

CII – iPATE 1.0 (2020)

Computer Based PAN India Examination

Category: GRADUATE ENGINEER

Engineering Discipline: ARCHITECTURE & PLANNING

Question Paper Structure

| Question Nos. | Sections & Topics | | Marks |
|---------------|--|---|------------|
| 1 to 20 | Section I : Cognitive Abilities | <ul style="list-style-type: none">Quantitative AptitudeAnalytical ReasoningData InterpretationEnglish Communication | 20 |
| 21 to 40 | Section II : Professional Abilities | <ul style="list-style-type: none">Project ManagementHealth, Safety & Risk ManagementEnvironmental LawsSocial Responsibility & EthicsFinance & AccountsLegal, Contracts & Arbitration | 20 |
| 41 to 50 | Section III (A) : Technical Abilities | Physics & Chemistry (10+2 level) | 10 |
| 51 to 100 | Section III (B) : Technical Abilities | Engineering Discipline | 50 |
| TOTAL | | | 100 |

NOTE:

- Exam Duration: 3 Hours
- Total 100 no. of Questions of 1 Mark each with Negative Marking of ½ Mark for every wrong answer
- Questions (Section wise) and respective Answer Options shuffling at Candidates' terminal

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|----------------|--|--------------|--------------|--------------|
| Question No. 1 | X, Y and Z are three participants in a kilometer race. If X can give Y a start of 40m and X can give Z a start of 64m, how many metres start can Y give Z? | | | |
| Answer Options | A) 20 mtr | B) 15 mtr | C) 25 mtr | D) 10 mtr |
| Right Answer | C | | | |

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| Question No. 2 | Two places A and B are 125km apart. Ram started from A to B and Raj from B to A at the same time. They met at a point 75km from A. Find the ratio of speeds of Ram & Raj. | | | |
| Answer Options | A) 3:2 | B) 2:3 | C) 1:3 | D) 3:4 |
| Right Answer | A | | | |

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|----------------|--|----------|----------|----------|
| Question No. 3 | The length of a circular track is 800 m. Virat and Amresh started from the same point on the track and ran in opposite directions. Virat took 12 minutes to cover one kilometer while Amresh took only 9 minutes to cover the same distance. They kept running for 90 minutes. How many times did they cross each other? | | | |
| Answer Options | A) 10 | B) 20 | C) 21 | D) 30 |
| Right Answer | C | | | |

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| Question No. 4 | The marks scored by Prasoan Joshi in three subjects are in the ratio 4 : 5 : 6. Prasoan Joshi scored an overall aggregate of 60% in the exam. If the maximum marks in each subject are the same, in how many subjects did Prasoan Joshi score more than 70% marks? | | | |
| Answer Options | A) One | B) Two | C) Three | D) Zero |
| Right Answer | A | | | |

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| Question No. 5 | Meena scores 40% in an examination and after review, even though her score is increased by 50%, she fails by 35 marks. If her post-review score is increased by 20%, she will have 7 marks more than the passing score. The percentage score needed for passing the examination is | | | |
| Answer Options | A) 75 | B) 80 | C) 60 | D) 70 |
| Right Answer | D | | | |

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| Question No. 6 | Fill up the following series: 100, 50, 52, 26, 28, _____ | | | |
| Answer Options | A) 30 | B) 32 | C) 14 | D) 16 |
| Right Answer | C | | | |

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|----------------|--|-----------------|----------------|-------------------|
| Question No. 7 | <p>The question is followed by three statements I, II, and III. Read the question and the statements carefully and choose your answer according to which set of the statement(s) is/are sufficient to answer the question.</p> <p>What is the present age of Rakesh?</p> <p>I. The ratio of the ages of Ramesh and Rakesh, three years ago, was 4 : 5.</p> <p>II. The ratio of the ages of Rajesh and Rakesh, after two years, will be 4 : 5.</p> <p>III. Two years ago the ratio of the ages of Rajesh and Ramesh was 12 : 13.</p> | | | |
| Answer Options | A) | B) | C) | D) |
| | I and II only | II and III only | I and III only | All I, II and III |
| Right Answer | D | | | |

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|----------------|---|----------------------------------|--|--|
| Question No. 8 | <p>The question below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and give answer:</p> <p>In a kilometre race, by how many meters Chandu beats Chand?</p> <p>Statement I : In a kilometer race, Chandu beats Chandan by 100 meters.</p> <p>Statement II : The respective ratio of the speed of Chandan and Chand is 4 : 3.</p> <p>Statement III : In a kilometer race, Chandan beats Chand by 150 meters.</p> | | | |
| Answer Options | A) | B) | C) | D) |
| | Either statement III alone or statements I and II together are sufficient | Only statement III is sufficient | Only statement I and II are sufficient | Only statement I, II, and III are sufficient |
| Right Answer | C | | | |

