



MANIPAL ACADEMY OF HIGHER EDUCATION

**SECOND SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - AUG/SEPT
2018**

**SUBJECT: BMRT 108/BRTT 106 - RADIOBIOLOGY
(2016 SCHEME/2016 RV SCHEME)**

Monday, August 27, 2018 (10.00 - 13.00)

Marks: 100

Duration: 180 mins.

- 1A) Describe the radiolysis of water and its biological significance. (20)
- 1B) What are acute radiation syndromes? Describe in detail any one of the syndromes. (20)
- 2A) What are the effects of radiation on macromolecules and their consequences? Describe. (10)
- 2B) How the radiation affects chromosome of the cell? Write a detailed description of various chromosomal aberrations induced by radiation with illustrated diagrams. (10)
- 3A) Define and describe LD₅₀₍₃₀₎. (5)
- 3B) Explain the effect of radiation on human fetus. (5)
- 3C) Add a brief note on Photoelectric effect. (5)
- 3D) Discuss the consequences of radiation exposure to skin. (5)
- 3E) Explain Stochastic and Non-stochastic effects - give example to each. (5)
- 3F) Briefly explain the effect of radiation on cell cycle. (5)
- 4A) Excitation and indirect effect of ionizing radiation (2)
- 4B) Genetically significant dose (GSD) (2)
- 4C) Define D₀ and D_q parameters of cell survival curve. (2)
- 4D) List out four radiation induced DNA lesions. (2)
- 4E) Define Sub lethal damage and potentially lethal damage. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. MRT DEGREE EXAMINATION - AUG/SEP 2018
SUBJECT: BMRT 110 - PSYCHOLOGY
(2016 SCHEME)

Friday, August 31, 2018 (10.00 - 13.00 Hrs.)

Answer ALL the questions.

Marks: 100

Duration: 180 mins.

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| 1) | Define perception and principles of perceptual organization with examples. | (20) |
| 2) | Describe various models of mental disorders. | (20) |
| 3) | Explain mood disorder. | (10) |
| 4) | Explain emotion development in children and adolescents. | (10) |
| 5A) | Supportive psychotherapy. | (5) |
| 5B) | Neuropsychological assessment. | (5) |
| 5C) | Fine motor skills. | (5) |
| 5D) | Write the steps in problem solving. | (5) |
| 5E) | Theories of forgetting. | (5) |
| 5F) | Cognitive and learning models of mental disorder. | (5) |
| 6A) | Introspection method. | (2) |
| 6B) | Observational learning. | (2) |
| 6C) | Self-report measures. | (2) |
| 6D) | Shaping. | (2) |
| 6E) | Sensory motor stage. | (2) |

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**SECOND SEMESTER BPT/ B.Sc. MRT/B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. MIT/ B.Sc. RRT & DT/ BOPT/ BOT/
B.Sc. E.S.S./ B.Sc. MLT DEGREE EXAMINATION - AUG/SEPT 2018**

SUBJECT: PHYSIOLOGY - II

**(PHYS 102/BPT 104; BMRT 102; PHYS 102; PHYS 102/BMIT 104; PHYS 102; PHYS 102/BOPT 102;
PHYS 102)**

(2016 RV & 2016 SCHEME)

Wednesday, August 29, 2018 (10.00 - 12.00 Hrs.)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

- 1A) With the help of a diagram describe the mechanism of gastric acid secretion. (5)
- 1B) Describe the different types of movements of small intestine. (5)
- 2A) Describe the regulation of thyroid hormone secretion in the form of a flow chart. (5)
- 2B) Mention any five actions of thyroid hormone. (5)
- 3A) Explain the actions of testosterone (5)
- 3B) Define glomerular filtration rate. Give its normal value. Mention three factors affecting GFR. (5)
- 3C) List two functions of Basal Ganglia. Give the cause and list any two clinical features of Parkinson's disease. (5)
- 3D) Mention the site of formation, absorption and three functions of cerebrospinal fluid. (5)
- 4A) List any two functions of saliva (2)
- 4B) List any two actions of cortisol. (2)
- 4C) Mention any two functions of kidney (2)
- 4D) List any two properties of synapses. (2)
- 4E) List any two functions of thalamus. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - AUG/SEPT
2018

SUBJECT: PSYC 202 - GENERAL PSYCHOLOGY
(2016 RV SCHEME)

Friday, August 31, 2018 (10.00 - 12.00)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

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| 1) | Explain Piaget's theory of Cognitive development. | (10) |
| 2) | Describe the major perspectives of Psychology. | (10) |
| 3A) | Bandura's Observation learning | (5) |
| 3B) | Types of Conflicts | (5) |
| 3C) | Maslow's hierarchy of needs | (5) |
| 3D) | Big five factor theory | (5) |
| 4A) | Rating scale | (2) |
| 4B) | Concepts | (2) |
| 4C) | Crystallized intelligence | (2) |
| 4D) | Define Emotion | (2) |
| 4E) | Shape constancy | (2) |

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