

P.G.DIP. in Biomedical Electronics Semester-I Examination
1-BME-1 MEDICAL PHYSICS

Time : Three Hours]

[Maximum Marks : 40

N.B. :— (1) All questions carry equal marks.

(2) Solve **one** question from each alternative.

(3) Draw neat sketches wherever necessary.

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| 1. | (a) Explain the natural and artificial Radioactivity. | 4 |
| | (b) What are different types of radiation ? Give their applications. | 4 |

OR

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| | (p) Explain the electromagnetic spectrum with diagram. | 4 |
| | (q) State the uses of radionuclides in medicine and technology. | 4 |
| 2. | (a) Explain in detail single hit and multi hit "Target Theory". | 8 |

OR

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| | (p) Explain the effect of radiation on cells. | 4 |
| | (q) Explain how DNA gets damaged due to radiation. | 4 |
| 3. | (a) What is Somatic effect of radiation ? Explain with suitable examples. | 8 |

OR

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| | (p) Explain the effect of radiation on : | |
| | (i) Embryo | |
| | (ii) Skin. | 8 |
| 4. | (a) Explain in detail "Dose Response Relationship". | 8 |

OR

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| | (p) Explain gene controlled hereditary disease. | 4 |
| | (q) State the various protection standards in Radiation theory. | 4 |
| 5. | (a) Explain the term "Phototherapy". | 4 |
| | (b) Write the characteristics of laser radiation. | 4 |

OR

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| | (p) What are the biological effects of laser radiation ? | 4 |
| | (q) Explain the disadvantages of photochemotherapy. | 4 |