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|----------------|---|-------|--------|---------|
| Question No. 9 | <p>In the following question, there is a certain relationship between two given words on one side of:: and one word is given on another side of:: while another word is to be found from the given alternatives having the same relationship with this word as the words of the given pair bear. Choose the correct alternative.</p> <p>particular : fussy :: _____ : subservient</p> | | | |
| Answer Options | A) | B) | C) | D) |
| | meek | above | cranky | uptight |
| Right Answer | A | | | |

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|-----------------|--|--------|----------------|--------------|
| Question No. 10 | <p>Pinky, who is Victor's daughter, say to Lucy, "Your Mother Rosy is the younger sister of my Father, who is the third child of Joseph." How is Joseph related to Lucy?</p> | | | |
| Answer Options | A) | B) | C) | D) |
| | Father - In - Law | Father | Maternal Uncle | Grand Father |
| Right Answer | D | | | |

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| Question No. 11 | Attracted by the serenity of the evening, a friend and I lately went to one of the public walks near the city. Here we (1) _____ together for some time. Then my friend, stopping suddenly, (2) _____ by the elbow, and led me out of the public walk. I could perceive by the quickness of this (3) _____, and by his frequently looking behind, that he was attempting to avoid somebody who followed. | | | |
| Answer Options | A) | B) | C) | D) |
| | (1)sauntered, (2)trapped, (3)pace | (1)vamoosed, (2)relinquished, (3)hands | (1)dance, (2)caught, (3) gallop | (1)sauntered, (2)caught, (3)gallop |
| Right Answer | D | | | |

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|-----------------|---|--|--|---|
| Question No. 12 | It was not surprising that my own countrymen should treat me so, for I had gained a (1) _____ of notoriety and popularly among them. Even for Englishmen I was individual and not merely one of the (2) _____ and, I imagine the fact that I had received my education in England, brought me (3) _____ | | | |
| Answer Options | A) | B) | C) | D) |
| | (1) weight (2) collection (3) in juxtaposition with them | (1) ration (2) mass (3) nearer to them | (1) measure (2) dispersal (3) at a remote position | (1) measure (2) mass (3) nearer to them |
| Right Answer | D | | | |

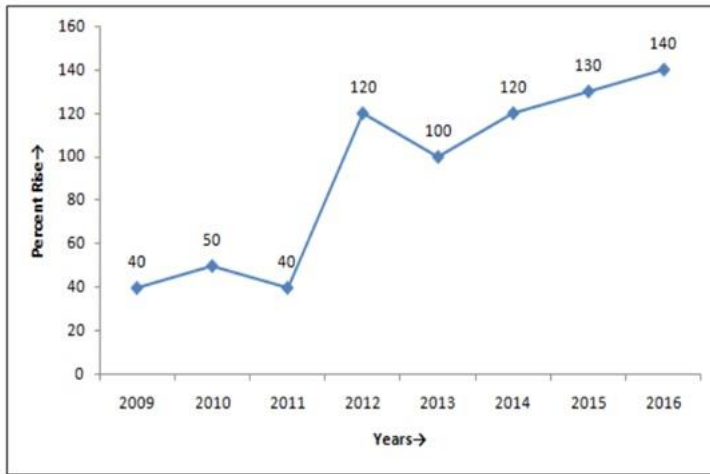
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|-----------------|--|------|------|------|
| Question No. 13 | Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order. A: A man on a bike had to ride on the pavement. B: When he tried to plunge onto the road, a car hit him. C: As the bus inched through the evening life, the traffic grew. D: There was no space on the road any more. | | | |
| Answer Options | A) | B) | C) | D) |
| | CBAD | DBCA | ADBC | CDAB |
| Right Answer | D | | | |

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|-----------------|-------------------------------|-----------|-------------|--------------|
| Question No. 14 | Select the Antonym of OFFHAND | | | |
| Answer Options | A) | B) | C) | D) |
| | accurate | universal | appropriate | premeditated |
| Right Answer | D | | | |

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|-----------------|------------------------------|---------|--------|-------|
| Question No. 15 | What is the synonym of SEIZE | | | |
| Answer Options | A) | B) | C) | D) |
| | Start | Release | Length | Grasp |
| Right Answer | D | | | |

Question No. 16

The Line graph given below shows the percent rise in population from 2009 to 2016.
For how many years the percent rise was more than 100%



Answer Options

| | | | |
|----|----|----|----|
| A) | B) | C) | D) |
| 4 | 3 | 2 | 5 |

Right Answer

A

Question No. 17

The following table gives the percentage of marks obtained by seven students in six different subjects in an examination. What are the average marks obtained by all the seven students in Physics? (rounded off to two digit after decimal)

The Numbers in the Brackets give the Maximum Marks in Each Subject.

| Student | Subject (Max. Marks) | | | | | |
|---------|----------------------|-----------|---------|-----------|---------|------------------|
| | Maths | Chemistry | Physics | Geography | History | Computer Science |
| | (150) | (130) | (120) | (100) | (60) | (40) |
| Ayush | 90 | 50 | 90 | 60 | 70 | 80 |
| Aman | 100 | 80 | 80 | 40 | 80 | 70 |
| Sajal | 90 | 60 | 70 | 70 | 90 | 70 |
| Rohit | 80 | 65 | 80 | 80 | 60 | 60 |
| Muskan | 80 | 65 | 85 | 95 | 50 | 90 |
| Tanvi | 70 | 75 | 65 | 85 | 40 | 60 |
| Tarun | 65 | 35 | 50 | 77 | 80 | 80 |

