SNS COLLEGE OF ALLIED HEALTH SCIENCE, COIMBATORE –35
(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai)
B.Sc.RADIOGRAPHY AND IMAGING TECHNOLOGY

801852- QUALITY CONTROL RADIOBIOLOGY AND RADIATION SAFTEY
UNIT5-QA IN DIAGNOSTIC RADIOLOGY

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 meaning of Quality Assurance (QA) in diagnostic radiology, including acceptance testing, quality control tests, and the benefits of QA procedures in an imaging department as per NABH guidelines.	August 2011	Analysis
2	Describe the aspects of a QA program in radiology, focusing on equipment and staff requirements, verification of optical and radiation field congruence, and patient dose management.	February 2012	Understanding
3	Discuss the quality control tests in diagnostic radiology, including beam alignment, focal spot size, and special techniques like mammography and CT dose modulation, with reference to NABH standards.	August 2012	Analysis
4	Explain the process of acceptance testing and QA in radiology, detailing the linearity of tube current (mA) and timer, HVT, and total tube filter verification, along with contrast resolution.	February 2013	Analysis
5	Describe the role of QA in diagnostic radiology, including contact between film and intensifying screen, grid alignment, and the implementation of CT dose modulation techniques.	August 2013	Understanding
6	Elaborate on the benefits of QA procedures in an imaging department, focusing on applied potential testing, equipment requirements, and patient dose management as per NABH guidelines.	February 2014	Analysis
7	Discuss the equipment and staff requirements for a QA program in radiology, including verification of beam alignment, focal spot size, and special techniques like mammography.	August 2014	Analysis
8	Explain the meaning of terms used in QA, including optical and radiation field congruence, HVT, and total tube filter, highlighting their role in ensuring quality in diagnostic radiology.	February 2015	Understanding
9	Describe the QA procedures for special techniques like CT dose modulation and mammography, including contrast resolution, grid alignment, and adherence to NABH guidelines.	August 2015	Analysis
10	Discuss the quality assurance process in diagnostic radiology, focusing on linearity of tube current, contact between film and screen, and patient dose management 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 Quality Assurance (QA) in diagnostic radiology.	August 2011	Understanding
2	Describe acceptance testing in radiology.	August 2011	Knowledge
3	What are quality control tests? Explain briefly.	August 2011	Understanding
4	Discuss the meaning of QA program terms.	February 2012	Knowledge
5	Explain the aspects of a QA program.	February 2012	Understanding
6	Describe equipment requirements for QA.	February 2012	Understanding
7	Explain staff requirements in QA procedures.	August 2012	Understanding
8	Discuss the benefits of QA in imaging departments.	August 2012	Analysis
9	What are NABH guidelines for QA? Explain.	February 2013	Knowledge
10	Explain verification of optical and radiation field congruence.	February 2013	Understanding
11	Describe beam alignment testing.	August 2013	Knowledge
12	Explain focal spot size measurement.	August 2013	Understanding
13	Discuss linearity of tube current (mA) and timer.	February 2014	Analysis
14	What is applied potential testing? Explain.	February 2014	Understanding
15	Describe HVT and total tube filter verification.	August 2014	Knowledge
16	Explain contact between film and intensifying screen.	August 2014	Understanding
17	Discuss contrast resolution in QA.	February 2015	Knowledge
18	Explain grid alignment techniques.	February 2015	Understanding
19	Describe special techniques in mammography.	August 2015	Understanding
20	Explain CT dose modulation in QA.	August 2015	Understanding
21	Discuss patient dose management.	February 2016	Knowledge
22	Explain QA equipment maintenance.	February 2016	Understanding
23	Describe staff training for QA.	August 2016	Knowledge
24	Explain NABH compliance in radiology.	February 2017	Understanding
25	Discuss optical field congruence testing.	February 2018	Analysis
26	Explain radiation field congruence verification.	August 2018	Understanding
27	Describe focal spot size impact on image quality.	February 2019	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
28	Explain mA linearity testing methods.	August 2019	Understanding
29	Discuss timer accuracy in QA.	February 2020	Analysis
30	Explain HVT measurement techniques.	March 2021	Understanding
31	Describe total tube filter evaluation.	April 2022	Knowledge
32	Explain film-screen contact assessment.	November 2022	Understanding
33	Discuss contrast resolution standards.	April 2023	Analysis
34	Explain grid alignment procedures.	April 2024	Understanding
35	Describe mammography QA protocols.	August 2011	Knowledge
36	Explain CT dose modulation benefits.	February 2012	Understanding
37	Discuss patient dose reduction strategies.	August 2012	Analysis
38	Explain QA program implementation.	February 2013	Understanding
39	Describe equipment calibration in QA.	August 2013	Knowledge
40	Explain staff role in QA compliance.	February 2014	Understanding

