

CERTIFICATION SCHEME FOR RADIATION PROTECTION OFFICER : NEW SYLLIBUS ON SECURITY

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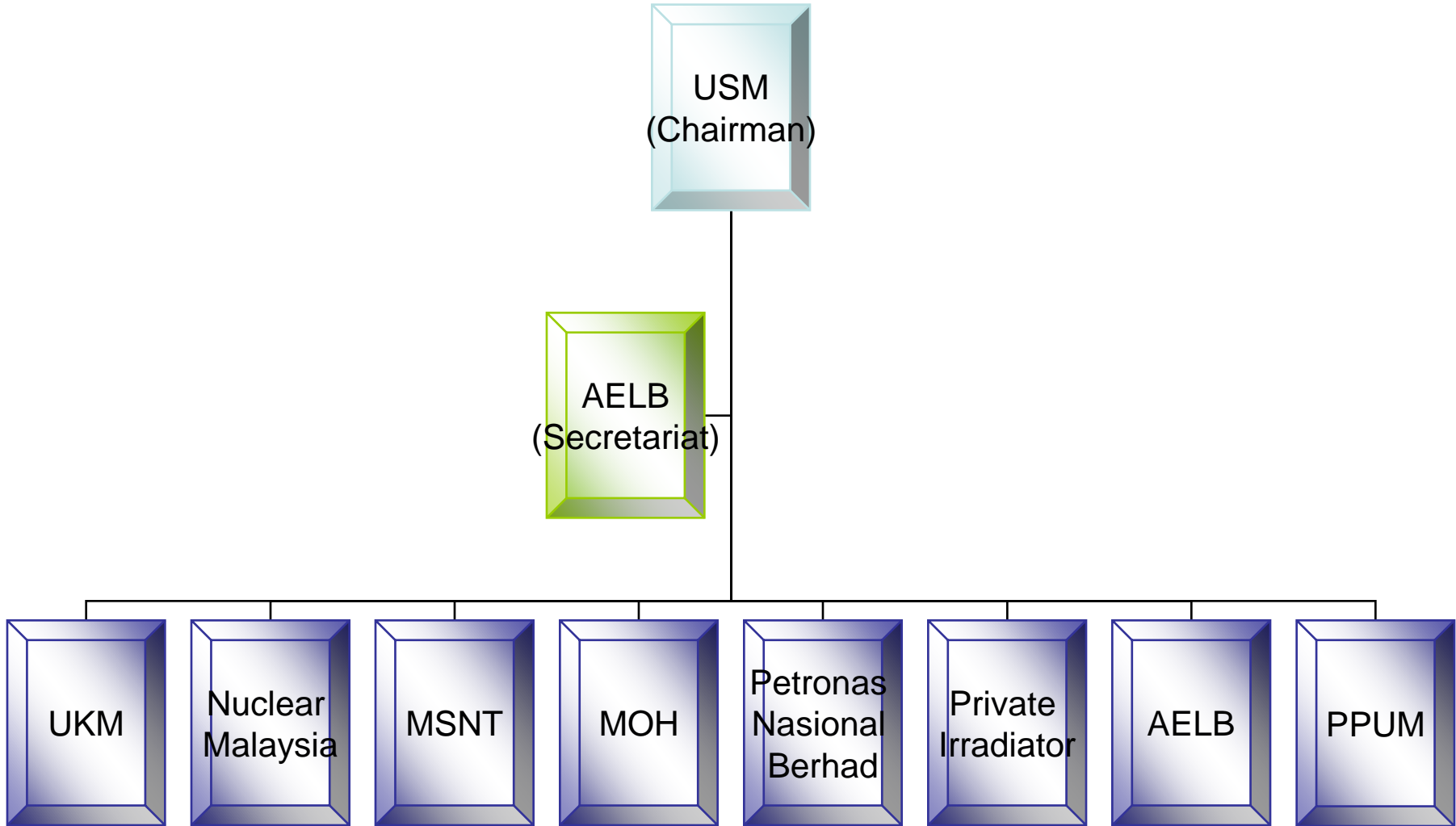


*National Committee for the Certification of
Radiation Protection Officer*

CONTENT

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MEMBERSHIP OF NCCRPO



FUNCTIONS OF NCCRPO

1. To prepare standard and guidelines for RPO certification examinations and accreditation of RPO Training Center.
2. To prepare questions, standards and guidelines for RPO Examination.
3. To conduct, analyse, inspect and confirm the results of RPO Examination.
4. To do audit to the Training Center and Examination Center for RPO.
5. To evaluate and endorse applications from agencies wishing to offer radiation protection courses and suggest to the Board for approval.
6. To evaluate and endorse applications from agencies wishing to be RPO Training Centre and suggest to the Board for approval.
7. To evaluate and endorse applications from agencies wishing to be RPO Examination Centre and suggest to the Board for approval.



