

801852- QUALITY CONTROL RADIOBIOLOGY AND RADIATION SAFETY UNIT-8-QA AND RADIATION PROTECTION

I. ELABORATE ON

10 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
1	Explain in detail the role of a radiographer in planning, quality assurance (QA), and radiation protection, including personnel and area monitoring, and the setup of a new X-ray unit as per AERB specifications.	August 2011	Analysis
2	Describe the responsibilities of a technologist in the radiology department, focusing on staff requirements, site planning for X-ray and dark rooms, and registration of X-ray equipment installations.	February 2012	Understanding
3	Discuss the role of a radiographer in QA and radiation protection, including inspection of X-ray installations, evaluation of workload versus radiation factors, and occupational exposure tools/devices.	August 2012	Analysis
4	Explain the planning of X-ray rooms and dark rooms, detailing AERB guidelines, certification processes, and the role of radiographers in adhering to ICRP, NRPB, and WHO radiation protection standards.	February 2013	Analysis
5	Describe the technologist's role in personnel monitoring, setting up a new X-ray unit, and implementing patient dose reduction guidance levels, with reference to pregnancy and radiation protection.	August 2013	Understanding
6	Elaborate on the radiographer's responsibilities in radiation protection, including area monitoring, workload evaluation, and the investigation of radiation incidents involving X-ray equipment.	February 2014	Analysis
7	Discuss the AERB specifications for site planning, staff requirements, and the role of radiographers in occupational exposure protection, including dose constraints for comforters of patients.	August 2014	Analysis
8	Explain the process of registering and certifying X-ray equipment installations, focusing on the radiographer's role in QA, planning, and adherence to NCRP and WHO guidelines.	February 2015	Understanding
9	Describe the role of a radiographer in evaluating workload versus radiation factors, implementing radiation protection tools/devices, and managing overexposure investigations with case studies.	August 2015	Analysis
10	Discuss the guidelines from ICRP, NRPB, and WHO for radiation protection, including the radiographer's role in planning X-ray rooms, area monitoring, and patient dose reduction strategies.	February 2016	Analysis

II. WRITE A NOTE ON

5 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
1	Explain in detail the role of a radiographer in planning, quality assurance (QA), and radiation protection, including personnel and area monitoring, and the setup of a new X-ray unit as per AERB specifications.	August 2011	Analysis
2	Describe the responsibilities of a technologist in the radiology department, focusing on staff requirements, site planning for X-ray and dark rooms, and registration of X-ray equipment installations.	February 2012	Understanding
3	Discuss the role of a radiographer in QA and radiation protection, including inspection of X-ray installations, evaluation of workload versus radiation factors, and occupational exposure tools/devices.	August 2012	Analysis
4	Explain the planning of X-ray rooms and dark rooms, detailing AERB guidelines, certification processes, and the role of radiographers in adhering to ICRP, NRPB, and WHO radiation protection standards.	February 2013	Analysis
5	Describe the technologist's role in personnel monitoring, setting up a new X-ray unit, and implementing patient dose reduction guidance levels, with reference to pregnancy and radiation protection.	August 2013	Understanding
6	Elaborate on the radiographer's responsibilities in radiation protection, including area monitoring, workload evaluation, and the investigation of radiation incidents involving X-ray equipment.	February 2014	Analysis
7	Discuss the AERB specifications for site planning, staff requirements, and the role of radiographers in occupational exposure protection, including dose constraints for comforters of patients.	August 2014	Analysis
8	Explain the process of registering and certifying X-ray equipment installations, focusing on the radiographer's role in QA, planning, and adherence to NCRP and WHO guidelines.	February 2015	Understanding
9	Describe the role of a radiographer in evaluating workload versus radiation factors, implementing radiation protection tools/devices, and managing overexposure investigations with case studies.	August 2015	Analysis
10	Discuss the guidelines from ICRP, NRPB, and WHO for radiation protection, including the radiographer's role in planning X-ray rooms, area monitoring, and patient dose reduction strategies.	February 2016	Analysis

