhar  
c) SBS Nagar  
d) Moga
- 60 What is the minimum width of passage required for crutch users according to design requirements?  
a) 500 mm  
b) 900 mm  
c) 750 mm  
d) 300 cm
- 61 Winders are  
a) Vertical posts that hold up the hand rails  
b) Supports on either side of treads and risers  
c) Steps with equal tread and rise  
d) Angular steps used for changing direction of the stairs
- 62 As per National Building Code of India 2016, the function of an Automatic Rescue Device is to  
a) bring a stuck lift to the nearest landing level.  
b) control fire in electrical system at plenum level.  
c) regulate the escape route lighting system.  
d) trigger fire sprinkler system.
- 63 'Gopuram' refers to  
a) Water tank in South Indian temples  
b) Entrance tower or gateway  
c) Villages along the coast, constructed by Pallavas  
d) Brick dome in North Indian tombs

- 64 Choose the correct option:  
 1) Punjab Municipal Act- 1911  
 2) Punjab Regional and Town Planning and Development Act- 1995  
 3) 74th Constitutional (Amendment) Act- 1986  
 a) 1 & 2 only  
 b) 2 & 3 only  
 c) 1 & 3 only  
 d) None of the above
- 65 The measurement of a damp proof course (DPC) is usually worked out in  
 a)  $m^3$   
 b)  $m^2$   
 c) m  
 d)  $m^4$
- 66 Polyvinyl Chloride (PVC) is  
 a) A Thermosetting material  
 b) Soluble in all solvents, and hence has wide range of applications in construction and sanitation  
 c) A Thermoplastic material  
 d) A natural ductile polymer with pungent smell and high electrical conductivity
- 67 Toothing is a construction technique used primarily in  
 a) Wood construction  
 b) Steel construction  
 c) Under water RCC construction  
 d) Brick Masonry
- 68 Which among the following acronyms represents a thermal comfort index?  
 a) PMV (Predicted Mean Vote)  
 b) NDVI (Normalized Difference Vegetation Index)  
 c) DEM (Digital Elevation Model)  
 d) PCA (Principal Component Analysis)
- 69 The relationship between young's modulus of elasticity E, bulk modulus K and Poisson's ratio  $\mu$  is given by  
 a)  $E = 2K (1 - 2\mu)$   
 b)  $E = 3K (1 + 2\mu)$   
 c)  $E = 3K (1 - 2\mu)$   
 d)  $E = 2K (1 + \mu)$
- 70 Which of the following cities was the capital of the Vijayanagara Empire from around early 14<sup>th</sup> c. to mid 16<sup>th</sup> c. and is known for its extensive network of water supply and drainage systems, temples, palaces and markets?  
 a) Hampi  
 b) Mohenjodaro  
 c) Thanjavur  
 d) Warangal
- 71 When designing a building in 'Kutch' or 'Kashmir', what is the primary purpose of a base isolator?

- a) To increase the height of the building in "Flash flood and cloud burst" vulnerable zones
  - b) To reduce the overall weight of the super structure in earthquake prone area as compared to the substructure
  - c) To limit lateral movement of building during an earthquake by decoupling superstructure & substructure
  - d) To enhance natural ventilation in the building and reduce the potential seepage of rain water or ground water into the superstructure & substructure
- 72 Which of the following is most obvious implication of India's Net Zero commitment for urban transportation?
- a) Encouraging fossil fuel-powered vehicles in villages but grey hydrogen powered vehicles in cities
  - b) Bullet trains in all Tier 2 cities by 2030
  - c) Incentivizing the adoption of electric vehicles and sustainable public transportation
  - d) Diverging funds from Smart Cities Mission to AMRUT scheme
- 73 What is the primary purpose of standards and codes in architecture?
- a) To encourage unrestricted creativity in design
  - b) To establish minimum safety, health, and environmental requirements for construction
  - c) To enforce a singular architectural style for all building types to cut cost
  - d) To regulate the prices of imported construction materials
- 74 In contemporary architectural design, what is the concept of designing structures to naturally capture, store and distribute solar energy for heating, cooling and lighting?
- a) The passive approach to sustainability
  - b) The active use of fire ice / calthrates
  - c) The Global Heat Budget
  - d) Radiative Forcing
- 75 AAC (Autoclaved Aerated Concrete) is a lightweight precast concrete product. What is the primary gas-forming agent used in its production?
- a) Cinnabar
  - b) Nitrogen
  - c) Radon
  - d) Aluminum powder
- 76 In timber frame construction, what is the primary purpose of diagonal bracing or sheathing?
- a) To provide insulation
  - b) To improve soundproofing
  - c) To increase structural stability
  - d) To enhance fire resistance
- 77 During construction planning, "float" or "slack" in a project's schedule refers to:
- a) The time wasted by team members to relax and recharge
  - b) The time for materials to be delivered to the site
  - c) The free time available for team building activities
  - d) The extra time that can be allocated to each task without delaying the project



- 78 In the context of structural design, what is the significance of Hooke's Law?
- a) It defines the modulus of elasticity for steel during its 'necking' and 'buckling'
  - b) It relates stress and strain within the elastic limit for linearly elastic materials
  - c) It describes the plastic deformation of materials like rubber
  - d) It governs the design of reinforced concrete structures, especially when ultimate stresses are reached
- 79 In reinforced concrete construction, what is the primary function of stirrups or ties used in beams?
- a) To provide vertical support to the beam and promote torsion in beams
  - b) To resist shear forces in the beam
  - c) To increase the beam's flexural strength at extent of shear strength
  - d) To increase the beam's fire resistance
- 80 What does the acronym "ECBC" stand for in the context of green building design?
- a) Environmental Certification of Building Construction
  - b) Energy Conservation Building Code
  - c) Ecological Code of Building Construction
  - d) Environmentally Conscious Building Compliance
- 81 In urban design, what does the term "urban grain" refer to?
- a) The size and shape of individual buildings
  - b) The pattern of green spaces within a city
  - c) The texture of materials used in construction of ancient Indus Valley cities
  - d) The arrangement and organization of streets and blocks
- 82 In a proposed urban development project, the total land area is 10,000 square meters. The maximum allowable FAR for the area is 2.5. Calculate the maximum floor area that can be built on this land
- a) 25,000 square meters
  - b) 40,000 square meters
  - c) 4,000 square meters
  - d) 15,000 square meters
- 83 In elevator terminology, what is the "hoistway"?
- a) The automated system to tune the voltage between 24 to 44 V
  - b) The machine room at the top of the elevator shaft
  - c) The shaft or well in which the elevator car and counterweight move
  - d) The safety mechanism that stops the elevator in an emergency
- 84 In a hot and arid climate, what architectural feature/features is/are effective for providing shade and cooling the interior of a building?
- a) Large south-facing windows in place of 'jaalis'
  - b) Exposed concrete surfaces
  - c) A deep, shaded eave or overhang
  - d) All of the above
- 85 In the context of building security, what is the primary function of a "mantrap" or "sally port" system?

- a) To manage access control at a building's entrances and exits
  - b) To provide shelter and food for building occupants during emergencies
  - c) To detect fires and initiate suppression systems
  - d) Both (b) & (c)
- 86 "Shadow cities" are typically characterized by:
- a) Well-planned infrastructure and modern amenities modelled on metro cities
  - b) Informal settlements with limited or no access to essential services
  - c) High-rise skyscrapers and a dense urban fabric
  - d) Advanced transportation networks
- 87 When preparing base maps for urban planning, what is the purpose of a "contour map"?
- a) Representing land use patterns
  - b) Showing transportation and water supply networks
  - c) Depicting elevation changes in the terrain
  - d) Indicating public and private property boundaries
- 88 In road design, what is the primary purpose of a "superelevation" or "banking" of a curve on a road?
- a) To use the excavated earth locally and thus minimize the project cost
  - b) To improve drainage
  - c) To provide a smoother and safer curve for vehicles
  - d) To reduce the width of the road
- 89 What is the name of the influential book written by Jane Jacobs in 1961, which criticized the modernist planning approach and advocated for mixed-use, diverse and vibrant urban neighbourhoods?
- a) The Death and Life of Great American Cities
  - b) The City in History
  - c) The Image of the City
  - d) The Urban Revolution
- 90 In the context of housing planning, what does "housing stress identification" involve?
- a) Identifying architectural design flaws in housing projects for improving aesthetics
  - b) Assessing the psychological stress levels of residents during/before/after a disaster
  - c) Evaluating the hazard risk and vulnerability of housing to environmental disasters
  - d) Identifying areas where there is a high demand for housing but limited supply
- 91 ਸੁੱਧ ਸ਼ਬਦਾਂ ਦੇ ਜੋੜੇ ਨੂੰ ਪਛਾਣੋ:
- a) ਡੂੰਗਾ, ਸੱਭਿਯਤਾ, ਏਡੀਟਰ
  - b) ਭਿੱਝ, ਯਗ, ਅਨਬਨ
  - c) ਘਭਰਾਉਣਾ, ਵੋਹਟੀ, ਨਿਰਭਯ
  - d) ਕਾਫੀ, ਸ਼ਖ਼ਸੀਅਤ, ਚੁੰਢੀ
- 92 ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜਾ ਪਿਛੇਤਰ ਸਹੀ ਪਛਾਣਿਆ ਗਿਆ ਹੈ ?
- a) ਸ਼ਬਦਾਵਲੀ- ਆਵਲੀ
  - b) ਬਣਾਵਟ- ਟ
  - c) ਹਮਲਾਵਰ- ਆਵਰ
  - d) ਦਿਆਲੂ-ਆਲੂ

