



Name : Mohan Manjhi

Max Marks : 70

Branch : C.S.E

Min Marks : 22

Subject : Latex Assignment

Time : 03:00 HRS

Signature of the Examiner with date

Signature of the Scrutinizer with date

READ THE INSTRUCTIONS CAREFULLY GENERAL

- This sealed booklet is your Question Paper. Do not break the seal till you are told to do so.
- Immediately after breaking the seal of the booklet, verify that the booklet contains 23 pages and that all the 16 questions along with the options are legible.
- Report immediately about any missing or torn sheet in this booklet and ask for a replacement of the booklet from the invigilator. No replacement will be allowed after 15 minutes of the starting of the examination.
- Write your Name, Roll Number, JEE (Advanced) 2022 Rank and other details in the space provided and nowhere else. No distinctive / identification mark of any type is to be put anywhere else in this booklet.
- Answers are to be written only in the booklet and within the space provided beside / below each Question and nowhere else. Answers written in nondesignated place will not be evaluated.
- Blank spaces are provided within this booklet for rough work.
- Do not deface this booklet or detach or mutilate any sheet from the booklet. Such acts lead to disqualification.
- All the questions are compulsory.

SECTION A: Architectural Awareness (Maximum Marks: 60)

This section contains **FOUR** questions. Question 1 carries **30 marks**, Questions 2, 3 and 4 carry **10 marks** each. There is **NO** negative marking

Q.1. This section contains **15 multiple choice questions**. Each question has four options, out of which **ONLY ONE** is correct. Mark the correct option with a tick

(5 x 2 = 10 Marks)

(i) Which of the following bridges is laid over a sea?

- A. Godavari Bridge, Andhra Pradesh
- B. Pamban Bridge, Tamilnadu
- C. Howrah Bridge, West Bengal
- D. Mahatma Gandhi Setu, Bihar

(ii) In 2021, —————annual festivity got inscribed on the representative list of Intangible Cultural Heritage of Humanity by UNESCO.

- | | |
|---------------------|---------------------|
| A. Makara Sankranti | B. Ganesh Chaturthi |
| C. Durga Puja | D. Chhath Puja |

(iii) Statue of which famous personality is called 'Statue of Unity'?

- | | |
|-----------------------------|-----------------------|
| A. Mahatma Gandhi | B. Dr. B. R. Ambedkar |
| C. Sardar Vallabhbhai Patel | D. Indira Gandhi |

(iv) Which of the following historic gateways is sharing an edge with a water body?

- | | |
|--------------------------|-----------------------------|
| A. Charminar, Hyderabad | B. India Gate, New Delhi |
| C. Rumi Darwaza, Lucknow | D. Gateway of India, Mumbai |

(v) Which architect has designed the building 'Church of Light', located in Japan?

- | | |
|-----------------|------------------|
| A. Moshe Safdie | B. Fumihiko Maki |
| C. Zaha Hadid | D. Tadao Ando |

Q.2 Match the famous architects in column I with their renowned projects in column II.

(Mark : 05)

Column I

- (A) Charles Correa
- (B) B V Doshi
- (C) Bimal Pate
- (D) Raj Rewal
- (E) Le Corbusier

Column II

- (P) IIM Bangalore
- (Q) Capitol Complex, Chandigarh
- (R) Central Vista, New Delhi
- (S) Dakshina Chitra, Chennai
- (T) Bharat Bhawan, Bhopal
- (U) Parliament Library, New Delhi

Q.3 Match the material in Column I with the craft in Column II.

(Mark : 05)

Column I

- (A) Stone
- (B) Paper
- (C) Glass
- (D) Fabric
- (E) Metal

Column II

- (P) Origami
- (Q) Embroidery
- (R) Carving
- (S) Carpentry
- (T) Etching
- (U) Filigree

Q.4 Refer to the following sketch of St. James' Church, Delhi. Match the numbers mentioned in Column I (highlighted in the sketch) with corresponding building elements in Column II. (Mark : 05)

**Column I**

- (A) i
- (B) ii
- (C) iii
- (D) iv
- (E) v

Column II

- (P) Column
- (Q) Pediment
- (R) Plinth
- (S) Dome
- (T) Architrave
- (U) Arch

Q.5 Read the following statements and choose the correct options.

(Mark : 07)

Statement A : Parapet is a type of window
Statement B : Pile is a type of foundation

- A. Both the statements A & B are True
- B. Both the statements A & B are False
- C. The statement A is True but statement B is False
- D. The statement B is False but statement A is True

Q.6 Refer to the graphical representation of timber, shown in figure 1 graphical representation shown in figure 2, indicate?