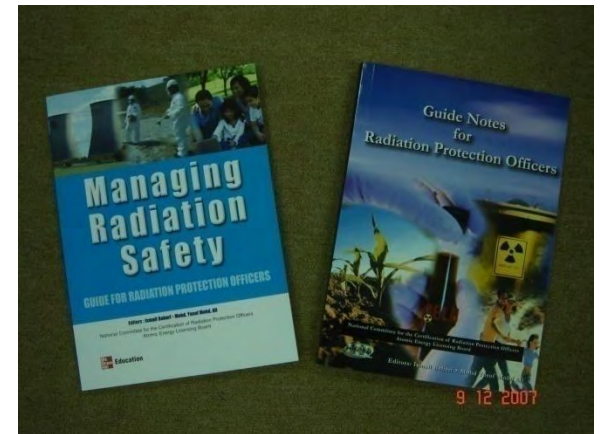
NCCRPO ACTIVITIES [1]

- To prepare standard and guidelines for RPO certification examinations and accreditation of RPO Training Center
 - RPO Certification Standard (LEM/TEK/44 Rev.2 [Part A])
 - Examination Center Recognition Standard (LEM/TEK/44 Rev.1 [Part B])
 - Training Center Recognition Standard (LEM/TEK/44 Rev.1 [Part C])
 - Application Guidelines to Sit for RPO Examination (LEM/TEK/44 Rev.2 [Part D])
 - RPO Examination Rules (LEM/TEK/44 Rev.1 [Part E])
 - Procedures to Handle RPO Certification Examination Discrepancies (LEM/TEK/44 [Part F])



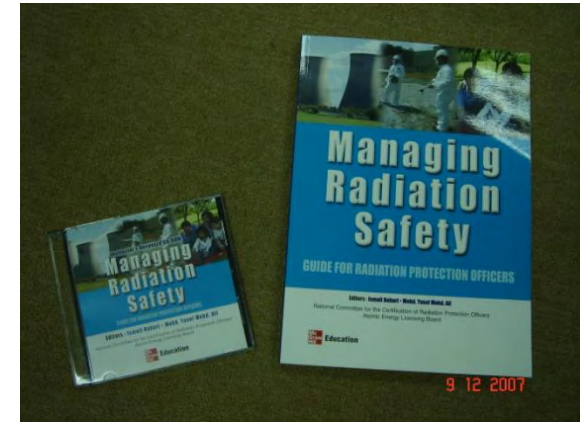
NCCRPO ACTIVITIES [2]

- Writing books to help in the dissemination of radiation protection knowledge (especially to those attending RPO Training Courses with a view of taking the examination since the content is based on the radiation protection course syllabus):
 - First Edition : “Guides Notes for RPO” – sold out.
 - Second Edition : “Managing Radiation Safety: Guide for RPO” – revised with additional contents – on sale now.
 - Past questions compilation book: in the process of compilation and editing – another way of helping participants to understand on radiation protection.



NCCRPO ACTIVITIES [3]

- Preparation of lecture slides:
 - Based on the book of “Managing Radiation Safety: Guide for RPO”.
 - To help the lecturers in their presentation that will cover the required syllabus.



