

UFP Admission Test - Sample Questions

These are only illustrative samples for general guidance and do not constitute or reflect the actual questions for the admissions test.

Section 1: Reading and Comprehension

Read the passage below and answer the questions that follow.

An excerpt from **‘A dive into sanitation solutions: processing, managing and treating used water’**

Where does the used water from our homes go?

It should go into sanitation systems designed to contain, convey, treat, and either dispose of or reuse the used water (given its value as a resource, the term ‘used water’ is preferred over ‘wastewater’) – ensuring good public health and reducing environmental pollution. While rudimentary sanitation was introduced by ancient civilisations around 4000 BC, the modern sanitation system was built in London around the 1800s.

What are the types of sanitation systems?

In rural areas or spacious urban residences, used water goes into on-site sanitation systems (OSS), connected below ground to toilets. These include twin pits and septic tanks. These systems serve as collection and storage structures that passively treat the used water and dispose of the liquid into the surrounding soil. Twin pits are two pits separated by at least one metre. The pits, used alternatively, have porous walls that allow the liquid part of used water to soak into the ground while solids collect and degrade at the bottom of the pit. When one pit reaches capacity, it is covered and left unused for two years until its contents are dry, pathogen-free, and safe for reuse. In conditions, such as areas with rocky soil where water percolates slowly, septic tanks along with pits or other forms of soakaways are used. Septic tanks are watertight; as used water flows through the tank, solids settle at the bottom, while scum – mostly oil

and grease – floats to the top. The clear liquid is disposed of in the surrounding soil through pits that are like twin pits or in a longer, shallower trench. In septic tanks, the accumulated faecal sludge and scum must be removed at regular intervals. This is done using trucks equipped with vacuum pumps that suck the faecal sludge out and transport it to treatment facilities called faecal sludge treatment plants (FSTPs). Conversely, in densely populated urban areas that lack space within properties, an underground network of pipes – a.k.a. sewers – collects and conveys the used water to treatment facilities.

This network of interconnected pipes transports used water from toilets, bathrooms, kitchens to treatment facilities by gravity or with the help of pumps. Sewers have machine-holes for maintenance and to remove blockages. (Machine-holes is a better term than ‘manholes’, which is inappropriate since the law prohibits manual cleaning exercises.)

Q 1. What is the preferred term for 'wastewater' as mentioned in this piece?

- Polluted water
- Dirty water
- Contaminated water
- **Used water**

Q 2. When was modern sanitation introduced according to the authors?

- Around 4000 BC
- In the 1600s
- **Around the 1800s**
- In the 1900s

Q 3. Where was the modern sanitation system introduced?

- India
- Rome
- Greece
- **London**

Q 4. In rural areas and in spacious urban residences, what types of sanitation systems are used?

- Water treatment plants
- **On-site sanitation systems**
- Sewers and drains
- Recycling units

Q 5. In a twin-pit system, when one pit reaches capacity, it is covered and left unused for how many years?

- One year
- **Two years**
- Three years
- It is permanently sealed

Q 6. 'Sewers have machine-holes for maintenance and to remove blockages'. The authors prefer the term machine holes to man-holes for which reason?

- **Manholes are inappropriate since the law prohibits manual cleaning exercises**
- Manholes have been replaced by machine holes in the age of technology
- The term manholes is used more commonly for on-site sanitation systems
- Manholes are technically different from machine holes

Q 7. In what type of areas are sewers primarily used, according to the article?

- Rural areas with spacious residences
- **Densely populated urban areas**
- Regions with rocky soil
- Areas near water bodies

Q 8. What is the role of sewers in the sanitation system?

- **Collects and conveys the used water to treatment facilities**
- To store used water temporarily

- To treat used water on-site
- To recycle used water into drinking water

Q 9. What is the full form of FSTPs?

- **Faecal Sludge Treatment Plants**
- Faecal Septage Treatment Plant
- Full Scale Treatment Plant
- Final Solid Treatment Plant

Q 10. Why do sewers have manholes?

- For disposal of sewage
- For new connections to the system
- **For maintenance and to remove blockages**
- All of the above

Section 2: Quantitative & Logical Reasoning

Q 1. A small survey interviewed 200 individuals in a city, collecting information on migration. 40% of the respondents said they are migrants. If 50% of the respondents who identified as migrants moved from rural areas, how many individuals migrated from rural areas?

- 20
- 50
- **40**
- Not enough information provided

Q 2. Two districts A and B have the same population of 15 lakhs. On 1st May 2021, suppose district A had 25,000 COVID-19 cases while district B had 10,000 cases, as identified by RT-PCR tests done in authorised labs. The test positivity ratio was 10% in district A and 30% in district B. Which of the following statements is true?

- The tests in district B are of lower accuracy
- **District A may be doing more extensive testing than district B**

- District A is testing only symptomatic contacts of confirmed cases, which district B is testing much more widely.
- District A administration has been completely ineffective in containing the spread of the disease, while district B has done a good job.

Use the table below to answer questions Q03 to Q07.