Answer Options

| | | | |
|----|-------|----|----|
| A) | B) | C) | D) |
| 58 | 89.14 | 74 | 80 |

Right Answer

D

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|------------------------|--|---------------------|---------------------|---------------------|
| <p>Question No. 18</p> | <p>The pie-chart shows sources of income for an NGO. The total income is Rs.40 crore. The bar chart gives the expenditure incurred on various items A – Food for poor, B – Education to illiterate, C – Mid-day deal programme, D – General Expenses, E – Eye Camp expenses, F – Integrated Street Children Programme.(in Crores)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>What Percentage of money is saved by the NGO?</p> | | | |
| <p>Answer Options</p> | <p>A) 0.035</p> | <p>B) 0.045</p> | <p>C) 0.025</p> | <p>D) 0.038</p> |
| <p>Right Answer</p> | <p>C</p> | | | |

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|------------------------|---|------------------------------------|------------------------------------|------------------------------------|
| <p>Question No. 19</p> | <p>Read the following information carefully and answer the following question.</p> <p>i) 'A \$ B' means 'A is mother of B'; ii) 'A # B' means 'A is father of B'; iii) 'A @ B' means 'A is husband of B'; iv) 'A % B' means 'A is daughter of B'.</p> <p>P @ Q \$ M # T indicates what relationship of P with T?</p> | | | |
| <p>Answer Options</p> | <p>A) Paternal grandmother</p> | <p>B) Maternal grandmother</p> | <p>C) Paternal grandfather</p> | <p>D) Maternal grandfather</p> |
| <p>Right Answer</p> | <p>C</p> | | | |

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|------------------------|--|------------------------|------------------------|------------------------|
| <p>Question No. 20</p> | <p>A monkey starts climbing up a tree 20ft. tall. Each hour, it hops 3ft. and slips back 2ft. How much time would it take the monkey to reach the top?</p> | | | |
| <p>Answer Options</p> | <p>A) 21 hours</p> | <p>B) 12 hours</p> | <p>C) 18 hours</p> | <p>D) 15 hours</p> |
| <p>Right Answer</p> | <p>C</p> | | | |

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|------------------------|---|--------------------------|-------------------------|--|
| <p>Question No. 21</p> | <p>Gantt Chart is commonly used for _____</p> | | | |
| <p>Answer Options</p> | <p>A) Routing</p> | <p>B) Scheduling</p> | <p>C) Follow up</p> | <p>D) Inspection and quality control</p> |
| <p>Right Answer</p> | <p>B</p> | | | |

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|-----------------|--|----------------------|---------------------|---------------------|
| Question No. 22 | Consider the following features/factors: (i) Projects are of non-repetitive type, (ii) Time required need not be known, (iii) Events have been established for planning, (iv) Emphasis is given to activities of project. PERT is preferred for planning because of..... | | | |
| Answer Options | A) | B) | C) | D) |
| | (i), (ii) and (iv) | (ii), (iii) and (iv) | (i), (iii) and (iv) | (i), (ii) and (iii) |
| Right Answer | A | | | |

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|-----------------|--|--|--|-----------------|
| Question No. 23 | What is the Critical Path Method (CPM) | | | |
| Answer Options | A) | B) | C) | D) |
| | It is an improvement upon Bar Chart method | It provides a realistic approach to daily problems | It avoids delay which is common in Bar Chart | All the options |
| Right Answer | D | | | |

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|-----------------|--|-----------|------------------|-----------------------------|
| Question No. 24 | An activity has an early start(ES) of day 3, a late start(LS) of day 13, an early finish(EF) of day 9 and a late finish(LF) of day 19. The activity ____ | | | |
| Answer Options | A) | B) | C) | D) |
| | Is on the Critical path | Has a Lag | Progressing well | Is not on the Critical path |
| Right Answer | D | | | |

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|-----------------|---|-----------|------|---------------|
| Question No. 25 | The following extinguisher is suitable for cotton or other textile fire | | | |
| Answer Options | A) | B) | C) | D) |
| | Water | Soda acid | Foam | Dry chemicals |
| Right Answer | D | | | |

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|-----------------|---|---------------|---------------|------------------|
| Question No. 26 | The following class of fire occur in electrical equipment | | | |
| Answer Options | A) | B) | C) | D) |
| | Class-A fires | Class-B fires | Class-C fires | All of the above |
| Right Answer | C | | | |

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|-----------------|---|------------|-------------|----------|
| Question No. 27 | Which of the following is not a chemical-related health hazard? | | | |
| Answer Options | A) | B) | C) | D) |
| | Carcinogenicity | Reactivity | Corrosivity | Toxicity |
| Right Answer | B | | | |

