Uva Wellassa University of Sri Lanka
Faculty of Applied Sciences
Department of Science and Technology
300 level 1st Semester Examination July / August 2019
Nanotechnology in Biomaterials SCT 302-1

Uva Wellassa University

011

Instructions to candidates
Duration: One (01) Hour
Number of Questions: 02 (two)
Answer all questions
Mark allocation: 100

Index Number

1.

i. Write two of the most commonly used wide-band gap oxide semiconductors in the field of nano-technology.

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ii. What are the two major processes for fabrication of nanostructures?

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iii. Write two peculiar properties of "Fullerene".

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iv. What are the major types of "Fullerene"?

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v. In which instrument that you could distinguish amorphous carbon and diamond practically?

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vi. Write two reasons for seeing nano-scale gold clusters in different colors.

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vii. What is the color of "Lycurgus cup" under illumination of reflected light mode?

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viii. Write two peculiar properties of the absorption spectra that you can expect for a nano-gold solution.

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ix. Write four reasons as to why we have to take special care while working with nano-powders.

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x. Who will get affected by nano-materials?

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(5 Marks X 10)

2.

i. Assume that a vegetable or fruit parcel is given to you rapped in a bag manufactured with polyester mixed with Bis(benzoxazoy). Explain how would you determine whether the fruits or vegetable is squashed or not without opening the bag.

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(25 Marks)

ii. Discus the advantages and disadvantages of using nano-powder in facial cream.

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(25 Marks)