PHY411: Final Semester Examination – Guidelines & Rules

MS21 Batch – 2024

Dates: **20th November 2024** (Thursday)
Venue: AB1-2TL2 (Nuclear Physics Lab)

Timing: Exam will be conducted in 5 batches with duration of 2 hours each (**55 minutes** for experiment and **55 minutes for analysis, report and viva**).
Schedule for each batch is as follows:
Batch 1 (MS2003 to MS21048): 09:30 to 11:20
Batch 2 (MS21051 to MS21107): 10:30 to 12:20
Batch 3 (MS21113 to MS21164): 11:30 to 13:20
Batch 4 (MS21167 to MS21242): 14:30 to 16:20
Batch 5 (MS21248 to MS21271 + All MP): 15:30 to 17:20

Note: NO Computer/LAPTOP Allowed for fitting or calcualtion. Only Calculator. Each one will bring 2 GRAPH papers along with required accessories (pencil, eraser, sharpner, etc.)

Evaluation weightage (EXAM only):

- 40-50% - experiment + data collection
- Remaining: for report writing + Viva

Note: Exam will proceed in the order of **Roll No.** More details later (after the last class and in the exam week).

Details/Instructions:

1) Evaluation will be done individually. The **exam** duration for each is **1 hour 50 minutes**. Out of this, the first **55 minutes** is **strictly** for DATA collection. One must **complete** the data gathering/taking by this time (55 mins, task will be appropriate for the allotted time). No excuse and extension accepted!

2) Data has to be physically written down on the sheet provided to you (*Mention your Roll no. on top of All loose A4 Sheets*). **Make sure** to get **4-5** of your **reading checked/verified** either by the TAs or us (*Prof. Shashi Dugad, Myself, Prof. Rajeev, and TAs*).

They will mark the data **Verified**. **This is your responsibility. Non-Verified** data files will not be considered at all.

3) You may bring a calculator (other electronics items are not allowed, including smart watches). If you get caught doing mal-practices, you will get **ZERO** and this will be reported to the Dean Academics.

4) After *the first* ***55 minutes***, you will shift to the side desk parallel to your instrument desk (to allow entry for the next batch). During this time, you will perform writing and calculation part and Viva too will be conducted (expected within the next 30-45 minutes)

5) While writing the experiment, please follow the standard practice -- Aim, Instruments and accessories used, connections, Working principle of the instrument and the underlying physical principle, a broad diagram of the instrumental set-up, Point-wise procedure of experiment, Results and your comments if any in the question.

6) Reach the lab (be present near the lab) 10 minutes before your scheduled time. **NO ENTRY allowed after 10 minutes of the start of each session**.

All the best,
Dr. Pankaj and Prof. Shashi Dugad

EXAM Instructions:

EXAM Rules: All the rules announced by the Dean Academics office regarding exams + additional stated in the previous & this email (**ONLY calculator is allowed**)

1) You have to remember every detail + relevant Formulas: Source details, decay channel & transition energies, half life + other relevant details + formula

We will only be providing you with instruments and relevant accessories + computer if necessary (and written in the question). **Any information in this regard will lead to 5% deduction out of the scored end-sem mark**

2) **Writing report:**

-- Should have Aim + **instrument label** on wh**ich experiment was** performed **(see on sides/front, eg GM-2, GRS-4, PHY411-2024-... etc)**

-- Equipments used (name of each and every component/accessories used in performing the experiment -- ***even the names of the connecting cables***, *failure on this will lead* to a ***FLAT 10% deduction*** out of the scored end-sem mark),

-- a sketch of connection between equipment with enough details that a newcomer can connect and perform the experiment

-- Value of all the input parameters that were kept fixed during the experiment (**10% deduction rule applicable here Too on Top of previous one**)

-- Basic working principle and the main mechanism responsible for the output signal

-- Pointwise mention of how the steps the way experiment was performed

-- Results+Conclusions Answer to queries if stated in the question sheet in pointwise manner + Radioactive Channel if source was used

3) **GRS:** Do not Power-on the circuit immediately. First set up the circuit then **show** to one of us and then Once Given Go Ahead, should power on and perform the experiment

4) Note to get **at least 2 data points checked/verified** at different stages of the experiment (not in One Go: One followed by the next).

In GM Case: (going up) 1 at rising part, at plateau part; Similarly 2 when stepping down

In GR Case: One for each source at the same voltage. If less than 4 data points, additional at the next operating voltage

The recording of the data to be done in front of us (myself, Co-instructor, or TAs) and then verified

In case of missing Data Verification checks, data will not be considered in evaluation at all and neither the report writing. ***NO Excuse will be entertained***!

All the best,
Dr. Pankaj and Prof. Sashi Dugad