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|-----------------|--|----------------|-----------------|-------------------|
| Question No. 28 | You should wear eye, head, and face protection if you are working with which of the following tools? | | | |
| Answer Options | A) | B) | C) | D) |
| | Portable abrasive wheel tools | Electric tools | Pneumatic tools | Liquid fuel tools |
| Right Answer | C | | | |

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|-----------------|---|---|---|-------------------|
| Question No. 29 | BOD is measure of | | | |
| Answer Options | A) | B) | C) | D) |
| | The amount of oxygen consumed in the biological process | The utilization of organic substances by aerobic microorganisms | Respiratory needs of biological community | None of the above |
| Right Answer | A | | | |

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|-----------------|--------------------------|------|------------------|-------------------|
| Question No. 30 | Smoke + fog is called as | | | |
| Answer Options | A) | B) | C) | D) |
| | Soeg | smog | Both (A) and (B) | None of the above |
| Right Answer | B | | | |

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|-----------------|--|----------|--------|---------|
| Question No. 31 | A Company or organization can go to ISO 14000 certificate provided it has an ongoing environmental management system in operation for at least | | | |
| Answer Options | A) | B) | C) | D) |
| | 3 months | 6 months | 1 year | 5 years |
| Right Answer | B | | | |

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|-----------------|--|--|--|------------------|
| Question No. 32 | Which statement is true? | | | |
| Answer Options | A) | B) | C) | D) |
| | Walton writes that business ethics is related with truth and justice | A businessman who follows unethical conduct in business should be socially boycotted by the people | Government in the country has enacted various laws, rule and regulations under the provisions of which the business is bound to act honestly | All of the above |
| Right Answer | D | | | |

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|-----------------|---|---|--|------------------|
| Question No. 33 | Which is the basic principle of ethos for management? | | | |
| Answer Options | A) | B) | C) | D) |
| | Co-operation is powerful instrument for team work and success in any enterprise involving collective work | Holistic approach indicating unity between the Divine, Individual Self and the Universe | Immense potential energy and talents for perfection as human being has the spirit within his heart | All of the above |
| Right Answer | D | | | |

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|-----------------|--|-------------|---------------|---------------------|
| Question No. 34 | The concept of international social responsibility is the expectation that MNCs concern themselves about _____ effects of their decisions regarding activities in other countries. | | | |
| Answer Options | A) | B) | C) | D) |
| | philosophical | competitive | environmental | social and economic |
| Right Answer | D | | | |

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|-----------------|---|-------------------------------------|---------------------------------|----------------------|
| Question No. 35 | Net working Capital refers to | | | |
| Answer Options | A) | B) | C) | D) |
| | Current assets less current liabilities | Total assets less total liabilities | Current assets less inventories | Total current assets |
| Right Answer | A | | | |

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|-----------------|----------------------------|--------------------------------|---|---|
| Question No. 36 | Non-cash items refer to | | | |
| Answer Options | A) | B) | C) | D) |
| | The credit sales of a firm | The accounts payable of a firm | Expenses charged against revenues that do not directly affect cash flow | All accounts on the balance sheet other than cash on hand |
| Right Answer | D | | | |

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|-----------------|---|----------------------------|------------------------|------------|
| Question No. 37 | The factor, which is largely considered in making or buying decisions | | | |
| Answer Options | A) | B) | C) | D) |
| | Quality Suppliers | Dependability of Suppliers | Production irrelevancy | Both A & B |
| Right Answer | D | | | |

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|-----------------|---|----------------------------|---|----------|
| Question No. 38 | Which of the following model law was used by the Indian Arbitration & Conciliation Act,1996 | | | |
| Answer Options | A) | B) | C) | D) |
| | Indian Constitution | Guideline of Supreme Court | European commercial Arbitration procedure | UNCITRAL |
| Right Answer | D | | | |

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|-----------------|---|---------------------|----------------|---------------|
| Question No. 39 | An arbitral award made under Arbitration & Conciliation Act,1996 shall be considered as a _____ | | | |
| Answer Options | A) | B) | C) | D) |
| | General award | International award | Domestic award | Foreign award |
| Right Answer | C | | | |

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|-----------------|---|-----------------|----------------------|--------------------|
| Question No. 40 | Which level of management is responsible for implementing programs that are intended to carry out the broader objectives of an organization set by management | | | |
| Answer Options | A) | B) | C) | D) |
| | Supervisory managers | Middle managers | First level managers | Financial managers |
| Right Answer | B | | | |

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|-----------------|---|-------------|------|---------------|
| Question No. 41 | The rate at which electrical energy is used may be measured in: | | | |
| Answer Options | A) | B) | C) | D) |
| | watt/second | watt second | watt | kilowatt-hour |
| Right Answer | C | | | |

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|-----------------|--|---|--|---|
| Question No. 42 | Radio waves are readily diffracted around buildings whereas light waves are negligibly diffracted around buildings. This is because radio waves: | | | |
| Answer Options | A) | B) | C) | D) |
| | are plane polarized | have much longer wavelengths than light waves | have much shorter wavelengths than light waves | are nearly monochromatic (single frequency) |
| Right Answer | B | | | |