(Mark : 07)



Figure 1

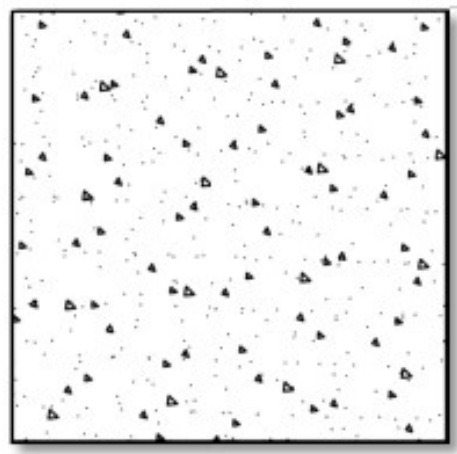


Figure 2

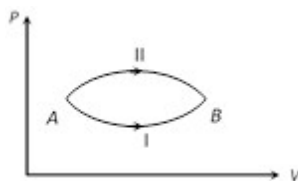
- A. Thermocol
- B. Concrete
- C. Steel
- D. Brick

Q.7 The least value of $\alpha \epsilon R$ for which $4\alpha x^2 + 1/x \geq 1$, for all $x > 0$, is

(Mark : 07)

- A. $\frac{1}{64}$
- B. $\frac{1}{32}$
- C. $\frac{1}{27}$
- D. $\frac{1}{25}$

Q.8 A system goes from A to B via two processes I and II as shown in figure. If ΔU_I and ΔU_{II} are the changes in internal energies in the processes I and II respectively, then (Mark : 07)

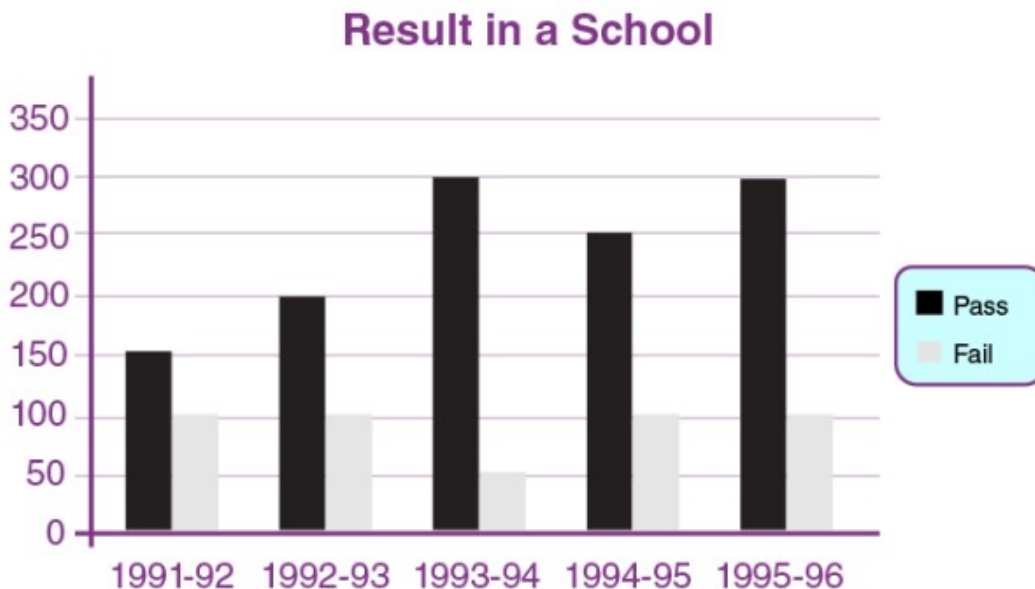


- A. $\Delta U_{II} > \Delta U_I$
- B. $\Delta U_{II} < \Delta U_I$
- C. $\Delta U_I = \Delta U_{II}$
- D. Relation between ΔU_I and ΔU_{II} can not be determined

Q.9 Consumers were polled about their favourite ice cream flavours in a survey. Draw a bar graph for the following data: (Mark : 07)

Flavour of Icecream	Frequency
Vanilla	1
Strawberry	5
Chocolate	12
Mint Chocolate	3
Others	6

Q.10 Examine the graph below carefully and answer the following questions. The graph depicts the results of a school's students. (Mark : 10)



- A. Which year has the smallest difference between the number of kids who passed and those who failed?
- B. In the last five years, what was the average number of kids who failed in school?
- C. How many times have the same number of kids failed?