93 ਯੂਨੈਸਕੋ ਵਲੋਂ ਮਾਨਤਾ ਪ੍ਰਾਪਤ ਜੰਡਿਆਲਾ ਗੁਰੂ ਦਾ ਸਬੰਧ ਹੈ \_\_\_\_\_

- a) ਵਣਜਾਰਿਆਂ ਨਾਲ
- b) ਕਾਲਬੇਲੀਆਂ ਨਾਲ
- c) ਠਠੇਰਿਆਂ ਨਾਲ
- d) ਘੁਮਿਆਰਾਂ ਨਾਲ

94 ਅਖਾਣ ਪੂਰੀ ਕਰੋ: "ਉੱਠ ਨੀ ਨੂੰਹੇ ਨਿੱਸਲ ਹੋ, \_\_\_\_\_ ਛੱਡ ਤੇ ਚੱਕੀ ਝੋ"

- a) ਰੋਟੀ
- b) ਚਾਟੀ
- c) ਝਾੜੂ
- d) ਚਰਖਾ

95 1. ਕਸਾਈ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਕਸਾਇਣ ਹੈ।

2. ਖੱਤਰੀ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਖੱਤਰਨ ਹੈ।

3. ਪੇਂਡੂ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਪੇਂਡੀ ਹੈ।

4. ਗਾਂ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਗਾਂਵਾ ਹੈ।

5. ਜੁਗਨੂੰ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਇੱਜੜ ਹੈ।

ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿੰਨੇ ਵਾਕ ਸਹੀ ਅਤੇ ਸੁੱਧ ਹਨ?

- a) ਕੋਈ ਨਹੀਂ
- b) 1
- c) 3
- d) 4

96 'Coffee is produced in Brazil.' ਦਾ ਸਹੀ ਪੰਜਾਬੀ ਰੂਪ ਹੈ:

- a) ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ।
- b) ਕੋਫੀ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
- c) ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
- d) ਕੋਫੀ ਦਾ ਨਿਰਮਾਣ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਹੁੰਦਾ ਹੈ।

97 ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਬੁਨਿਆਦੀ ਪ੍ਰਸ਼ਨ ਪਰਮ-ਸੱਚ ਅਤੇ ਪਰਮਾਰਥ ਦੀ ਵਿਆਖਿਆ ਨਾਲ ਸੰਬੰਧ ਰੱਖਦੇ ਹਨ। ਇਨ੍ਹਾਂ ਦੋਹਾਂ ਦਾ ਆਪਸ ਵਿੱਚ ਗੂੜ੍ਹਾ ਸੰਬੰਧ ਹੈ। ਸਾਡੀਆਂ ਨਜ਼ਰਾਂ ਦੇ ਸਾਮ੍ਹਣੇ ਫੈਲਿਆ ਹੋਇਆ ਇਹ ਦ੍ਰਿਸ਼ਟਮਾਨ ਸੰਸਾਰ ਕੀ ਹੈ? ਇਸਦੀ ਹਸਤੀ ਅਤੇ ਹੋਂਦ ਦਾ ਪਰਮ-ਸੱਚ ਕੀ ਹੈ? ਇਸ ਪਰਮ-ਸੱਚ ਦਾ ਪਰਮਾਣਿਕ ਗਿਆਨ ਕਿਵੇਂ ਪ੍ਰਾਪਤ ਹੋ ਸਕਦਾ ਹੈ? ਮਨੁੱਖ ਕੀ ਹੈ? ਉਸ ਦੇ ਜੀਵਨ ਦਾ ਪਰਮ-ਮਨੋਰਥ ਕੀ ਹੈ? ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੇ ਇਸ ਦੇ ਤਿੰਨ ਉਪ-ਅਨੁਸ਼ਾਸਨਾਂ ਨੂੰ ਜਨਮ ਦਿੱਤਾ ਹੈ – ਤੱਤ-ਮੀਮਾਂਸਾ (metaphysics); ਗਿਆਨ-ਮੀਮਾਂਸਾ (epistemology) ਅਤੇ ਨੀਤੀ-ਮੀਮਾਂਸਾ (ethics)। ਭਾਰਤ ਦੀਆਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਨੇ, ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੂੰ ਆਪੋ ਆਪਣੇ ਢੰਗ ਨਾਲ ਅਤੇ ਆਪੋ ਆਪਣੇ ਦ੍ਰਿਸ਼ਟੀਕੋਣ ਤੋਂ, ਸੰਬੋਧਿਤ ਹੋਣ ਦਾ ਉਪਰਾਲਾ ਕੀਤਾ ਹੈ। ਇਨ੍ਹਾਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਦਾ ਆਪੋ ਆਪਣਾ ਵਿਵੇਕ ਅਤੇ ਤਾਰਕਿਕ ਆਧਾਰ ਹੈ। ਇੱਥੇ ਇੱਕ ਗੱਲ ਸਪਸ਼ਟ ਕਰ ਲੈਣੀ ਬਣਦੀ ਹੈ ਕਿ

ਭਾਰਤੀ ਦਰਸ਼ਨ ਤੋਂ ਭਾਵ ਭਾਰਤ ਦੀ ਕੋਈ ਇੱਕ ਪਰੰਪਰਾ ਨਹੀਂ ਸਗੋਂ ਇਸ ਦੇ ਅੰਤਰਗਤ ਇਸ ਧਰਤੀ ਉੱਤੇ ਵਿਕਸਿਤ ਹੋਈਆਂ ਸਮੂਹ ਦਾਰਸ਼ਨਿਕ ਪਰੰਪਰਾਵਾਂ ਆ ਜਾਂਦੀਆਂ ਹਨ। ਇਸ ਵਿੱਚ ਸਨਾਤਨ ਹਿੰਦੂ ਪਰੰਪਰਾ, ਬੌਧ, ਜੈਨ ਅਤੇ ਸਿੱਖ ਪਰੰਪਰਾ ਨਾਲ ਸੰਬੰਧਿਤ ਸਮੁੱਚਾ ਦਾਰਸ਼ਨਿਕ ਚਿੰਤਨ ਸ਼ਾਮਿਲ ਹੈ। ਦਰਸ਼ਨ-ਸ਼ਾਸਤਰ ਦੀਆਂ ਇਹ ਸਾਰੀਆਂ ਪਰੰਪਰਾਵਾਂ ਸਮੁੱਚੇ ਤੌਰ ਤੇ ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੀ ਵਿਰਾਟ ਪਰੰਪਰਾ ਦਾ ਨਿਰਮਾਨ ਕਰਦੀਆਂ ਹਨ।

ਉਪਰੋਕਤ ਪੈਰ੍ਹੇ ਦੇ ਆਧਾਰ 'ਤੇ ਸਹੀ ਵਿਕਲਪ ਚੁਣੋ:

ਭਾਰਤੀ ਦਰਸ਼ਨ ਵਿੱਚ ਪਰਮ-ਸੱਚ ਤੋਂ ਕੀ ਭਾਵ ਹੈ:

- a) ਸਦਾ ਸੱਚ ਬੋਲਣਾ
- b) ਜੀਵਨ ਦੇ ਮੂਲ ਦਾ ਸੱਚ
- c) ਇੱਕ ਰੱਬ
- d) ਬਹੁਗਿਣਤੀ ਵਾਲੇ ਧਰਮਾਂ ਦੀਆਂ ਪਰੰਪਰਾਵਾਂ

98 ਜੇਕਰ ਇਨ੍ਹਾਂ ਇਤਿਹਾਸਕ ਘਟਨਾਵਾਂ ਨੂੰ ਕ੍ਰਮਵਾਰ (ਸਮੇਂ ਦੇ ਆਧਾਰ ਤੇ) ਲਗਾਇਆ ਜਾਵੇ, ਤਾਂ ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜੀ ਘਟਨਾ ਆਖੀਰ ਵਿੱਚ ਆਵੇਗੀ?