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|-----------------|---|-------------------------|-------------------|-------------------------|
| Question No. 43 | An ideal gas expands into a vacuum in a rigid vessel. As a result there is: | | | |
| Answer Options | A) | B) | C) | D) |
| | a change in entropy | a change in temperature | a change in phase | an increase of pressure |
| Right Answer | A | | | |

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|-----------------|---|---|--|---|
| Question No. 44 | A heat engine: | | | |
| Answer Options | A) | B) | C) | D) |
| | converts heat input to an equivalent amount of work | converts work to an equivalent amount of heat | takes heat in, does work, and loses energy as heat | uses positive work done on the system to transfer heat from a low temperature reservoir to a high temperature reservoir |
| Right Answer | C | | | |

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|-----------------|---|---|-------------------------------|-------------------|
| Question No. 45 | The coefficient of kinetic friction: | | | |
| Answer Options | A) | B) | C) | D) |
| | is in the direction of the frictional force | is in the direction of the normal force | is the ratio of force to area | None of the above |
| Right Answer | D | | | |

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|-----------------|--|--------|-------|-------------|
| Question No. 46 | Which of the following is a crystalline solid? | | | |
| Answer Options | A) | B) | C) | D) |
| | Tar | Butter | Glass | Common salt |
| Right Answer | D | | | |

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|-----------------|--|--------------------|---------------------|----------------------|
| Question No. 47 | Which of the following are physical changes? (i) Melting of iron metal (ii) Rusting of iron (iii) Bending of an iron rod (iv) Drawing a wire of iron metal | | | |
| Answer Options | A) | B) | C) | D) |
| | (i), (ii) and (iii) | (i), (ii) and (iv) | (i), (iii) and (iv) | (ii), (iii) and (iv) |
| Right Answer | C | | | |

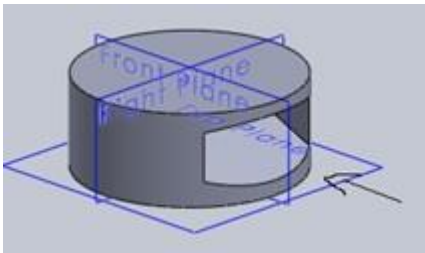
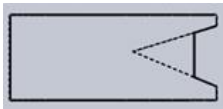

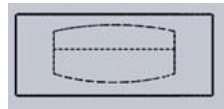
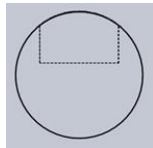
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|-----------------|-----------------------------------|------------------------|----------------------------|-----------|
| Question No. 48 | The monomers of Buna-S rubber are | | | |
| Answer Options | A) | B) | C) | D) |
| | styrene and butadiene | isoprene and butadiene | vinyl chloride and sulphur | butadiene |
| Right Answer | A | | | |

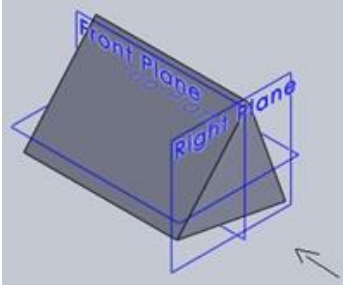
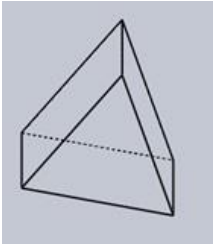
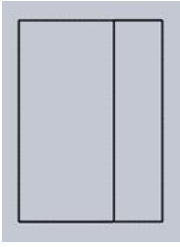
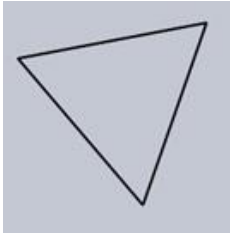
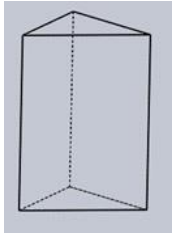
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|-----------------|---|-----------|------------|-------------|
| Question No. 49 | Equal masses of ethane and hydrogen are mixed in any empty container at 25°C. The fraction of total pressure exerted by hydrogen is | | | |
| Answer Options | A) 1:2 | B) 1:1 | C) 1:16 | D) 15:16 |
| Right Answer | D | | | |

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|-----------------|--|---------------|---------------|----------------|
| Question No. 50 | n-propyl bromide on treating with alcoholic KOH produces | | | |
| Answer Options | A) propyne | B) propene | C) propane | D) propanol |
| Right Answer | B | | | |

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|-----------------|---|------------------------------------|--------------------|-------------------|
| Question No. 51 | When a solid completely penetrates another solid, there will be two lines of intersection. These lines are called _____ | | | |
| Answer Options | A) line of interpenetration | B) conconcyclic curves of lines | C) hidden lines | D) inside line |
| Right Answer | A | | | |