NCCRPO ACTIVITIES [4]

- Prepared RPO Examination questions:
 - 13 sets for General
 - 13 sets for Gauges
 - 8 sets for Sales
 - 10 sets for Industrial Radiography
 - 8 sets for NORM/TENORM
 - 2 sets for Radiation Processing
 - 2 sets for Research and Teaching

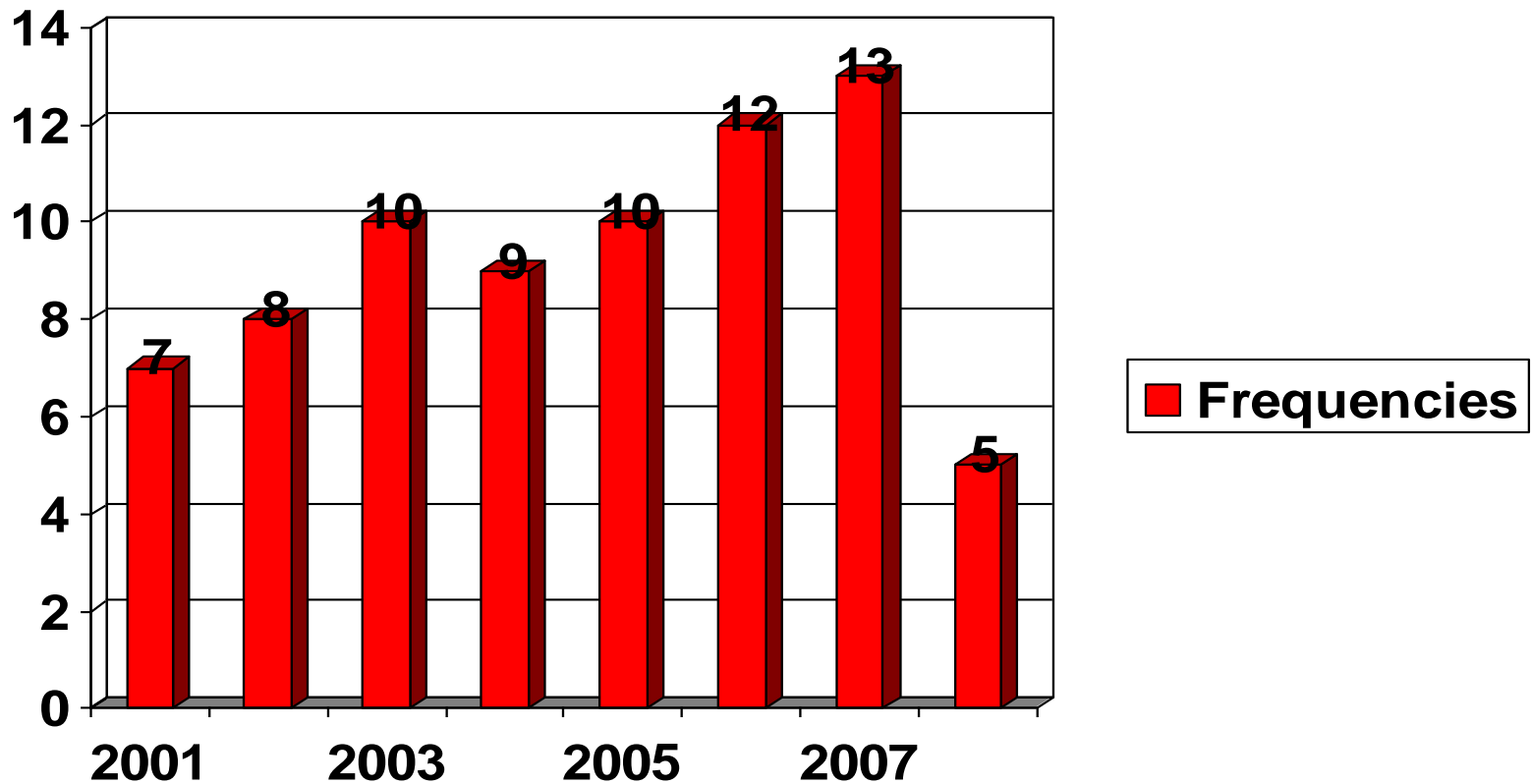
NCCRPO ACTIVITIES [4]

- In the process of editing and adding to the question banks:

- Gauges	-	1 set
- Sales	-	4 set
- Industrial Radiography	-	1 set
- Research and Teaching	-	3 set
- Radiation Processing	-	3 set
- NORM/TENORM	-	4 set
- Radiotherapy	-	3 set
- Nuclear Medicine	-	3 set
- Medical Radiography	-	3 set

NCCRPO ACTIVITIES [5]