I ਭੰਗਾਈ ਦੀ ਯੁੱਧ

II ਪਹਿਲਾ ਐਂਗਲੋ-ਸਿੱਖ ਯੁੱਧ

III ਅਨੰਦਪੁਰ ਸਾਹਿਬ ਦੀ ਪਹਿਲੀ ਲੜਾਈ

IV ਚਮਕੌਰ ਸਾਹਿਬ ਦੀ ਲੜਾਈ

- a) I
- b) II
- c) III
- d) IV

99 ਯੋਜਕ ਚੁਣੋ:

- a) ਦਾ, ਦੀ
- b) ਨੂੰ, ਨੇ
- c) ਅਤੇ, ਪਰ
- d) ਉੱਤੇ, ਕੋਲ

100 ਕਿਹੜਾ ਸ਼ਬਦ ਸਵਰ-ਲੇਪ ਦੀ ਮਿਸਾਲ ਨਹੀਂ ਹੈ -

- a) ਮਰੂਦ
- b) ਸ਼ਨਾਨ
- c) ਖੰਡਪਾਠ
- d) ਇਤਰਾਜ਼

101 'Harrod Domar' model and 'Mahalanobis model' were related to

- a) Green Revolution
- b) Monetary policy framework for inflation targeting
- c) Five year plans
- d) Nationalization of banks

- 102 The power of the supreme court of India to decide disputes between the Centre and the states fall under its
- Advisory jurisdiction
  - Appellate jurisdiction
  - Writ Jurisdiction
  - Original jurisdiction
- 103 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R
- Assertion A: In most cases, invasive species take advantage of opportunities in ecosystems that are disturbed by human activity
- Reason R: Unlike invasive species, the native species show traits, such as high reproductive rates, high dispersal rates, and high genetic variability
- In the light of the above statements, choose the most appropriate answer from the options given below
- Both A and R are correct and R is the correct explanation of A
  - Both A and R are correct but R is not the correct explanation of A
  - A is correct but R is not correct
  - A is incorrect but R is correct
- 104 'AIRAWAT', 'Pratyush' and 'Mihir', often heard in news, are
- Cheetahs translocated from South Africa to India.
  - Elephants designated as official Mascots for 2036 Olympics
  - India's fastest Supercomputers
  - Platinum rated buildings constructed recently using 3-D printing
- 105 Which of the following events of Indian history was last to happen (chronologically)
- Komagatamaru incident
  - Announcement of partition of Bengal by Lord Curzon
  - Formation of Naujawan Bharat Sabha
  - Founding of Arya Samaj by Dayanand Saraswati
- 106 Which of the following initiatives taken by the government may help in reducing air pollution:
- PM Ujjwala Yojana
  - International Solar Alliance
  - Mission Shakti and Swadhar Greh
  - National Action Plan on climate change
- 2, 3, and 4 only
  - 1, 2, and 4 only
  - 3 and 4 only
  - 1 and 2 only
- 107 The compositions of which of the following bhakts/saints is/are part of Sri Guru Granth Sahib?
- Kabir
  - Farid
  - Surdas
  - All of the above

- 108 Which one of the following pair is correctly matched?
- | National park         | Location                    |
|-----------------------|-----------------------------|
| a) Sangalila -----    | Punjab                      |
| b) Keibul Lamjao----- | Manipur                     |
| c) Dudhwa-----        | Andaman and Nicobar islands |
| d) Dachigam-----      | Chattisgarh                 |
- 109 With respect to art and culture of India, 'Ravana Chhaya', 'Kundhei', 'Gombeyatta' and 'Putul Nautch' are forms/styles of \_\_\_\_\_
- Martial Dances
  - Traditional Theatre
  - Puppetry
  - Indo-Islamic Architecture
- 110 Consider the following statements:
1. Thomas Cup is awarded to the champions of One Day International Cricket.
  2. 2024 Summer Olympics is scheduled to take place in Sharm-el-Sheikh, Egypt.
  3. Dhanraj Pillay is known as the 'Wizard of Hockey' because of his remarkable performance at 1924 and 1928 Olympics.
- Which of the above statements are correct?
- 1 and 2 only
  - 3 only
  - 1, 2 and 3
  - None of the above
- 111 In the following question, the symbols @, &, \$, # and \* are used with the following meaning as illustrated below:
- 'P \$ Q' means 'P is neither smaller than nor equal to Q'
- 'P@Q' means 'P is not greater than Q'
- 'P\* Q' means 'P is neither greater than nor smaller than Q'
- 'P& Q' means 'P is neither greater nor equal to Q'
- 'P # Q' means 'P is not smaller than Q'
- Assuming the given statements to be true, find which of the following conclusions I, II, III and IV given below is/are definitely true.
- Statements:
- Z # H, B & H, K \$ B
- Conclusions:
- K \$ Z
  - K \* Z
  - K \$ H
  - Z \$ B
- Only I is true
  - Only II is true
  - Only I and III are true
  - Only IV is true
- 112 A cube is painted blue on all faces and is then cut into 125 cubes of equal size. Answer the following question based on the statement.

How many cubes are not painted on any face?

- a) 8
- b) 16
- c) 27
- d) 36

113 What is the value of x when  
 $81 \times [16/25]^{x+2} \div [3/5]^{2x+4} = 144$ ?

- a) 1
- b) 0
- c) -2
- d) -1

114 If 7 times the 7th term of an AP is equal 11 times its 11th term, then the 18th term of the AP is

- a) 1
- b) 2
- c) 0
- d) 18

**Directions for Q 115 & 116:** For answering the following questions, use the data given in the Table below and choose the most appropriate option:

Brand	Revenue in 2011 (Rs Cr)	Growth (from 2010 to 2011)
HTC	450	99.1%
Karbonn	1,004	25.5%
LG	1,834	14.6%
Micromax	2,289	42.9%
Nokia	12,929	0.2%
RIM (Blackberry)	1,950	61.2%
Samsung	5,720	21.7%
Spice	920	-11.5%
Others	2,761	48.5%

115 What was the revenue of Spice in the year 2010?

- a) 825 Cr.
- b) 1040 Cr.
- c) 1022.22 Cr.
- d) 1033.33 Cr.

116 What is value of ratio of 2010 Revenues to 2011 Revenues for Samsung?

- a) 0.217
- b) 4.608
- c) 2.304
- d) 0.822

- 117 January 3, 2008 was Thursday. What day of the week fell on January 3, 2009?  
a) Tuesday  
b) Friday  
c) Thursday  
d) Saturday
- 118 If 4 bulbs are there in a box each of which can be defective or non defective then what is the probability that at least one bulb is non defective ?  
a)  $15/16$   
b)  $1/16$   
c)  $3/4$   
d)  $1/4$
- 119 Consider three sets: Set A, Set B and Set C. The following information is given:  
Set A contains prime numbers from 1 to 10.  
Set B contains even numbers from 1 to 10.  
Set C contains multiples of 3 from 1 to 10.  
Based on this information, answer the following question:  
Which of the following statements is/are correct?  
1. There are 3 elements in Set A  
2. There are 4 elements in Set A  
3. There are 5 elements in Set A  
4. There is 1 element in intersection of Sets A, B and C  
5. There is no element in intersection of Sets A, B and C  
a) 1 & 4  
b) 2 & 5  
c) 3 & 4  
d) 3 & 5
- 120 Find the sum of  $0.40 + 0.43 + 0.46 + \dots + 1$   
a) 16.7  
b) 13.7  
c) 12.7  
d) 14.7

\*\*\*\*\*



# **SPACE FOR ROUGH WORK**

# **SPACE FOR ROUGH WORK**

# PUNJAB PUBLIC SERVICE COMMISSION

Objective Type Test (April-2024) for Recruitment to the Post of Planning Officer (Group A)  
in the Department of Town and Country Planning, Government of Punjab

READ INSTRUCTIONS BEFORE FILLING ANY DETAILS OR ATTEMPTING TO ANSWER THE QUESTIONS.