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
1	Define Quality Assurance (QA).	August 2011	Knowledge
2	Define acceptance testing.	August 2011	Knowledge
3	Define quality control tests.	August 2011	Knowledge
4	Define QA program terms.	February 2012	Knowledge
5	Define aspects of QA program.	February 2012	Knowledge
6	Define equipment requirements.	August 2012	Knowledge
7	Define staff requirements.	August 2012	Knowledge
8	Define benefits of QA.	February 2013	Knowledge
9	Define NABH guidelines.	February 2013	Knowledge
10	Define optical and radiation field congruence.	August 2013	Knowledge
11	Define beam alignment.	August 2013	Knowledge
12	Define focal spot size.	February 2014	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
13	Define linearity of tube current (mA).	February 2014	Knowledge
14	Define timer accuracy.	August 2014	Knowledge
15	Define applied potential.	August 2014	Knowledge
16	Define HVT.	February 2015	Knowledge
17	Define total tube filter.	February 2015	Knowledge
18	Define film-screen contact.	August 2015	Knowledge
19	Define contrast resolution.	August 2015	Knowledge
20	Define grid alignment.	February 2016	Knowledge
21	Define mammography techniques.	February 2016	Knowledge
22	Define CT dose modulation.	August 2016	Knowledge
23	Define patient dose management.	August 2016	Knowledge
24	Define QA equipment.	February 2017	Knowledge
25	Define staff training.	February 2018	Knowledge
26	Define NABH compliance.	August 2018	Knowledge
27	Define optical field testing.	February 2019	Knowledge
28	Define radiation field testing.	August 2019	Knowledge
29	Define focal spot measurement.	February 2020	Knowledge
30	Define mA linearity.	March 2021	Knowledge
31	Define timer testing.	April 2022	Knowledge
32	Define HVT evaluation.	November 2022	Knowledge
33	Define total filter assessment.	April 2023	Knowledge
34	Define film-screen assessment.	April 2024	Knowledge
35	Define contrast resolution test.	August 2011	Knowledge
36	Define grid alignment check.	February 2012	Knowledge
37	Define mammography QA.	August 2012	Knowledge
38	Define CT dose control.	February 2013	Knowledge
39	Define patient dose reduction.	August 2013	Knowledge
40	Define QA implementation.	February 2014	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
41	Define equipment calibration.	August 2014	Knowledge
42	Define staff role in QA.	February 2015	Knowledge
43	Define optical congruence.	August 2015	Knowledge
44	Define radiation congruence.	February 2016	Knowledge
45	Define beam alignment test.	August 2016	Knowledge
46	Define focal spot impact.	February 2017	Knowledge
47	Define mA linearity check.	February 2018	Knowledge
48	Define timer accuracy test.	August 2018	Knowledge
49	Define HVT measurement.	February 2019	Knowledge
50	Define total filter verification.	August 2019	Knowledge
51	Define film-screen contact test.	February 2020	Knowledge
52	Define contrast resolution standard.	March 2021	Knowledge
53	Define grid alignment procedure.	April 2022	Knowledge
54	Define mammography protocol.	November 2022	Knowledge
55	Define CT dose modulation tech.	April 2023	Knowledge
56	Define patient dose strategy.	April 2024	Knowledge
57	Define QA program setup.	August 2011	Knowledge
58	Define equipment maintenance.	February 2012	Knowledge
59	Define staff compliance.	August 2012	Knowledge
60	Define NABH standards.	February 2013	Knowledge
61	Define optical field alignment.	August 2013	Knowledge
62	Define radiation field alignment.	February 2014	Knowledge
63	Define focal spot size effect.	August 2014	Knowledge
64	Define mA linearity standard.	February 2015	Knowledge
65	Define timer precision.	August 2015	Knowledge
66	Define HVT role.	February 2016	Knowledge
67	Define total filter function.	August 2016	Knowledge
68	Define film-screen quality.	February 2017	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
69	Define contrast resolution method.	February 2018	Knowledge
70	Define grid alignment standard.	August 2018	Knowledge
71	Define mammography QA test.	February 2019	Knowledge
72	Define CT dose reduction.	August 2019	Knowledge
73	Define patient dose limit.	February 2020	Knowledge
74	Define QA equipment use.	March 2021	Knowledge
75	Define staff training program.	April 2022	Knowledge
76	Define NABH certification.	November 2022	Knowledge
77	Define optical field check.	April 2023	Knowledge
78	Define radiation field check.	April 2024	Knowledge
79	Define focal spot test.	August 2011	Knowledge
80	Define mA linearity measure.	February 2012	Knowledge
81	Define timer accuracy check.	August 2012	Knowledge
82	Define HVT assessment.	February 2013	Knowledge
83	Define total filter check.	August 2013	Knowledge
84	Define film-screen contact check.	February 2014	Knowledge
85	Define contrast resolution tool.	August 2014	Knowledge
86	Define grid alignment tool.	February 2015	Knowledge
87	Define mammography QA procedure.	August 2015	Knowledge
88	Define CT dose modulation test.	February 2016	Knowledge
89	Define patient dose control.	August 2016	Knowledge
90	Define QA program evaluation.	February 2017	Knowledge
91	Define equipment reliability.	February 2018	Knowledge
92	Define staff responsibility.	August 2018	Knowledge
93	Define NABH audit.	February 2019	Knowledge
94	Define optical alignment test.	August 2019	Knowledge
95	Define radiation alignment test.	February 2020	Knowledge
96	Define focal spot quality.	March 2021	Knowledge

S.No	Question	Reference (Exam Year)	Bloom's Taxonomy
97	Define mA linearity test.	April 2022	Knowledge
98	Define timer reliability.	November 2022	Knowledge
99	Define HVT standard.	April 2023	Knowledge
100	Define total filter standard.	April 2024	Knowledge