FREQUENCIES OF RPO EXAMINATION FOR YEAR 2001
TILL JUNE 2008



NCCRPO ACTIVITIES [7]

- To do audit to the Training Center and Examination Center for RPO:

AGENCY	AUDIT DATES	AIMS OF AUDIT	RESULTS
Malaysia Nuclear Agency	13.03.2003 07.04.2005 18.10.2006 14.5.2008	Recognition as RPO Training Center and RPO Examination Center	Approved as RPO Training Center (all activities) and RPO Examination Center (Theory)
Universiti Kebangsaan Malaysia	20.07.2005	Recognition of Nuclear Science Programme as a RPO Training Course	Not comply with the NCCRPO standard as a RPO Training Course
Universiti Kebangsaan Malaysia	30.10.2007	Recognition of Post Graduate Diploma (PGD) Course as a RPO Training Course	PGD participants are allowed to sit for RPO Examination without attend RPO Training Course
Universiti Sains Malaysia	30.05.2007	Recognition of Post Graduate 5 (PGEC5) Course as a RPO Training Course	PGEC5 participants are allowed to sit for RPO Examination with a requirement of attending minimum 2 hours of Act 304 lecture
Radiation Safety Academy	29.01.2007	Recognition as RPO Training Center	Approved as RPO Training Center (gauges activities only)

NCCRPO ACTIVITIES [8 & 9]

- To evaluate and endorse applications from agencies wishing to be RPO Training Courses and suggest to the Board for approval:

Agencies	Evaluation Result
Malaysia Nuclear Agency	Approved (all activities)
Radiation Safety Academy	Approved (gauges)

- To evaluate and endorse applications from agencies wishing to be RPO Examination Centre and suggest to the Board for approval:

Agencies	Evaluation Result
Malaysia Nuclear Agency	Approved as RPO Examination Centre (Theory)



RPO EXAMINATION : QUALIFICATION (TRAINING)

TRAINING SCOPE	Table 2, LEM/TEK/44 Rev. 2 [Part A] MINIMUM TRAINING DURATION (HOUR) FOR EACH ACTIVITY*									
	RI	TN	PP	NT	PJ	PS	RT	PN	RP	KN
TOTAL HOUR	46	42	45	44	42	48	50	50	44	51

*ACTIVITY:

Category 1:

KN – Nuclear Facility
PS – Radiation Processing
RT - Radiotherapy

Category 2:

RI – Industrial Radiography

Category 3:

TN – Nuclear Gauges
PJ – Selling (other than radioactive material Category 1 and 2)
PP – Research and Teaching
NT – Activity involving NORM/TENORM
PN – Nuclear Medicine
RP – Medical Radiography

RPO EXAMINATION : QUALIFICATION (TRAINING) [1]

- GENERAL: Table 3, LEM/TEK/44 Rev. 2 [Part A]
 - Basic mathematic
 - Fundamentals of ionising radiation
 - Biological effects of radiation
 - Radiation protection principles
 - Instrumentations and methods in radiological measuring and monitoring
 - Transportation of radioactive materials
 - Radioactive waste management
 - Acts and regulations regulating the safe use of atomic energy in Malaysia
 - Management system of radiation safety and security of radioactive sources
 - Safety in maintenance
 - Security of radioactive sources

RPO EXAMINATION : QUALIFICATION (TRAINING) [2]

- SPECIFIC: CATEGORY 1: Table 3, LEM/TEK/44 Rev. 2 [Part A]
 - Safety and security in :
 - nuclear facility
 - radiation processing
 - radiotherapy
 - Planning and emergency procedures in :
 - nuclear facility
 - radiation processing
 - radiotherapy

Note: For user, supplier etc

RPO EXAMINATION : QUALIFICATION (TRAINING) [3]

- SPECIFIC: CATEGORY 2: Table 3, LEM/TEK/44 Rev. 2 [Part A]
 - Safety and security in industrial radiography
 - Planning and emergency procedures in industrial radiography

Note: For user, supplier etc

RPO EXAMINATION : QUALIFICATION (TRAINING) [4]