Total Questions: 120  
Time Allowed: 2 Hours

Candidate's Name \_\_\_\_\_

Father's Name \_\_\_\_\_

Date of Birth     
DD MM YYYY

OMR Response Sheet No. \_\_\_\_\_

Roll No. \_\_\_\_\_

Candidate's Signature (Please sign in the box)

Question  
Booklet Set

D

Booklet Series

## INSTRUCTIONS

1. The candidate shall NOT open this booklet till the time told to do so by the Invigilation Staff. However, in the meantime, the candidate can read these instructions carefully and subsequently fill the appropriate columns given above in CAPITAL letters. The candidate may also fill the relevant boxes 1 to 9 of the Optical Mark Reader (OMR) response sheet, supplied separately.
2. Use only blue or black **ball point pen** to fill the relevant columns on this page as well as in OMR sheet. Use of Ink pen or any other pen is not allowed.
3. Other than filling credentials/information in specific space allotted above, do not write anything else on the Test Booklet. Space for rough work is provided at the end. The candidate shall be liable for any adverse effect if the information given above is wrong or illegible or incomplete.
4. Each candidate is required to attempt 120 questions in 120 minutes, except for orthopedically/visually impaired candidates, who would be given 40 extra minutes, for marking correct responses on the OMR sheet.
5. The question paper booklet has 22 pages.
6. The candidates, when allowed to open the question paper booklet, must first check the entire booklet to confirm that the booklet has complete number of pages, the pages are printed correctly and there are no blank or torn pages. In case there is any such error in the question paper booklet then the candidate should IMMEDIATELY bring this fact to the notice of the Invigilation Staff and obtain a new booklet of the same series as given earlier.
7. The serial number of the new Question booklet, if issued for some reason, should be entered in the relevant column of the OMR. The Invigilation Staff must make necessary corrections in their record regarding the change in the serial no. of Question booklet.
8. The paper consists of total 480 Marks. Each question shall carry 4 marks. There are four options for each question and the candidate has to mark the MOST APPROPRIATE answer on the OMR response sheet.
9. There is **negative marking** (1 mark for each question) for questions wrongly answered by the candidate.
10. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers is correct. There will be same penalty, as above, to that question.
11. If Question is left blank, i.e. question remains unattempted, there will be no penalty for that question.
12. Use of Electronic/Manual Calculator is prohibited.
13. The candidate **MUST READ INSTRUCTIONS BEHIND THE OMR SHEET** before answering the questions and check that two carbon copies attached to the OMR sheet are intact.

- 1 'Harrod Domar' model and 'Mahalanobis model' were related to
  - a) Green Revolution
  - b) Monetary policy framework for inflation targeting
  - c) Five year plans
  - d) Nationalization of banks
  
- 2 The power of the supreme court of India to decide disputes between the Centre and the states fall under its
  - a) Advisory jurisdiction
  - b) Appellate jurisdiction
  - c) Writ Jurisdiction
  - d) Original jurisdiction
  
- 3 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R  
 Assertion A: In most cases, invasive species take advantage of opportunities in ecosystems that are disturbed by human activity  
 Reason R: Unlike invasive species, the native species show traits, such as high reproductive rates, high dispersal rates, and high genetic variability  
 In the light of the above statements, choose the most appropriate answer from the options given below
  - a) Both A and R are correct and R is the correct explanation of A
  - b) Both A and R are correct but R is not the correct explanation of A
  - c) A is correct but R is not correct
  - d) A is incorrect but R is correct
  
- 4 'AIRAWAT', 'Pratyush' and 'Mihir', often heard in news, are
  - a) Cheetahs translocated from South Africa to India.
  - b) Elephants designated as official Mascots for 2036 Olympics
  - c) India's fastest Supercomputers
  - d) Platinum rated buildings constructed recently using 3-D printing
  
- 5 Which of the following events of Indian history was last to happen (chronologically)
  - a) Komagatamaru incident
  - b) Announcement of partition of Bengal by Lord Curzon
  - c) Formation of Naujawan Bharat Sabha
  - d) Founding of Arya Samaj by Dayanand Saraswati
  
- 6 Which of the following initiatives taken by the government may help in reducing air pollution:
  - (1) PM Ujjwala Yojana
  - (2) International Solar Alliance
  - (3) Mission Shakti and Swadhar Greh
  - (4) National Action Plan on climate change
  - a) 2, 3, and 4 only
  - b) 1, 2, and 4 only
  - c) 3 and 4 only
  - d) 1 and 2 only

- 7 The compositions of which of the following bhakts/saints is/are part of Sri Guru Granth Sahib?  
 a) Kabir  
 b) Farid  
 c) Surdas  
 d) All of the above
- 8 Which one of the following pair is correctly matched?  

National park	Location
a) Sangalila -----	Punjab
b) Keibul Lamjao-----	Manipur
c) Dudhwa-----	Andaman and Nicobar islands
d) Dachigam-----	Chattisgarh
- 9 With respect to art and culture of India, 'Ravana Chhaya', 'Kundhei', 'Gombeyatta' and 'Putul Nautch' are forms/styles of \_\_\_\_\_  
 a) Martial Dances  
 b) Traditional Theatre  
 c) Puppetry  
 d) Indo-Islamic Architecture
- 10 Consider the following statements:  
 1. Thomas Cup is awarded to the champions of One Day International Cricket.  
 2. 2024 Summer Olympics is scheduled to take place in Sharm-el-Sheikh, Egypt.  
 3. Dhanraj Pillay is known as the 'Wizard of Hockey' because of his remarkable performance at 1924 and 1928 Olympics.  
 Which of the above statements are correct?  
 a) 1 and 2 only  
 b) 3 only  
 c) 1, 2 and 3  
 d) None of the above
- 11 ਸ਼ੁੱਧ ਸ਼ਬਦਾਂ ਦੇ ਜੋੜੇ ਨੂੰ ਪਛਾਣੋ:  
 a) ਡੂੰਗਾ, ਸੱਭਿਯਤਾ, ਏਡੀਟਰ  
 b) ਭਿੱਝ, ਯਗ, ਅਨਬਨ  
 c) ਘਭਰਾਉਣਾ, ਵੌਹਟੀ, ਨਿਰਭਯ  
 d) ਕਾਫ਼ੀ, ਸ਼ਖ਼ਸੀਅਤ, ਚੁੰਢੀ
- 12 ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜਾ ਪਿਛੇਤਰ ਸਹੀ ਪਛਾਣਿਆ ਗਿਆ ਹੈ ?  
 a) ਸ਼ਬਦਾਵਲੀ- ਆਵਲੀ  
 b) ਬਣਾਵਟ- ਟ  
 c) ਹਮਲਾਵਰ- ਆਵਰ  
 d) ਦਿਆਲੂ-ਆਲੂ
- 13 ਯੂਨੈਸਕੋ ਵਲੋਂ ਮਾਨਤਾ ਪ੍ਰਾਪਤ ਜੰਡਿਆਲਾ ਗੁਰੂ ਦਾ ਸਬੰਧ ਹੈ \_\_\_\_\_  
 a) ਵਣਜਾਰਿਆਂ ਨਾਲ  
 b) ਕਾਲਬੇਲੀਆਂ ਨਾਲ  
 c) ਠਠੇਰਿਆਂ ਨਾਲ  
 d) ਘੁਮਿਆਰਾਂ ਨਾਲ

- 14 ਅਖਾਣ ਪੂਰੀ ਕਰੋ: "ਉੱਠ ਨੀ ਨੂੰਹੇ ਨਿੱਸਲ ਹੇ, \_\_\_\_\_ ਛੱਡ ਤੇ ਚੱਕੀ ਝੋ"
- ਰੋਟੀ
  - ਚਾਟੀ
  - ਝਾੜੂ
  - ਚਰਖਾ

- 15 1. ਕਸਾਈ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਕਸਾਇਣ ਹੈ।  
 2. ਖੱਤਰੀ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਖੱਤਰਨ ਹੈ।  
 3. ਪੇਂਡੂ ਸ਼ਬਦ ਦਾ ਇਸਤਰੀ ਲਿੰਗ ਪੇਂਡੀ ਹੈ।  
 4. ਗਾਂ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਗਾਂਵਾ ਹੈ।  
 5. ਜੁਗਨੂੰ ਸ਼ਬਦ ਦਾ ਬਹੁਵਚਨ ਇੱਜੜ ਹੈ।

ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿੰਨੇ ਵਾਕ ਸਹੀ ਅਤੇ ਸ਼ੁੱਧ ਹਨ?