III. WRITE SHORT NOTE ON

3 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
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S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
1	Define role of radiographer in planning.	August 2011	Knowledge
2	Define role in quality assurance (QA).	August 2011	Knowledge
3	Define role in radiation protection.	August 2011	Knowledge
4	Define personnel monitoring.	February 2012	Knowledge
5	Define area monitoring.	February 2012	Knowledge
6	Define setting up a new X-ray unit.	August 2012	Knowledge
7	Define staff requirements.	August 2012	Knowledge
8	Define AERB specifications.	February 2013	Knowledge
9	Define site planning guidelines.	February 2013	Knowledge
10	Define mandatory guidelines for X-ray rooms.	August 2013	Knowledge
11	Define planning of dark rooms.	August 2013	Knowledge
12	Define inspection of installations.	February 2014	Knowledge
13	Define registration of equipment.	February 2014	Knowledge
14	Define certification process.	August 2014	Knowledge
15	Define workload evaluation.	August 2014	Knowledge
16	Define radiation factors.	February 2015	Knowledge
17	Define occupational exposure.	February 2015	Knowledge
18	Define protection tools/devices.	August 2015	Knowledge
19	Define ICRP guidelines.	August 2015	Knowledge
20	Define NRPB guidelines.	February 2016	Knowledge
21	Define NCRP guidelines.	February 2016	Knowledge
22	Define WHO guidelines.	August 2016	Knowledge
23	Define pregnancy and radiation protection.	August 2016	Knowledge
24	Define patient dose reduction levels.	February 2017	Knowledge
25	Define dose constraints for comforters.	February 2017	Knowledge
26	Define radiation incidents.	February 2018	Knowledge
27	Define overexposure investigations.	February 2018	Knowledge
28	Define case studies in incidents.	August 2018	Knowledge
29	Define technologist monitoring role.	February 2019	Knowledge
30	Define AERB site planning.	August 2019	Knowledge
31	Define X-ray room planning.	February 2020	Knowledge
32	Define dark room planning.	March 2021	Knowledge
33	Define installation inspection.	April 2022	Knowledge
34	Define equipment registration.	November 2022	Knowledge
35	Define certification standards.	April 2023	Knowledge
36	Define workload assessment.	April 2024	Knowledge
37	Define radiation factor impact.	August 2011	Knowledge
38	Define occupational protection.	February 2012	Knowledge
39	Define ICRP safety standards.	August 2012	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
40	Define NRPB safety standards.	February 2013	Knowledge
41	Define NCRP safety standards.	August 2013	Knowledge
42	Define WHO safety standards.	February 2014	Knowledge
43	Define pregnancy safety protocols.	August 2014	Knowledge
44	Define patient dose guidelines.	February 2015	Knowledge
45	Define comforter dose limits.	August 2015	Knowledge
46	Define radiation incident management.	February 2016	Knowledge
47	Define overexposure analysis.	August 2016	Knowledge
48	Define case study analysis.	February 2017	Knowledge
49	Define technologist safety role.	February 2018	Knowledge
50	Define AERB planning rules.	August 2018	Knowledge
51	Define X-ray room setup.	February 2019	Knowledge
52	Define dark room setup.	August 2019	Knowledge
53	Define installation checks.	February 2020	Knowledge
54	Define registration process.	March 2021	Knowledge
55	Define certification process.	April 2022	Knowledge
56	Define workload monitoring.	November 2022	Knowledge
57	Define radiation factor monitoring.	April 2023	Knowledge
58	Define occupational safety tools.	April 2024	Knowledge
59	Define ICRP protection measures.	August 2011	Knowledge
60	Define NRPB protection measures.	February 2012	Knowledge
61	Define NCRP protection measures.	August 2012	Knowledge
62	Define WHO protection measures.	February 2013	Knowledge
63	Define pregnancy protection rules.	August 2013	Knowledge
64	Define patient dose reduction.	February 2014	Knowledge
65	Define comforter dose constraints.	August 2014	Knowledge
66	Define radiation incident protocols.	February 2015	Knowledge
67	Define overexposure investigations.	August 2015	Knowledge
68	Define case study protocols.	February 2016	Knowledge
69	Define technologist monitoring duties.	August 2016	Knowledge
70	Define AERB site guidelines.	February 2017	Knowledge
71	Define X-ray room design.	February 2018	Knowledge
72	Define dark room design.	August 2018	Knowledge
73	Define installation inspection standards.	February 2019	Knowledge
74	Define registration standards.	August 2019	Knowledge
75	Define certification standards.	February 2020	Knowledge
76	Define workload evaluation standards.	March 2021	Knowledge
77	Define radiation factor evaluation.	April 2022	Knowledge
78	Define occupational protection devices.	November 2022	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
79	Define ICRP safety guidelines.	April 2023	Knowledge
80	Define NRPB safety guidelines.	April 2024	Knowledge
81	Define NCRP safety guidelines.	August 2011	Knowledge
82	Define WHO safety guidelines.	February 2012	Knowledge
83	Define pregnancy safety guidelines.	August 2012	Knowledge
84	Define patient dose guidance.	February 2013	Knowledge
85	Define comforter dose guidance.	August 2013	Knowledge
86	Define radiation incident guidelines.	February 2014	Knowledge
87	Define overexposure guidelines.	August 2014	Knowledge
88	Define case study guidelines.	February 2015	Knowledge
89	Define technologist safety duties.	August 2015	Knowledge
90	Define AERB safety specifications.	February 2016	Knowledge
91	Define X-ray room safety.	August 2016	Knowledge
92	Define dark room safety.	February 2017	Knowledge
93	Define installation safety checks.	February 2018	Knowledge
94	Define registration safety.	August 2018	Knowledge
95	Define certification safety.	February 2019	Knowledge
96	Define workload safety.	August 2019	Knowledge
97	Define radiation factor safety.	February 2020	Knowledge
98	Define occupational safety measures.	March 2021	Knowledge
99	Define ICRP safety protocols.	April 2022	Knowledge
100	Define NRPB safety protocols.	November 2022	Knowledge