SEMESTER	I	QP CODE	23CORE12

P.R. GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA
SEM I END EXAMINATIONS JANUARY-2024
I B.SC(MATHS STREAM), SUBJECT: ADVANCES IN MATHS,PHYSICS&CHEMISTRY

DATE & SESSION	11.01.2024 AN	REG NO								MAX MARKS	50

Section -I

Answer any three of the following questions.
Must attempt at least one question from each part. Each question carries 10 Marks.
3X 10 = 30M

Part – A

1. Evaluate $\int \frac{1-Sin\,x}{1+Sin\,x}\,dx$ (BT 3)
2. Discuss the recent advances in the field of Nanotechnology. (BT2)
3. Explain the impact of Chemical pollutants on human health? (BT 2)

Part – B

4. The half-life of radioactive cobalt is 5.27 years. Suppose that a nuclear accident has left the level of cobalt radiation in a certain region at 100 times the level acceptable for human habitation. How long will it be unit the region is again habitable? (BT-4)
5. Explain the applications of Biophysics (BT 2)
6. What is Computer Aided Drug Design? Write briefly about Structure based drug design and Ligand based drug design? (BT 1)

Section-II

Answer any Four of the following questions. **4 X 5 = 20M**

7. Find the equation of a line, which passes through the points (-1, 1) and (2, -4). (BT 1)
8. Find the derivative of x cos x. (BT 2)
9. Write about Nanomedicine. (BT1)
10. Analyse various methods of water treatment? (BT 3)
11. Write the applications of chemical biology? (BT 2)
12. Explain dye degradation by photocatalysis method? (BT 3)
13. Categorize distinct types of multiplexing techniques used in combining and transmitting multiple data signals over shared communication channels or mediums? (BT 2)

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