- ਕੋਈ ਨਹੀਂ
  - 1
  - 3
  - 4
- 16 'Coffee is produced in Brazil.' ਦਾ ਸਹੀ ਪੰਜਾਬੀ ਰੂਪ ਹੈ:
- ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ।
  - ਕੋਫੀ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
  - ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਕੋਫੀ ਪੈਦਾ ਹੁੰਦੀ ਹੈ।
  - ਕੋਫੀ ਦਾ ਨਿਰਮਾਣ ਬ੍ਰਾਜ਼ੀਲ ਵਿੱਚ ਹੁੰਦਾ ਹੈ।

- 17 ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਬੁਨਿਆਦੀ ਪ੍ਰਸ਼ਨ ਪਰਮ-ਸੱਚ ਅਤੇ ਪਰਮਾਰਥ ਦੀ ਵਿਆਖਿਆ ਨਾਲ ਸੰਬੰਧ ਰੱਖਦੇ ਹਨ। ਇਨ੍ਹਾਂ ਦੋਹਾਂ ਦਾ ਆਪਸ ਵਿੱਚ ਗੂੜ੍ਹਾ ਸੰਬੰਧ ਹੈ। ਸਾਡੀਆਂ ਨਜ਼ਰਾਂ ਦੇ ਸਾਮ੍ਹਣੇ ਫੈਲਿਆ ਹੋਇਆ ਇਹ ਦ੍ਰਿਸ਼ਟਮਾਨ ਸੰਸਾਰ ਕੀ ਹੈ? ਇਸਦੀ ਹਸਤੀ ਅਤੇ ਹੋਂਦ ਦਾ ਪਰਮ-ਸੱਚ ਕੀ ਹੈ? ਇਸ ਪਰਮ-ਸੱਚ ਦਾ ਪਰਮਾਣਿਕ ਗਿਆਨ ਕਿਵੇਂ ਪ੍ਰਾਪਤ ਹੋ ਸਕਦਾ ਹੈ? ਮਨੁੱਖ ਕੀ ਹੈ? ਉਸ ਦੇ ਜੀਵਨ ਦਾ ਪਰਮ-ਮਨੋਰਥ ਕੀ ਹੈ? ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੇ ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੇ ਇਸ ਦੇ ਤਿੰਨ ਉਪ-ਅਨੁਸ਼ਾਸਨਾਂ ਨੂੰ ਜਨਮ ਦਿੱਤਾ ਹੈ – ਤੱਤ-ਮੀਮਾਂਸਾ (metaphysics); ਗਿਆਨ-ਮੀਮਾਂਸਾ (epistemology) ਅਤੇ ਨੀਤੀ-ਮੀਮਾਂਸਾ (ethics)। ਭਾਰਤ ਦੀਆਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਨੇ, ਇਨ੍ਹਾਂ ਮੂਲ ਪ੍ਰਸ਼ਨਾਂ ਨੂੰ ਆਪੇ ਆਪਣੇ ਢੰਗ ਨਾਲ ਅਤੇ ਆਪੇ ਆਪਣੇ ਦ੍ਰਿਸ਼ਟੀਕੋਣ ਤੋਂ, ਸੰਬੋਧਿਤ ਹੋਣ ਦਾ ਉਪਰਾਲਾ ਕੀਤਾ ਹੈ। ਇਨ੍ਹਾਂ ਵਿਭਿੰਨ ਦਾਰਸ਼ਨਿਕ ਸੰਪ੍ਰਦਾਵਾਂ ਦਾ ਆਪੇ ਆਪਣਾ ਵਿਵੇਕ ਅਤੇ ਤਾਰਕਿਕ ਆਧਾਰ ਹੈ। ਇੱਥੇ ਇੱਕ ਗੱਲ ਸਪਸ਼ਟ ਕਰ ਲੈਣੀ ਬਣਦੀ ਹੈ ਕਿ ਭਾਰਤੀ ਦਰਸ਼ਨ ਤੋਂ ਭਾਵ ਭਾਰਤ ਦੀ ਕੋਈ ਇੱਕ ਪਰੰਪਰਾ ਨਹੀਂ ਸਗੋਂ ਇਸ ਦੇ ਅੰਤਰਗਤ ਇਸ ਧਰਤੀ ਉੱਤੇ ਵਿਕਸਿਤ ਹੋਈਆਂ ਸਮੂਹ ਦਾਰਸ਼ਨਿਕ ਪਰੰਪਰਾਵਾਂ ਆ ਜਾਂਦੀਆਂ ਹਨ। ਇਸ ਵਿੱਚ ਸਨਾਤਨ ਹਿੰਦੂ ਪਰੰਪਰਾ, ਬੋਧ, ਜੈਨ ਅਤੇ ਸਿੱਖ ਪਰੰਪਰਾ ਨਾਲ ਸੰਬੰਧਿਤ ਸਮੁੱਚਾ ਦਾਰਸ਼ਨਿਕ ਚਿੰਤਨ ਸ਼ਾਮਿਲ ਹੈ। ਦਰਸ਼ਨ-ਸ਼ਾਸਤਰ ਦੀਆਂ ਇਹ ਸਾਰੀਆਂ ਪਰੰਪਰਾਵਾਂ ਸਮੁੱਚੇ ਤੌਰ ਤੇ ਭਾਰਤੀ ਦਰਸ਼ਨ ਦੀ ਵਿਰਾਟ ਪਰੰਪਰਾ ਦਾ ਨਿਰਮਾਨ ਕਰਦੀਆਂ ਹਨ।

ਉਪਰੋਕਤ ਪੈਰ੍ਹੇ ਦੇ ਆਧਾਰ 'ਤੇ ਸਹੀ ਵਿਕਲਪ ਚੁਣੋ:

ਭਾਰਤੀ ਦਰਸ਼ਨ ਵਿੱਚ ਪਰਮ-ਸੱਚ ਤੋਂ ਕੀ ਭਾਵ ਹੈ:

- a) ਸਦਾ ਸੱਚ ਬੋਲਣਾ  
b) ਜੀਵਨ ਦੇ ਮੂਲ ਦਾ ਸੱਚ  
c) ਇੱਕ ਰੱਬ  
d) ਬਹੁਗਿਣਤੀ ਵਾਲੇ ਧਰਮਾਂ ਦੀਆਂ ਪਰੰਪਰਾਵਾਂ
- 18 ਜੇਕਰ ਇਨ੍ਹਾਂ ਇਤਿਹਾਸਕ ਘਟਨਾਵਾਂ ਨੂੰ ਕ੍ਰਮਵਾਰ (ਸਮੇਂ ਦੇ ਅਧਾਰ ਤੇ) ਲਗਾਇਆ ਜਾਵੇ, ਤਾਂ ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਕਿਹੜੀ ਘਟਨਾ ਆਖੀਰ ਵਿੱਚ ਆਵੇਗੀ?  
I ਭੰਗਾਈ ਦੀ ਯੁੱਧ  
II ਪਹਿਲਾ ਐਂਗਲੋ-ਸਿੱਖ ਯੁੱਧ  
III ਅਨੰਦਪੁਰ ਸਾਹਿਬ ਦੀ ਪਹਿਲੀ ਲੜਾਈ  
IV ਚਮਕੌਰ ਸਾਹਿਬ ਦੀ ਲੜਾਈ  
a) I  
b) II  
c) III  
d) IV
- 19 ਯੋਜਕ ਚੁਣੋ:  
a) ਦਾ, ਦੀ  
b) ਨੂੰ, ਨੇ  
c) ਅਤੇ, ਪਰ  
d) ਉੱਤੇ, ਕੋਲ
- 20 ਕਿਹੜਾ ਸ਼ਬਦ ਸਵਰ-ਲੇਪ ਦੀ ਮਿਸਾਲ ਨਹੀਂ ਹੈ -  
a) ਮਰੂਦ  
b) ਸਨਾਨ  
c) ਖੰਡਪਾਠ  
d) ਇਤਰਾਜ਼
- 21 In the following question, the symbols @, &, \$, # and \* are used with the following meaning as illustrated below:  
'P \$ Q' means 'P is neither smaller than nor equal to Q'  
'P@Q' means 'P is not greater than Q'  
'P\* Q' means 'P is neither greater than nor smaller than Q'  
'P& Q' means 'P is neither greater nor equal to Q'  
'P # Q' means 'P is not smaller than Q'  
Assuming the given statements to be true, find which of the following conclusions I, II, III and IV given below is/are definitely true.  
Statements:  
Z # H, B & H, K \$ B  
Conclusions:  
I. K \$ Z  
II. K \* Z  
III. K \$ H  
IV. Z \$ B

- a) Only I is true  
b) Only II is true  
c) Only I and III are true  
d) Only IV is true
- 22 A cube is painted blue on all faces and is then cut into 125 cubes of equal size. Answer the following question based on the statement.  
How many cubes are not painted on any face?  
a) 8  
b) 16  
c) 27  
d) 36
- 23 What is the value of x when  
 $81 \times [16/25]^{x+2} \div [3/5]^{2x+4} = 144$ ?  
a) 1  
b) 0  
c) -2  
d) -1
- 24 If 7 times the 7th term of an AP is equal 11 times its 11th term, then the 18th term of the AP is  
a) 1  
b) 2  
c) 0  
d) 18

**Directions for Q 25 & 26:** For answering the following questions, use the data given in the Table below and choose the most appropriate option:

Brand	Revenue in 2011 (Rs Cr)	Growth (from 2010 to 2011)
HTC	450	99.1%
Karbonn	1,004	25.5%
LG	1,834	14.6%
Micromax	2,289	42.9%
Nokia	12,929	0.2%
RIM (Blackberry)	1,950	61.2%
Samsung	5,720	21.7%
Spice	920	-11.5%
Others	2,761	48.5%

- 25 What was the revenue of Spice in the year 2010?  
a) 825 Cr.  
b) 1040 Cr.  
c) 1022.22 Cr.  
d) 1033.33 Cr.