- SPECIFIC: CATEGORY 3: Table 3, LEM/TEK/44 Rev. 2 [Part A]
 - Safety and security in :
 - nuclear gauges
 - research and teaching
 - selling (other than radioactive material Category 1 and 2)
 - activity involving NORM/TENORM
 - nuclear medicine
 - medical radiography
 - Planning and emergency procedures in :
 - nuclear gauges
 - research and teaching
 - selling (other than radioactive material Category 1 and 2)
 - activity involving NORM/TENORM
 - nuclear medicine
 - medical radiography

RPO EXAMINATION : QUALIFICATION (EXPERIENCE)

Table 1, LEM/TEK/44 Rev. 2 [Part A] : ACADEMIC QUALIFICATION AND MINIMUM EXPERIENCE DURATION (MONTH)

NO	MINIMUM ACADEMIC QUALIFICATION	EXPERIENCE DURATION FOR EACH ACTIVITY* (MONTH)									
		RI	T	PP	N	PJ	PS	RT	PN	RP	KN
1.	Degree (engineering, science or medical)	6	6	6	6	6	6	6	6	6	6
2.	Diploma (engineering or science)	12	6	12	12	6	12	-	-	12	-
3.	Certificate (SPM, STPM, polytechnic) or equivalent	36	24	36	36	24	36	-	-	-	-

***ACTIVITY:**

Category 1: KN – Nuclear Facility
 PS – Radiation Processing
 RT - Radiotherapy

Category 2: RI – Industrial Radiography

Category 3: TN – Nuclear Gauges
 PJ – Selling (other than radioactive material Category 1 and 2)
 PP – Research and Teaching
 NT – Activity involving NORM/TENORM
 PN – Nuclear Medicine
 RP – Medical Radiography

"Pengalaman" ditafsirkan sebagai pengalaman bekerja dalam bidang berkaitan.



RPO EXAMINATION : FORMAT

Theory Examination

General Part

- o Objective - 30 questions
- o Examination time - 30 minutes

Theory Examination

Specific Part

- o Objective - 20 questions
- o Subjective - 6 questions (2 general and 4 specific), answer 4 questions only
- o Examination time - 2 hour

Practical Examination

Laboratory

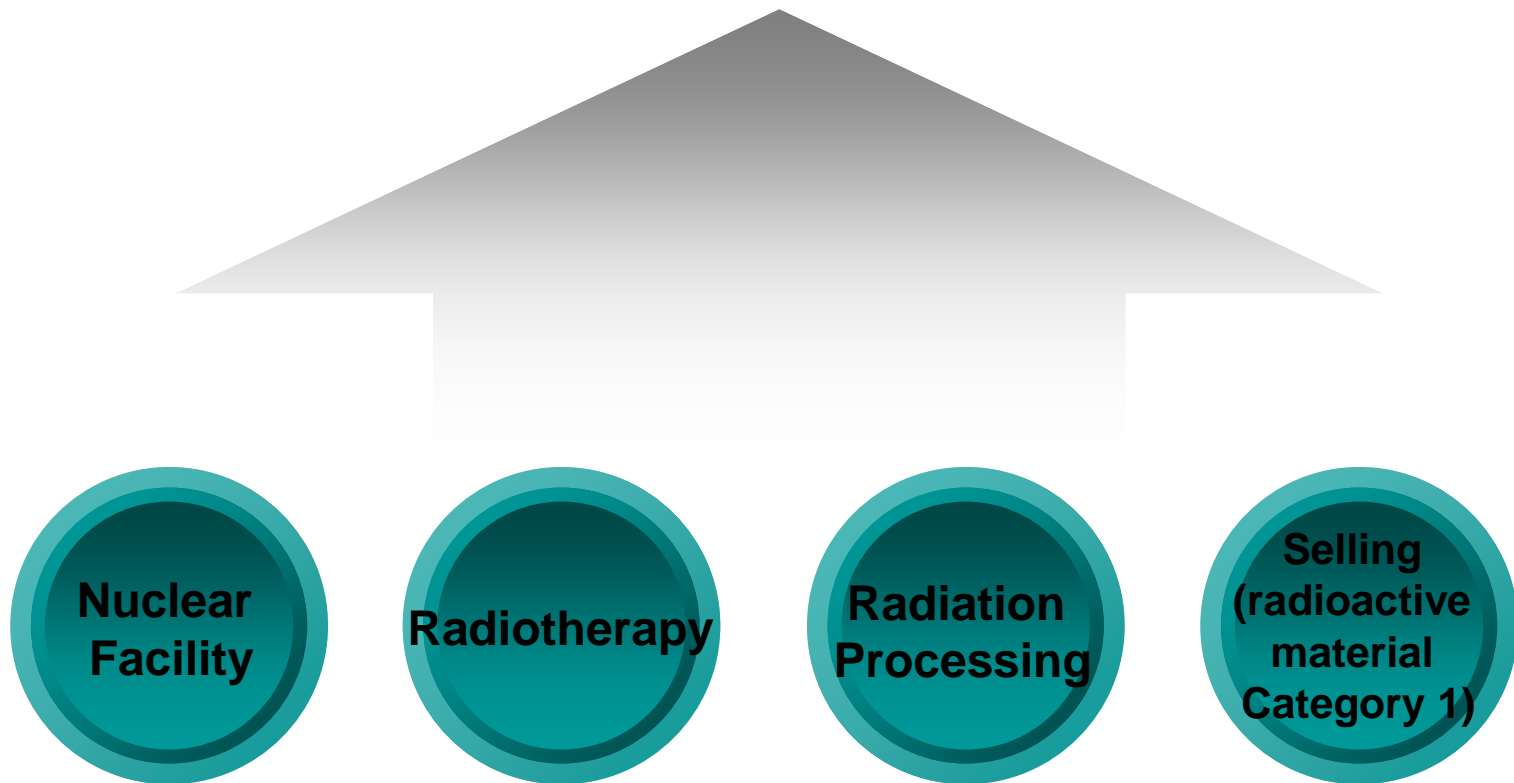
- o 2 practical
- o Examination time - 2 hour