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|-----------------|--|------------|-------------------------|----------------------|
| Question No. 52 | Drawing straight lines on both the surfaces of solids and then pointing the points where they intersect and drawing lines which forms the line of intersection this process of finding the line of intersection is termed as _____ method. | | | |
| Answer Options | A) assumption | B) line | C) removing material | D) cutting- plane |
| Right Answer | B | | | |

| | | | | |
|-----------------|---|---|--|---|
| Question No. 53 | Identify the back view for the below cylinder. | | | |
| |  | | | |
| Answer Options | A)  | B)  | C)  | D)  |
| Right Answer | C | | | |

| | | | | |
|------------------------|---|---|--|---|
| <p>Question No. 54</p> | <p>Identify the front view from the isometric view for the below-given prism.</p>  | | | |
| <p>Answer Options</p> | <p>A)</p>  | <p>B)</p>  | <p>C)</p>  | <p>D)</p>  |
| <p>Right Answer</p> | <p>C</p> | | | |

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|------------------------|--|------------------------|-----------------------|--------------------------|
| <p>Question No. 55</p> | <p>The perspectives of concentric circles are not concentric _____</p> | | | |
| <p>Answer Options</p> | <p>A) circles</p> | <p>B) ellipses</p> | <p>C) spheres</p> | <p>D) ellipsoids</p> |
| <p>Right Answer</p> | <p>B</p> | | | |

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| <p>Question No. 56</p> | <p>The ratio between illumination at a working point indoor to total light available simultaneously outdoor is known as</p> | | | |
| <p>Answer Options</p> | <p>A) Daylight Factor</p> | <p>B) Sky Component</p> | <p>C) Internally Reflected Component</p> | <p>D) Externally Reflected Component</p> |
| <p>Right Answer</p> | <p>A</p> | | | |

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| <p>Question No. 57</p> | <p>The process of spraying Polyester, Polyurethane, Acrylic and Epoxy Plastic, followed by heat curing onto metals is called</p> | | | |
| <p>Answer Options</p> | <p>A) Anodizing</p> | <p>B) Galvanizing</p> | <p>C) Vitreous Enamelling</p> | <p>D) Powder Coating</p> |
| <p>Right Answer</p> | <p>D</p> | | | |

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|-----------------|---|---------------|--------------------|-----------------|
| Question No. 58 | Which of the following is a part of a studio apartment? | | | |
| Answer Options | A) | B) | C) | D) |
| | Master bed room | Artist's room | Multipurpose space | Children's room |
| Right Answer | C | | | |

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|-----------------|---|------------------|------------------|-------------------------|
| Question No. 59 | Identify the role of Vermiculate in vertical landscapes | | | |
| Answer Options | A) | B) | C) | D) |
| | Fertilizer | Holding material | Binding material | Water retention element |
| Right Answer | D | | | |

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|-----------------|---|------------------|--------|---------|
| Question No. 60 | The ingredient to be added to produce Aerated Cement Concrete, is | | | |
| Answer Options | A) | B) | C) | D) |
| | Aluminium | Calcium chloride | Gypsum | Sulphur |
| Right Answer | A | | | |

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| Question No. 61 | The spherical surface of the geodesic dome comprises of | | | |
| Answer Options | A) | B) | C) | D) |
| | Equilateral triangles of various sizes | Isosceles triangles of various sizes | Equilateral triangles of uniform size | Isosceles triangles of uniform size |
| Right Answer | C | | | |

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|-----------------|---|---------------------------------|----------------------------------|--------------------------------|
| Question No. 62 | Typical features of Buddhist architecture are | | | |
| Answer Options | A) | B) | C) | D) |
| | Mandapa, Chattri, Amalaka, Torana | Stambha, Toana, Vimana, Harmika | Vedika, Chattri, Torana, Harmika | Vedika, Stupa, Chaitya, Vimana |
| Right Answer | C | | | |

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|-----------------|---|----------|--------------|----------|
| Question No. 63 | An element constructed at intervals along the length of a wall to stabilize it against overturning is | | | |
| Answer Options | A) | B) | C) | D) |
| | Barrel Vault | Pilaster | Squinch Arch | Buttress |
| Right Answer | D | | | |

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|-----------------|--|----------|--------|-------------|
| Question No. 64 | The solar protection system consisting of fixed slates or grids, outside a building façade in front of openings, is known as | | | |
| Answer Options | A) | B) | C) | D) |
| | Sun breaker | Solarium | Malqaf | Trombe wall |
| Right Answer | A | | | |

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|-----------------|---|---------|---------|---------|
| Question No. 65 | In escalators, the angle of inclination with the horizontal plane should be in the range of | | | |
| Answer Options | A) | B) | C) | D) |
| | 10°-20° | 20°-30° | 30°-35° | 35°-45° |
| Right Answer | C | | | |

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|-----------------|---|-----------------------------------|-------------------------------|----------------------|
| Question No. 66 | Development authorities in India are established under the provision of | | | |
| Answer Options | A) | B) | C) | D) |
| | Municipal Act | 74th Constitutional Amendment Act | Town and Country Planning Act | Land Acquisition Act |
| Right Answer | C | | | |