- 26 What is value of ratio of 2010 Revenues to 2011 Revenues for Samsung?  
a) 0.217  
b) 4.608  
c) 2.304  
d) 0.822
- 27 January 3, 2008 was Thursday. What day of the week fell on January 3, 2009?  
a) Tuesday  
b) Friday  
c) Thursday  
d) Saturday
- 28 If 4 bulbs are there in a box each of which can be defective or non defective then what is the probability that at least one bulb is non defective ?  
a)  $15/16$   
b)  $1/16$   
c)  $3/4$   
d)  $1/4$
- 29 Consider three sets: Set A, Set B and Set C. The following information is given:  
Set A contains prime numbers from 1 to 10.  
Set B contains even numbers from 1 to 10.  
Set C contains multiples of 3 from 1 to 10.  
Based on this information, answer the following question:  
Which of the following statements is/are correct?  
1. There are 3 elements in Set A  
2. There are 4 elements in Set A  
3. There are 5 elements in Set A  
4. There is 1 element in intersection of Sets A, B and C  
5. There is no element in intersection of Sets A, B and C  
a) 1 & 4  
b) 2 & 5  
c) 3 & 4  
d) 3 & 5
- 30 Find the sum of  $0.40 + 0.43 + 0.46 + \dots + 1$   
a) 16.7  
b) 13.7  
c) 12.7  
d) 14.7
- 31 A town has 16,000 existing dwelling units of which 10% are dilapidated If the housing need is 8,700 dwelling units and the average household size is 4.5, then what is the population of the town  
a) 1,11,150  
b) 1,18,350  
c) 64,800  
d) 1,03,950

- 32 Which of the following represents the correct sequence of the mentioned stages in the Environmental Impact Assessment (EIA) process?
- a) Screening, Impact analysis, Decision-making, Reporting, Scoping, Mitigation, Post monitoring
  - b) Screening, Scoping, Impact analysis, Mitigation, Reporting, Decision-making, Post monitoring
  - c) Decision-making, Scoping, Reporting, Mitigation, Impact analysis, Screening and post monitoring
  - d) Scoping, Decision-making, Screening, Impact analysis, Reporting, Mitigation, Post monitoring
- 33 Which of the following statement is/are correct:
1. The overall density of the population of a settlement is the ratio between Adult population to total built- up area.
  2. The overall density of the population of a settlement is the ratio between total population to total area
  3. Sex ratio in India is defined as number of Males to 100 females
  4. Sex ratio in India is defined as number of Females to 1000 males
- a) 1 and 3
  - b) 1 and 4
  - c) 2 and 3
  - d) 2 and 4
- 34 Which Ministry is responsible for implementing the NUTP in India?
- a) Ministry of Electronics and Information Technology
  - b) Ministry of Housing and Urban Affairs
  - c) Ministry of Power
  - d) Ministry of Road Transport & Highways
- 35 What is a common feature of neighbourhood structure in traditional societies that promotes community cohesion and social interaction?
- a) High-rise apartment buildings
  - b) Gated communities with limited access
  - c) Shared public spaces and courtyards
  - d) High-density single-family homes
- 36 What is the primary objective of Special Economic Zones (SEZs) in India?
- a) Promoting domestic consumption and increasing current account deficit
  - b) Encouraging foreign direct investment (FDI)
  - c) Restricting international trade
  - d) Supporting agriculture over industry
- 37 The term 'COP', often heard in context of Climate Change, refers to
- a) Conference of the Parties.
  - b) Convention of Pacific nations
  - c) Convention of Official Partners
  - d) Conference of People for Planet

- 38 According to Manual of Water Supply and Treatment, 1999 by the Ministry of Urban Development, recommended water supply level for designing schemes for cities with piped water supply where sewerage system is existing/contemplated is 135 \_\_\_\_\_  
a) million litre per capita per day  
b) litre per capita per day  
c) million litre per day  
d) m<sup>3</sup> per capita per day
- 39 Which of the following cities in Punjab is being developed as a smart city under Smart Cities Mission?  
a) Patiala  
b) Jalandhar  
c) SBS Nagar  
d) Moga
- 40 What is the minimum width of passage required for crutch users according to design requirements?  
a) 500 mm  
b) 900 mm  
c) 750 mm  
d) 300 cm
- 41 Winders are  
a) Vertical posts that hold up the hand rails  
b) Supports on either side of treads and risers  
c) Steps with equal tread and rise  
d) Angular steps used for changing direction of the stairs
- 42 As per National Building Code of India 2016, the function of an Automatic Rescue Device is to  
a) bring a stuck lift to the nearest landing level.  
b) control fire in electrical system at plenum level.  
c) regulate the escape route lighting system.  
d) trigger fire sprinkler system.
- 43 'Gopuram' refers to  
a) Water tank in South Indian temples  
b) Entrance tower or gateway  
c) Villages along the coast, constructed by Pallavas  
d) Brick dome in North Indian tombs
- 44 Choose the correct option:  
1) Punjab Municipal Act- 1911  
2) Punjab Regional and Town Planning and Development Act- 1995  
3) 74th Constitutional (Amendment) Act- 1986  
a) 1 & 2 only  
b) 2 & 3 only  
c) 1 & 3 only  
d) None of the above

- 45 The measurement of a damp proof course (DPC) is usually worked out in  
a)  $m^3$   
b)  $m^2$   
c) m  
d)  $m^4$
- 46 Polyvinyl Chloride (PVC) is  
a) A Thermosetting material  
b) Soluble in all solvents, and hence has wide range of applications in construction and sanitation  
c) A Thermoplastic material  
d) A natural ductile polymer with pungent smell and high electrical conductivity
- 47 Toothing is a construction technique used primarily in  
a) Wood construction  
b) Steel construction  
c) Under water RCC construction  
d) Brick Masonry
- 48 Which among the following acronyms represents a thermal comfort index?  
a) PMV (Predicted Mean Vote)  
b) NDVI (Normalized Difference Vegetation Index)  
c) DEM (Digital Elevation Model)  
d) PCA (Principal Component Analysis)
- 49 The relationship between young's modulus of elasticity E, bulk modulus K and Poisson's ratio  $\mu$  is given by  
a)  $E = 2K (1 - 2\mu)$   
b)  $E = 3K (1 + 2\mu)$   
c)  $E = 3K (1 - 2\mu)$   
d)  $E = 2K (1 + \mu)$
- 50 Which of the following cities was the capital of the Vijayanagara Empire from around early 14<sup>th</sup> c. to mid 16<sup>th</sup> c. and is known for its extensive network of water supply and drainage systems, temples, palaces and markets?  
a) Hampi  
b) Mohenjodaro  
c) Thanjavur  
d) Warangal
- 51 When designing a building in 'Kutch' or 'Kashmir', what is the primary purpose of a base isolator?  
a) To increase the height of the building in "Flash flood and cloud burst" vulnerable zones  
b) To reduce the overall weight of the super structure in earthquake prone area as compared to the substructure  
c) To limit lateral movement of building during an earthquake by decoupling superstructure & substructure  
d) To enhance natural ventilation in the building and reduce the potential seepage of rain water or ground water into the superstructure & substructure

- 52 Which of the following is most obvious implication of India's Net Zero commitment for urban transportation?
- a) Encouraging fossil fuel-powered vehicles in villages but grey hydrogen powered vehicles in cities
  - b) Bullet trains in all Tier 2 cities by 2030
  - c) Incentivizing the adoption of electric vehicles and sustainable public transportation
  - d) Diverging funds from Smart Cities Mission to AMRUT scheme
- 53 What is the primary purpose of standards and codes in architecture?
- a) To encourage unrestricted creativity in design
  - b) To establish minimum safety, health, and environmental requirements for construction
  - c) To enforce a singular architectural style for all building types to cut cost
  - d) To regulate the prices of imported construction materials
- 54 In contemporary architectural design, what is the concept of designing structures to naturally capture, store and distribute solar energy for heating, cooling and lighting?
- a) The passive approach to sustainability
  - b) The active use of fire ice / calthrates
  - c) The Global Heat Budget
  - d) Radiative Forcing
- 55 AAC (Autoclaved Aerated Concrete) is a lightweight precast concrete product. What is the primary gas-forming agent used in its production?
- a) Cinnabar
  - b) Nitrogen
  - c) Radon
  - d) Aluminum powder
- 56 In timber frame construction, what is the primary purpose of diagonal bracing or sheathing?
- a) To provide insulation
  - b) To improve soundproofing
  - c) To increase structural stability
  - d) To enhance fire resistance
- 57 During construction planning, "float" or "slack" in a project's schedule refers to:
- a) The time wasted by team members to relax and recharge
  - b) The time for materials to be delivered to the site
  - c) The free time available for team building activities
  - d) The extra time that can be allocated to each task without delaying the project
- 58 In the context of structural design, what is the significance of Hooke's Law?
- a) It defines the modulus of elasticity for steel during its 'necking' and 'buckling'
  - b) It relates stress and strain within the elastic limit for linearly elastic materials
  - c) It describes the plastic deformation of materials like rubber
  - d) It governs the design of reinforced concrete structures, especially when ultimate stresses are reached