Written

- o 6 questions
- o Examination time - 1 hour

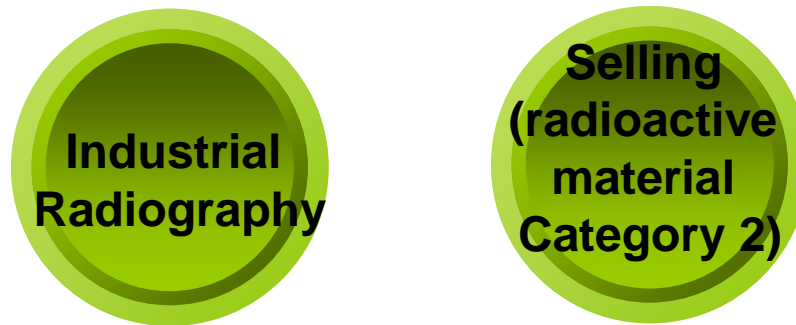
RPO EXAMINATION : FORMAT

Theory Examination: Specific Part: Category 1



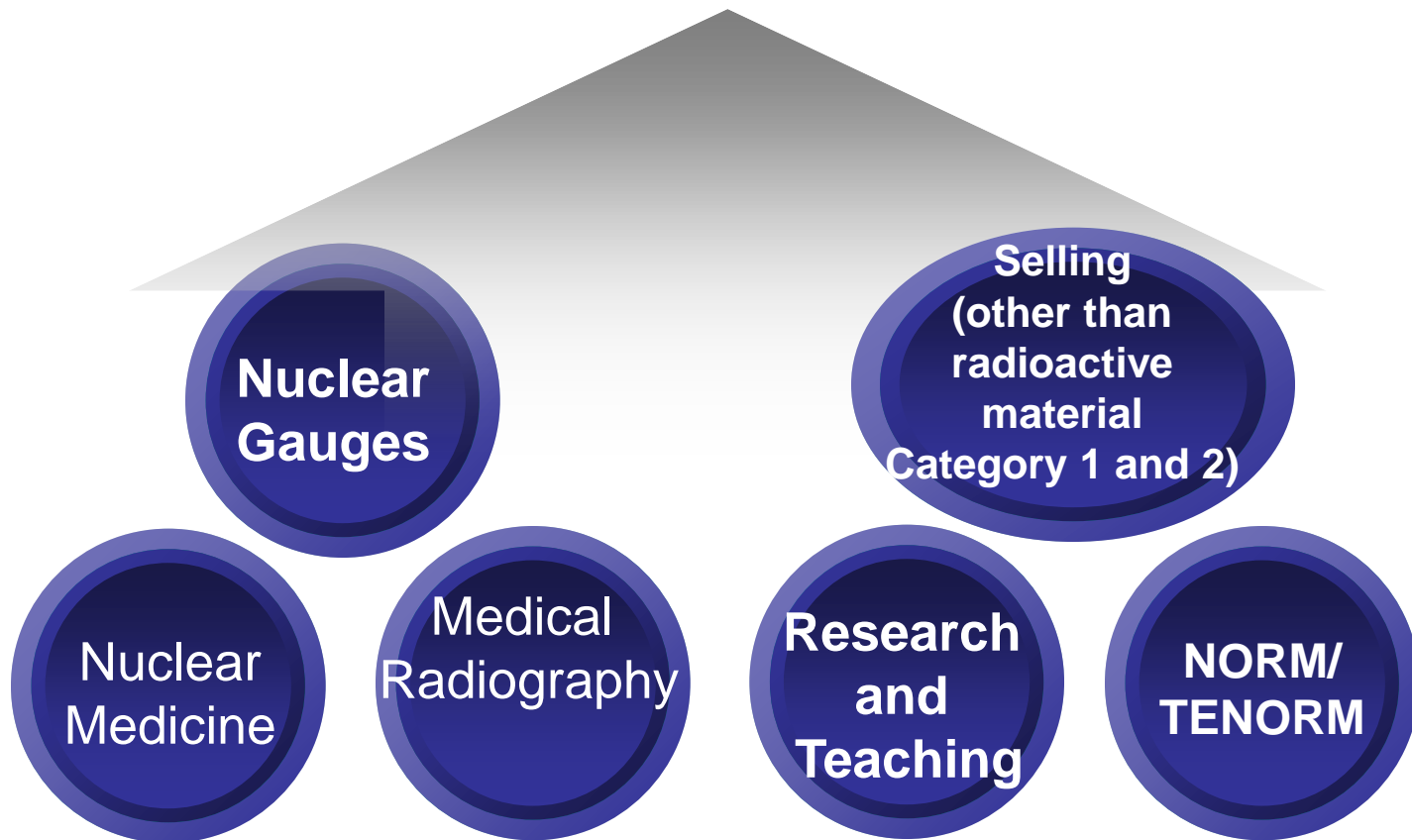
RPO EXAMINATION : FORMAT

Theory Examination: Specific Part: Category 2



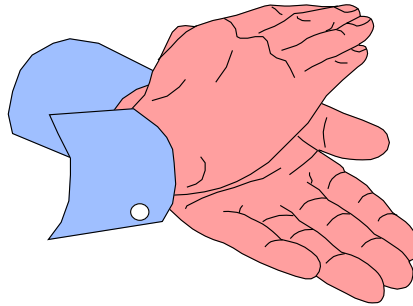
RPO EXAMINATION : FORMAT

Theory Examination: Specific Part: Category 3

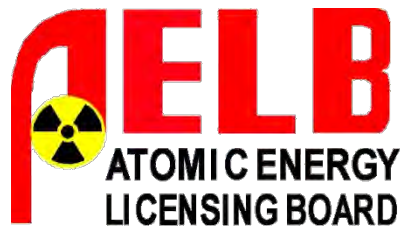


FUTURE OUTLOOK AND POSSIBLE PLANS

- To prepare new standard and guidelines:
 - Guidelines for Experiments for Specific Courses (LEM/TEK/44 [Part G])
- To create examinations for new fields such as nuclear facility, radiotherapy, nuclear medicine and medical radiography.
- To prepare new questions in order to increase the question banks.
- To encourage more agencies to provide trainings.
- To establish syllabus for continuous education programme (CEP) and review syllabus for awareness and refresher course.
- To help AELB to create their own laboratories for RPO Practical Examinations (currently using UKM facilities).
- To establish *Computer Based Examination (CBE)* .
- To look into the possibility of creating a new position of Radiation Protection Adviser and their roles, job specifications, trainings and examination.
- To review and propose the possibility of coordination of RPO-SHO.



THANK YOU



*National Committee for the Certification of
Radiation Protection Officer*