S. No.	Year	Total Population (In Lakh)			Sex Ratio	Population Density	Decadal Growth Rate (%)	% of Urban population in Total population
		Male	Female	Total				
1	1901	1207.9	1173.6	2384	972	77	N.A	10.85
2	1911	1283.9	1237.1	2520.9	964	82	5.75	10.29
3	1921	1285.5	1227.7	2513.2	955	81	-0.31	11.18
4	1931	1429.3	1357.9	2789.8	950	90	11.00	11.99
5	1941	1636.9	1546.9	3186.6	945	103	14.22	13.86
6	1951	1855.3	1755.6	3610.9	946	117	13.31	17.29
7	1961	2262.9	2129.4	4392.3	941	142	21.64	17.97
8	1971	2840.5	2641.1	5481.6	930	177	24.80	19.91
9	1981	3533.7	3299.5	6833.3	934	216	24.66	23.33
10	1991	4393.6	4070.6	8464.2	926	267	23.87	25.70
11	2001	5322.2	4965.1	10287.4	933	325	21.54	27.81
12	2011	6232.7	5875.8	12108.5	943	382	17.70	31.14

Q 3. How much has the population grown between 1901 and 2011 in India (in numbers)?

- **9724.5 lakhs**
- 9724.5 crores
- 4702.2 lakhs
- 4702.2 crores

Q 4. Between which decadal years has the sex ratio improved the most?

- 1941-1951
- 1961-1971
- 1991-2001
- **2001-2011**

Q 5. What should replace p, q, and r to calculate the decadal growth rate (%) between 2001 and 2011. Decadal growth rate = $100 \times (p - q)/r = 17.7\%$

- p = 10287.4 ,q = 12108.5, r = 12108.5
- **p = 12108.5, q = 10287.4 , r = 10287.4**
- p = 21.54, q = 17.7, r = 17.7
- p = 17.7, q = 21.54, r = 21.54

Q 6. In the year 2011, approximately how many people lived in urban areas?

- 2140 lakhs
- **3770 lakhs**
- 2860 lakhs
- 2200 lakhs

Q7. “The population density is highest in the census year 2011.” What can we infer from this statement?

- Census 2011 observes the largest number of people living in urban areas among all census years since 1901.
- Census 2011 observes the highest growth in sex ratio since 1901.
- **Census 2011 observes more people living per unit area than any other census year since 1901.**
- Census 2011 shows that the growth in towns and cities are concentrating to their centres, resulting in the densest urban areas compared to any year since 1901.

Q 8. A person doing the house listing for census has been assigned one enumeration block. She goes east from the starting point and walks 700 metres, then takes a right turn and walks another 600 metres. With reference to the starting point, which direction is she in at this point?

- South
- North
- **South-East**
- North-East

Q 9. In a particular year, Bengaluru received 1000 mm of rainfall. It was reported that this value is the 75th percentile of all recorded annual rainfall numbers for the city. What does this mean?

- **25% of the years in the data had an annual rainfall equal to or higher than 1000 mm.**
- 1000 mm is the 75% of the maximum historical rainfall in the city.
- The average annual rainfall in Bengaluru is 750 mm.
- That year, the city got non-zero values of rainfall on 75% of the days.

Q 10. A city plans to increase its water supply by 20% to support a growing population. Assuming a per capita use of 135 litres per day, the current supply is 540,000 litres per day, what will the new total daily water supply be?

- **648,000 litres**
- 650,000 litres
- 660,000 litres
- 700,000 litres

Section 3: Urban Domain and General Awareness Questions

Q 1. Rural areas represent a dominant number of parliamentary seats in the Lok Sabha, far outnumbering urban areas.

- True
- False

Q 2. Select the Biosphere Reserve(s) in India which is/are listed in the 'Man and the Biosphere' program of UNESCO. (Select ALL that apply.)

- **The Sunderbans**
- Sena Oura
- Majang Forest
- **The Gulf of Mannar**

Q 3. Select the options that are listed among the Sustainable Development Goals as articulated by the United Nations. (Select ALL that apply.)

- Globalisation and Free Trade
- **Sustainable Cities and Communities**
- Protection of Indigenous Culture and Architecture
- **Good health and well-being**

Q 4. Which one of the following is NOT an ongoing national urban mission?

- AMRUT
- Smart Cities
- HRIDAY
- **JNNURM**

Q 5. Which one of the following is NOT a land use zone?

- Industrial zone
- Agriculture zone
- **Heritage zone**
- Commercial zone

Q 6. The rate of urbanisation in a country can increase due to the following factors.

Select the option that does NOT apply.

- Rural to urban migration
- Expansion of urban boundaries
- **Growth in the farm economy**
- Natural increase of urban population

Q 7. What is India's national health insurance scheme called?

- **Ayushman Bharat**
- National Rural Health Mission
- Janani Suraksha Yojana
- None of the above

Q 8. Atal Mission for Urban Rejuvenation and Transformation (AMRUT) is an infrastructure program of the Government of India. It does NOT focus on:

- Water
- Stormwater drainage
- Parks
- **Electricity**