- 59 In reinforced concrete construction, what is the primary function of stirrups or ties used in beams?
- a) To provide vertical support to the beam and promote torsion in beams
  - b) To resist shear forces in the beam
  - c) To increase the beam's flexural strength at extent of shear strength
  - d) To increase the beam's fire resistance
- 60 What does the acronym "ECBC" stand for in the context of green building design?
- a) Environmental Certification of Building Construction
  - b) Energy Conservation Building Code
  - c) Ecological Code of Building Construction
  - d) Environmentally Conscious Building Compliance
- 61 In urban design, what does the term "urban grain" refer to?
- a) The size and shape of individual buildings
  - b) The pattern of green spaces within a city
  - c) The texture of materials used in construction of ancient Indus Valley cities
  - d) The arrangement and organization of streets and blocks
- 62 In a proposed urban development project, the total land area is 10,000 square meters. The maximum allowable FAR for the area is 2.5. Calculate the maximum floor area that can be built on this land
- a) 25,000 square meters
  - b) 40,000 square meters
  - c) 4,000 square meters
  - d) 15,000 square meters
- 63 In elevator terminology, what is the "hoistway"?
- a) The automated system to tune the voltage between 24 to 44 V
  - b) The machine room at the top of the elevator shaft
  - c) The shaft or well in which the elevator car and counterweight move
  - d) The safety mechanism that stops the elevator in an emergency
- 64 In a hot and arid climate, what architectural feature/features is/are effective for providing shade and cooling the interior of a building?
- a) Large south-facing windows in place of 'jaalis'
  - b) Exposed concrete surfaces
  - c) A deep, shaded eave or overhang
  - d) All of the above
- 65 In the context of building security, what is the primary function of a "mantrap" or "sally port" system?
- a) To manage access control at a building's entrances and exits
  - b) To provide shelter and food for building occupants during emergencies
  - c) To detect fires and initiate suppression systems
  - d) Both (b) & (c)
- 66 "Shadow cities" are typically characterized by:
- a) Well-planned infrastructure and modern amenities modelled on metro cities
  - b) Informal settlements with limited or no access to essential services
  - c) High-rise skyscrapers and a dense urban fabric
  - d) Advanced transportation networks

- 67 When preparing base maps for urban planning, what is the purpose of a "contour map"?
- a) Representing land use patterns
  - b) Showing transportation and water supply networks
  - c) Depicting elevation changes in the terrain
  - d) Indicating public and private property boundaries
- 68 In road design, what is the primary purpose of a "superelevation" or "banking" of a curve on a road?
- a) To use the excavated earth locally and thus minimize the project cost
  - b) To improve drainage
  - c) To provide a smoother and safer curve for vehicles
  - d) To reduce the width of the road
- 69 What is the name of the influential book written by Jane Jacobs in 1961, which criticized the modernist planning approach and advocated for mixed-use, diverse and vibrant urban neighbourhoods?
- a) The Death and Life of Great American Cities
  - b) The City in History
  - c) The Image of the City
  - d) The Urban Revolution
- 70 In the context of housing planning, what does "housing stress identification" involve?
- a) Identifying architectural design flaws in housing projects for improving aesthetics
  - b) Assessing the psychological stress levels of residents during/before/after a disaster
  - c) Evaluating the hazard risk and vulnerability of housing to environmental disasters
  - d) Identifying areas where there is a high demand for housing but limited supply
- 71 Which medieval city in India is famous for its urban design that reflects the principles of cosmology, with nine sectors representing the nine planets (ancient astrological zodiac) and a central palace complex?
- a) Delhi
  - b) Jaipur
  - c) Chennai
  - d) Lucknow
- 72 Which of the following is correct regarding devolution of functions (under 12th Schedule of Indian Constitution) to Urban Local Bodies (74th Constitutional Amendment Act)?
- a) There is uniform mandatory devolution of functions to all ULBs of North India, but their devolution is optional for South Indian States
  - b) 'Water Supply' and 'Roads' have been compulsorily devolved to all ULBs
  - c) Devolution of functions to ULBs under the 12th Schedule is optional
  - d) Town Planning has been compulsorily devolved to all ULBs in India under the Act
- 73 Which of the following is correct about TOD (Transit Oriented Development)?
- a) It focuses on encouraging car-centric transportation and isolation of residential areas from commercial areas
  - b) It aims to promote development around public transport hubs
  - c) It discourages medium to high density housing and mixed-income development
  - d) It primarily intends to promote large shopping malls and exclusive office complexes, apart from promoting sub-urban sprawl

- 74 "The volume of migration is proportional to the population of the origin and destination centres and inversely proportional to the distance between them." Which of the following models is best reflected in this statement?
- a) Stouffer's Model of Migration
  - b) Cost Benefit Model
  - c) Zipf's Gravity Model
  - d) Input-Output model
- 75 Which of the following programmes/schemes was launched for development of heritage cities like Amritsar and Ajmer?
- a) HRIDAY
  - b) SPARSH
  - c) Vibrant Villages Programme
  - d) PM AASHA
- 76 Length of a Vehicle affects
- a) Width of Traffic Lanes only
  - b) Extra width of Pavement and minimum turning radius
  - c) Width of Shoulders and parking facilities only
  - d) Clearance to be provided under structures such as overbridges and underbridges
- 77 The "Miyawaki method" is known for the:
- a) Restoration of coral-reef ecosystems
  - b) Harvesting wind energy on coastal areas and on sea surfaces
  - c) Development of gardens along Himalayan slopes using genetically modified flora
  - d) Creation of mini forests in urban areas
- 78 What is objective of Real Estate Regulatory Authority (RERA) Act, 2017?
- a) To displace or annul the Real Estate Regulatory Authority and entrust the ULBs with exclusive power to regulate and promote real estate sector
  - b) Deregulating Real Estate Sector and entrusting the Supreme Court with power to hear direct appeals rather than an Appellate Tribunal to increase efficiency of justice delivery
  - c) Protecting the Interests of Buyers in the Real Estate Sector
  - d) Providing land to Real Estate Agents and enabling profiteering by promoters
- 79 The Slump recommended for mass concrete is
- a) 25 mm to 50 mm
  - b) 75 mm to 100 mm
  - c) 100 cm to 125 cm
  - d) 125 cm to 150 cm
- 80 What is the legal term used to describe the government's authority to take private property for public use, provided that just compensation is paid to the property owner?
- a) Eminent domain
  - b) Exclusionary zoning
  - c) Indusionary zoning
  - d) Orwellian authority



- 81 In which ancient civilization could you find the iconic structure known as the "Parthenon", a classical example of Doric architecture?
- a) Ancient Egypt
  - b) Ancient India
  - c) Ancient Greece
  - d) Ancient China
- 82 National Building Code of India is prepared by:
- a) Bureau of Indian Standards
  - b) Ministry of Housing and Urban Affairs
  - c) Town and Country Planning Organisation
  - d) NITI Aayog
- 83 Who designed Virasat-e-Khalsa located in Anandpur Sahib?
- a) Raj Rewal
  - b) Chandrajit Singh Shah
  - c) Ranjit Sabiki
  - d) Moshe Safdie
- 84 What is/are a software modeling process/processes that architects, engineers, and contractors commonly use to collaborate on a building's design, construction and operation?
- a) ChatGPT
  - b) CIBMS and BOLD-QIT
  - c) Bus Schedule System
  - d) Building Information Modelling (BIM)
- 85 What does GRIHA rating system evaluate over building's life cycle?
- a) Environment Performance
  - b) Space Utilisation
  - c) Infrastructure and Manpower Requirement
  - d) Building Safety and serviceability
- 86 Which of the following is not a part of Kevin Lynch's performance dimensions?
- a) Vitality and Fit
  - b) Control and Access
  - c) Scale and Size
  - d) Efficiency and Justice
- 87 What standard unit may be used for measuring the brightness of light emitted by a source?
- a) Lumens
  - b) Watts
  - c) Parsec
  - d) Weber
- 88 Which of the following concepts was crucially emphasized by Lewis Mumford in urban planning?