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|-----------------|---|--------------------------------------|---------------------------------------|--------------------------------------|
| Question No. 67 | Invert level of a pipe at a given cross section refers to the | | | |
| Answer Options | A) | B) | C) | D) |
| | highest point of the internal surface | lowest point of the internal surface | highest point of the external surface | lowest point of the external surface |
| Right Answer | B | | | |

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|-----------------|---|--|----------------------------------|--|
| Question No. 68 | In a single-stack system of plumbing | | | |
| Answer Options | A) | B) | C) | D) |
| | All the appliances and traps are fully ventilated | Only WC branches are connected with anti-siphonage pipes | Anti-siphonage pipes are omitted | Only the stack is vented above the branch connection at each floor level |
| Right Answer | C | | | |

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|-----------------|---|---------------------------|----------------------|-------------------------------|
| Question No. 69 | Among the following, the one that is NOT a land assembly technique is | | | |
| Answer Options | A) | B) | C) | D) |
| | Land Use Zoning | Accommodation Reservation | Town Planning Scheme | Transfer of Development Right |
| Right Answer | A | | | |

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|-----------------|--|-------------------|----------|-------------------|
| Question No. 70 | The structural floor joined to the joists that support the finish flooring | | | |
| Answer Options | A) | B) | C) | D) |
| | Subfloor | Construction Type | Contrast | Building Envelope |
| Right Answer | A | | | |

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|-----------------|---|-------------------------|---------|----------|
| Question No. 71 | A horizontal structural member located on top of the studs used to hold the wall together | | | |
| Answer Options | A) | B) | C) | D) |
| | Top Plate | Air Handling Unit (AHU) | Footing | Emphasis |
| Right Answer | A | | | |

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|-----------------|--|-----------|----------------|-------------|
| Question No. 72 | A plot of the internal moment in a beam versus position along the axis of the beam | | | |
| Answer Options | A) | B) | C) | D) |
| | Spread Footing | Architect | Moment Diagram | Water Meter |
| Right Answer | C | | | |

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|-----------------|--|--------|----------------|-----------------------|
| Question No. 73 | A measure of the probable discharge into the drainage system by various types of plumbing fixtures | | | |
| Answer Options | A) | B) | C) | D) |
| | Drain | Column | Elevated Floor | Drainage Fixture Unit |
| Right Answer | D | | | |

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|-----------------|---|-------------|-------|--------|
| Question No. 74 | A beam supporting the weight above a door or window opening | | | |
| Answer Options | A) | B) | C) | D) |
| | Property Survey | Static Head | Truss | Lintel |
| Right Answer | D | | | |

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|-----------------|--|--------------|--------------------|----------|
| Question No. 75 | A fitting with a removable plug that is placed in plumbing drainage pipe lines to allow access for cleaning out the pipe | | | |
| Answer Options | A) | B) | C) | D) |
| | Egress | Curtain Wall | Thermal Convection | Cleanout |
| Right Answer | D | | | |

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|-----------------|---|---------------|----------|----------|
| Question No. 76 | Any of the wedge-shaped units in a masonry arch or vault - having side cuts converging at one of the arch centers | | | |
| Answer Options | A) | B) | C) | D) |
| | Siding | Slab-on-Grade | Voussoir | Charette |
| Right Answer | C | | | |

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|-----------------|---|------|-------------------|-------|
| Question No. 77 | Any surface to which elevations are referred (for example - mean sea level) | | | |
| Answer Options | A) | B) | C) | D) |
| | Foresight | Main | Fine Grained Soil | Datum |
| Right Answer | D | | | |

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|-----------------|--|------------------|------------|------------------------|
| Question No. 78 | A sewer that conveys storm water or other drainage but not sanitary sewage | | | |
| Answer Options | A) | B) | C) | D) |
| | Storm Sewer | No potable Water | Grade Beam | Low Impact Development |
| Right Answer | A | | | |

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|-----------------|--|------------|---------|-------------------|
| Question No. 79 | The rules that describe how designers might put together various design elements to create an aesthetic finished product | | | |
| Answer Options | A) | B) | C) | D) |
| | Sill | Grade Beam | Masonry | Design Principles |
| Right Answer | D | | | |

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|-----------------|--|---------------------|------------------|------|
| Question No. 80 | An electric safety switch that automatically opens a circuit when excessive amperage occurs. | | | |
| Answer Options | A) | B) | C) | D) |
| | Circuit Breaker | Construction Survey | Plasticity Limit | EPDM |
| Right Answer | A | | | |

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|-----------------|---|------|------|---------|
| Question No. 81 | A fitting or device that provides a liquid seal to prevent the emission of sewer gases without materially affecting the flow of sewage or wastewater through the trap | | | |
| Answer Options | A) | B) | C) | D) |
| | R-value | Trap | Pile | Pattern |
| Right Answer | B | | | |

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|-----------------|--|---------|-------------|--------------|
| Question No. 82 | The moving of soil to affect the elevation of land at a construction site` | | | |
| Answer Options | A) | B) | C) | D) |
| | Cleanout | Grading | Storm Sewer | Plane Survey |
| Right Answer | B | | | |

