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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
MID TERM EXAMINATION - APR 2023**

Semester : Semester VI - 2020

Course Code : MEC3009

Course Name : Sem IV - MEC3009 - Nanotechnology

Program : MEC

Date : 13-APR-2023

Time : 2:00PM - 3:30PM

Max Marks : 50

Weightage : 25%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS

(5 X 2 = 10M)

1. Mention the chemical composition of Lycurgus cup and Modern cup. (CO1) [Knowledge]
2. What is Nanotechnology? (CO1) [Knowledge]
3. What is the function of Atomic force Microscope. (CO2) [Knowledge]
4. Enlist bottom up and Top down method of Nanomaterial synthesis. (CO2) [Knowledge]
5. Mention the structured design processes in relation to materials. (CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS

(2 X 10 = 20M)

6. Explain the Nanostructure of Ribosome and Geckos. (CO1) [Comprehension]
7. Classify and brief nanomaterials with respect to their dimensions. Mention their characteristics. (CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION

(1 X 20 = 20M)

8. Explain the historical saga of Nano, which we didn't know, existed around us in the form of mother nature (CO1) [Application]