- a) Rapid industrialization and urbanization
  - b) The unrestricted expansion of transport infrastructure
  - c) Human scale, walkable communities and cultural context in urban design
  - d) Segregation of urban neighbourhood based on income
- 89 Aerial/remote sensing and GIS (Geographic Information System) are primarily used in urban planning for:
- a) Conducting socioeconomic surveys including current employment status and housing demand
  - b) Collecting demographic data including sex ratio, worker population ratio and fertility ratio
  - c) Mapping and analyzing spatial data, including land use and environmental factors
  - d) Designing uniform architectural blueprints for specific seismic zones
- 90 Which surveying equipment is commonly used to measure distances accurately over land?
- a) A barometer
  - b) A pacemaker
  - c) A total station
  - d) An electroencephalogram
- 91 How does the concept of "imageability" relate to urban form?
- a) Imageability refers to the physical characteristics of buildings, ignoring their functionality
  - b) It is unrelated to urban form and is more about cultural identity
  - c) Imageability is about the visual and functional aspects of a city, creating a memorable urban form
  - d) Imageability is only concerned with the aesthetics of natural assets in urban areas
- 92 What is the primary goal of "watershed management"?
- a) Promoting urban infrastructural development within watersheds
  - b) Ensuring equitable piped water distribution in cities
  - c) Promoting discharges into water bodies by point sources and banning discharge from non-point sources
  - d) Preserving the quality and quantity of water resources within a specific geographic area
- 93 What does "topographic analysis" primarily involve in the context of environmental planning?
- a) Studying the effects of air pollution on topography
  - b) Analyzing the cultural and historical significance of landscapes
  - c) Evaluating the shape and elevation of the land surface
  - d) Assessing the behavior of societies in different topographic regions from 'Sustainability' perspective
- 94 What is the primary focus of the field of "demography"?
- a) The study of population genetics and heredity; including the evolution of homosapiens from the primitive man
  - b) The study of population size and distribution, as well as the factors that influence these patterns
  - c) The study of cultural practices within different populations, including art and architecture
  - d) The study of international relations and diplomacy, in context of Public Health Emergencies of International Concern

- 95 In population studies, what does "dependency ratio" indicate about a population?
- a) The percentage of the population that is seasonally employed (and contributing to the economy), to the total population
  - b) The ratio of children and elderly individuals to the working-age population
  - c) The percentage of the population that depends on government subsidy for food and fuel
  - d) The ratio of unindustrialized rural population to industrialized urban population
- 96 In urban planning, what does "land use zoning" refer to in the context of planning urban networks and services?
- a) Allocating land for parks and recreational facilities on the outskirts of cities
  - b) Designating areas for residential, commercial, industrial or other specific land uses
  - c) Identifying areas with high potential for natural disasters and taking measures for enhanced resilience
  - d) Regulating the density of the population in unplanned unauthorized societies
- 97 What is the primary goal of an effective "storm water drainage system" in urban planning?
- a) Maximizing the sewage treatment by promoting addition of reactive chemicals
  - b) Controlling water pollution from industrial sources
  - c) Managing excess rainwater and preventing flooding
  - d) Promoting water conservation in urban areas using microirrigation techniques
- 98 When planning for fire protection, what does "defensible space" refer to?
- a) A space where residents can hide during a fire
  - b) An area that is not accessible by firefighters and hence needs automatic mechanical defense
  - c) Creating a space around a structure that reduces the risk of spreading of fire
  - d) A space that is free from all vegetation in rural settings
- 99 In infrastructure planning, what does the term "smart grid" typically refer to?
- a) An advanced road network with automated traffic control
  - b) A sophisticated urban water supply system based on perpendicular distribution pipelines
  - c) An intelligent electrical grid that uses digital technology for efficient energy distribution
  - d) A network of smart transportation hubs along Industrial Corridors and Dedicated Freight Corridors
- 100 Which of the following subjects may be seen in 12th schedule of Indian Constitution?
- a) Urban Planning including Town Planning
  - b) Fire Services
  - c) Cattle Pounds
  - d) All of the above
- 101 Which architectural style is characterized by its use of pointed arches, ribbed vaults, and flying buttresses, and is often associated with medieval European cathedrals. Sainte chapelle & Notre Dame de Paris are prominent examples.

- a) Neoclassical
  - b) Gothic
  - c) Baroque
  - d) Renaissance
- 102 What term refers to the inbuilt self-regulating mechanism in natural ecosystems?
- a) Allelopathy
  - b) Homeostatic mechanism
  - c) Ecological niche
  - d) Symbiosis
- 103 Brasília, the capital city of Brazil, is known for its modernist urban design and was planned by which architect?
- a) Oscar Niemeyer
  - b) Buckminster Fuller
  - c) Frank Lloyd Wright
  - d) Le Corbusier
- 104 The roadway portion designed and constructed for vehicular movement is specifically called:
- a) Right of Way
  - b) Carriage Way
  - c) Kerb
  - d) Culvert
- 105 Which of the following urban theorists proposed the Concentric Zone Theory in 1925, based on his observation of the spatial patterns of Chicago?
- a) Ernest Burgess
  - b) Homer Hoyt
  - c) Chauncy Harris
  - d) Peter Calthorpe
- 106 Which of the following is a type of physical survey that involves measuring the dimensions, boundaries and features of a land parcel or a building?
- a) Topographic survey
  - b) Cadastral survey
  - c) Bathymetric survey
  - d) Environmental survey
- 107 Which of the following is/are example/examples of Land use – Transport Integration Model
- a) Gravity and Logit Models
  - b) Logit and Henry Models
  - c) Lowry Model
  - d) Gravity and Henry Models
- 108 As per the IRC Standards, grade separated intersection is justified when the total traffic of all the arms of intersection exceeds

- a) 10,000 PCU/Hr
  - b) 1,00,000 PCU/Hr
  - c) 1,000 PCU/Hr
  - d) 100 PCU/Hr
- 109 What is the number of conflict points in a four arm non signalized intersection?
- a) 24
  - b) 36
  - c) 32
  - d) 12
- 110 Which of the following is incorrect?
- a) Intersection Design does not depend upon Land Use and Right of way
  - b) Intersection Design depends only on Socio-Economic profile of users
  - c) Accident Frequency does not affect Intersection Design at all
  - d) All of the above
- 111 The Concept of 'Ekistics' was propagated by
- a) Michelangelo
  - b) Constantine Doxiadis
  - c) Patrick Geddes
  - d) Alberti
- 112 V7 concept given by Le Corbusier refers to
- a) Blue green infrastructure (Wetlands, lakes, etc)
  - b) Housing typologies
  - c) Earthquake resistant architecture
  - d) Hierarchy of roads
- 113 Theory of Urbanism as a way of life was propounded by
- a) Louis Wirth
  - b) Lewis Mumford
  - c) Louis Cassello
  - d) Lewis Walter
- 114 Constitution of a 'District Planning Committee' has been provided in
- a) Article 243 ZD of Indian Constitution
  - b) Part IV of Indian Constitution
  - c) Article 239 AA of Indian Constitution
  - d) Schedule 9 of Indian Constitution
- 115 World Happiness Report is published by \_\_\_\_\_
- a) 'UN High Commissioner for Refugees' in association with 'OECD'
  - b) 'Institute for Economics and Peace' in association with 'World Bank'
  - c) 'Human Rights First' in association with 'Reporters without Borders'
  - d) UN Sustainable Development Solutions Network

- 116 The author of the book Regional Sociology (1926) is
- a) Charles J. Galpin
  - b) Radhakamal Mukerjee
  - c) John H. von Thunen
  - d) Rupert B. Vance
- 117 Wastewater from different sources like kitchens, wash basins and bathrooms is called \_\_\_\_\_
- a) C & D waste
  - b) Garbage
  - c) Sullage
  - d) Radioactive discharge
- 118 When the organic matter present in the sanitary landfill decomposes, it primarily generates –
- a) Chlorofluorocarbons
  - b) Nitrogen and Neon
  - c) Hydrogen and Helium
  - d) Methane
- 119 Urban Roadways in India are classified as:
- a) Arterial, Sub- arterial, collector and local streets
  - b) Primary, Secondary and Tertiary roads
  - c) NH, SH, ODR, MDR
  - d) Paved roads, Unpaved Roads and Expressways
- 120 A base map of a city is drawn at a 1:10,000 scale. If a road on the map measures 5 centimeters, what is the actual road length?
- a) 500 meters
  - b) 5,000 meters
  - c) 50,000 meters
  - d) 2,000 meters

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# **SPACE FOR ROUGH WORK**

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