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|-----------------|---|--------|------|--------|
| Question No. 83 | A long slender piece of material driven or drilled into the ground to act as an element of a foundation | | | |
| Answer Options | A) | B) | C) | D) |
| | Heat Pump | Fascia | Pile | Egress |
| Right Answer | C | | | |

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|-----------------|---|--------------------|--------|--------|
| Question No. 84 | A horizontal structural member used to support other structural members over openings such as doors and windows | | | |
| Answer Options | A) | B) | C) | D) |
| | Strain | Rainfall Intensity | Ground | Header |
| Right Answer | D | | | |

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|-----------------|--|-------|---------------|----------------------|
| Question No. 85 | An assembly of structural members joined to form a rigid framework - usually connected to form triangles | | | |
| Answer Options | A) | B) | C) | D) |
| | Fenestration | Truss | Built-up-Roof | Tilt-up Construction |
| Right Answer | B | | | |

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|-----------------|--|------|-------|----------|
| Question No. 86 | An arrangement of several arches whose bases form a circle and whose tops meet in the center | | | |
| Answer Options | A) | B) | C) | D) |
| | element of design | dome | space | contrast |
| Right Answer | B | | | |

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|-----------------|--|--------|--------|-------------------|
| Question No. 87 | movement characterized by a patterned repetition or alteration of formal elements or motifs in the same or a modified form | | | |
| Answer Options | A) | B) | C) | D) |
| | emphasis | rhythm | facade | element of design |
| Right Answer | B | | | |

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|-----------------|--|------------------------------|-------|-------|
| Question No. 88 | A curved structure used as a support over an open space - designed to support a vertical load primarily by axial compression | | | |
| Answer Options | A) | B) | C) | D) |
| | arch | post and lintel construction | unity | space |
| Right Answer | A | | | |

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|-----------------|---|---------------|----------|----------|
| Question No. 89 | A wedge-shaped stone placed in the crown of an arch | | | |
| Answer Options | A) | B) | C) | D) |
| | line | bearing walls | keystone | movement |
| Right Answer | C | | | |

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|-----------------|--|---------|---------|--------|
| Question No. 90 | The pleasing or harmonious arrangement or proportion of parts or elements in a design or composition | | | |
| Answer Options | A) | B) | C) | D) |
| | architect | texture | balance | facade |
| Right Answer | C | | | |

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|-----------------|---|-------|-------|----------|
| Question No. 91 | The relative lightness or darkness of a color | | | |
| Answer Options | A) | B) | C) | D) |
| | design principles | unity | value | movement |
| Right Answer | C | | | |

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|-----------------|--|---------------|------|-------------------|
| Question No. 92 | Wedge-shaped units in a masonry arch or vault - having side cuts converging at one of the arch centers | | | |
| Answer Options | A) | B) | C) | D) |
| | vousoir | bearing walls | arch | element of design |
| Right Answer | A | | | |

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|-----------------|---|-------------------------|----------|-----------|
| Question No. 93 | Culturally and climatically relevant architecture using locally available materials and traditional building techniques | | | |
| Answer Options | A) | B) | C) | D) |
| | lintel | vernacular architecture | contrast | architect |
| Right Answer | B | | | |

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|-----------------|---|--------|----------------|-------------------------|
| Question No. 94 | Walls that provide support for each other and for the roof of the structure | | | |
| Answer Options | A) | B) | C) | D) |
| | bearing walls | facade | civil engineer | vernacular architecture |
| Right Answer | A | | | |

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|-----------------|---|--------|-------|-----------------------|
| Question No. 95 | A microscopic layer of metal applied to glass surfaces to reflect heat energy | | | |
| Answer Options | A) | B) | C) | D) |
| | passive solar design | are-21 | low E | argon and krypton gas |
| Right Answer | C | | | |

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|-----------------|---|----------------|---------|----------------------|
| Question No. 96 | Use of site consideration - house orientation - and room placement to improve energy efficiency | | | |
| Answer Options | A) | B) | C) | D) |
| | insulation | vapour barrier | 3-4 ACH | passive solar design |
| Right Answer | D | | | |

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|-----------------|--|-------|--------------|-------|
| Question No. 97 | Opposing force sliding past each other | | | |
| Answer Options | A) | B) | C) | D) |
| | Span | Shape | Area of Load | Shear |
| Right Answer | D | | | |

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|-----------------|------------------------------|--------------|-------------------|--------------|
| Question No. 98 | A force that pushes together | | | |
| Answer Options | A) | B) | C) | D) |
| | Compression | Area of Load | The 5 beam shapes | Dynamic Load |
| Right Answer | A | | | |

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|-----------------|--------------------------|---------|-------|-------------|
| Question No. 99 | Forces that don't change | | | |
| Answer Options | A) | B) | C) | D) |
| | Weight | Torsion | Shear | Static Load |
| Right Answer | D | | | |

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|------------------|--------------------------|---------|------|-----------|
| Question No. 100 | A force that pulls apart | | | |
| Answer Options | A) | B) | C) | D) |
| | Compression | Tension | Span | Materials |
| Right Answer | B | | | |