

National Board of Examinations

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| Question Paper Name : | DNB Radiation Oncology Paper1 |
| Subject Name : | DNB Radiation Oncology Paper1 |
| Creation Date : | 2022-06-25 17:18:21 |
| Duration : | 180 |
| Share Answer Key With Delivery Engine : | No |
| Actual Answer Key : | No |

DNB Radiation Oncology Paper1

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| Group Number : | 1 |
| Group Id : | 3271871177 |
| Group Maximum Duration : | 0 |
| Group Minimum Duration : | 180 |
| Show Attended Group? : | No |
| Edit Attended Group? : | No |
| Break time : | 0 |
| Group Marks : | 100 |
| Is this Group for Examiner? : | No |
| Examiner permission : | Cant View |
| Show Progress Bar? : | No |

DNB Radiation Oncology Paper1

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| Section Id : | 3271871180 |
| Section Number : | 1 |

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|---|------------|
| Section type : | Offline |
| Mandatory or Optional : | Mandatory |
| Number of Questions to be attempted : | 10 |
| Section Marks : | 100 |
| Enable Mark as Answered Mark for Review and Clear Response : | Yes |
| Maximum Instruction Time : | 0 |
| Sub-Section Number : | 1 |
| Sub-Section Id : | 3271871184 |
| Question Shuffling Allowed : | No |

Question Number : 1 Question Id : 32718710822 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Please write your answers in the answer booklet within the allotted pages as follows:-

| Question Number | Answer to be attempted within | Question Number | Answer to be attempted within |
|-----------------|-------------------------------|-----------------|-------------------------------|
| Q. 1 | Page 1-5 | Q. 6 | Page 26-30 |
| Q. 2 | Page 6-10 | Q. 7 | Page 31-35 |
| Q. 3 | Page 11-15 | Q. 8 | Page 36-40 |
| Q. 4 | Page 16-20 | Q. 9 | Page 41-45 |
| Q. 5 | Page 21-25 | Q. 10 | Page 46-50 |

- Describe with a schematic diagram the anatomy and lymphatic drainage of rectum. [3]
- Elaborate the role of radiotherapy in the management of carcinoma rectum. [5]
- What do you understand by TNT in rectal cancer? [2]

Question Number : 2 Question Id : 32718710823 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- Describe screening programme for Carcinoma Cervix in India. [3]
- What is the role of HPV vaccination in the prevention of Carcinoma Cervix. [2]
- Describe the external beam radiotherapy planning process in Carcinoma Cervix. [5]

Question Number : 3 Question Id : 32718710824 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Draw a graph showing the comparison of depth dose distribution of photon, proton, and electrons. [2]
- b) Describe FLASH radiotherapy. [3]
- c) Describe the different types of dose volume histograms with pros and cons of each. [5]

Question Number : 4 Question Id : 32718710825 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Describe randomization. [3]
- b) What is the p-value? [2]
- c) Describe the Levels and Grades of evidence. [5]

Question Number : 5 Question Id : 32718710826 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) What are the various types of interaction of radiation with matter? [3]
- b) Describe the role of radiotherapy in benign conditions with examples. [4+3]

Question Number : 6 Question Id : 32718710827 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) What are the unsealed radioisotopes? [2]
- b) Enumerate three uses of unsealed radioisotopes in Oncology. [3]
- c) Describe the structure of Cobalt-60 teletherapy source and give a schematic diagram of its decay. [5]

Question Number : 7 Question Id : 32718710828 Question Type : SUBJECTIVE Consider As

Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) What is the evidence to describe the role of regional nodal radiation in carcinoma breast? [5]
- b) What are the criteria for breast conservation therapy of carcinoma breast? [5]

Question Number : 8 Question Id : 32718710829 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Describe the role of total-body irradiation: Indications, techniques and dose delivered. [10]

Question Number : 9 Question Id : 32718710830 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) What is the full form of NPCDCS, how will you set up screening and early detection of cancers covered under it? [5]
- b) What is the number of Cancer Registries in India? Describe the steps of setting up of a cancer registry in India. [3+2]

Question Number : 10 Question Id : 32718710831 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Describe the mechanism of cell death following radiation. [5]
- b) Write advantages and limitations of LQ model. [5]