

SUBJECT CODE-216
FACULTY OF ENGINEERING AND TECHNOLOGY
F.E(ALL) Examination Nov/Dec 2015
Engineering Physics
(Revised)

[Time: Two Hours]

[Max Marks : 40]

“Please check whether you have got the right question paper.”

- N.B i) Q. no. 1 is compulsory.
 ii) Solve any two questions from the remaining question.
 iii) Figures to the right indicate full marks.
 iv) Use of non-programmable calculator is allowed.

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| Q.1. Answer the following question (any five) | 10 |
| a) Explain production of positive rays. | |
| b) Draw a neat diagram of Bainbridge mass spectrograph. | |
| c) State bathes law. Write its formula | |
| d) What are time base circuit and trigger circuit | |
| e) Explain testing of optical planeness of surface | |
| f) How R.I. of thin film is determined by using Michelson's interferometer | |
| g) What is Isotope effect | |
| h) Write the important stages in liquid drop model of nucleus | |
| Q.2 | 08 |
| a) Explain the construction working and theory of Aston's mass spectrograph. | |
| b) What is Compton's effect? Derive an expression for Compton shift in wave length | 07 |
| Q.3 | 05 |
| a) Explain the appearance of newtons rings by reflected light | |
| b) Obtain an expression for the R.I. of a liquid | 05 |
| c) Explain theory of plane transmission grating | 05 |
| Q.4 | 05 |
| a) State and explain Meissner effect | |
| b) Explain type – I and type – II superconductor | 05 |
| c) Explain the construction and working of G.M. counter | 05 |
| Q.5 | 05 |
| a) Write a short note on CRT | |
| b) Write a short note on Laurent's half shade polarimeter | 05 |
| c) Write a short note on BCS theory | 05 |