

Question Paper

Exam Date & Time: 07-Jun-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY/ B.Sc. RADIOTHERAPY TECHNOLOGY DEGREE
EXAMINATION - MAY/JUNE 2019
SUBJECT: BMRT 108/BRTT 106 - RADIOBIOLOGY
(2016 SCHEME/2016 RV SCHEME)
Friday, June 07, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1A) Describe ionizing radiation induced chromosomal aberrations with illustrated diagrams. (20)
- 1B) Define radiation and describe the various interactions of ionizing radiation with matter. (20)
- 2A) Describe the radiolysis of water and its chemical reactions. (10)
- 2B) Define cell survival curve and explain the various parameters by illustrating a typical mammalian shouldered *in vitro* cell survival curve. (10)
- 3A) Define LD50₍₃₀₎ and explain the experiment to derive LD50₍₃₀₎ dose for a mice colony. (5)
- 3B) Acute Radiation Syndrome - Discuss briefly. (5)
- 3C) Add a note on Stochastic and Non-stochastic effects of radiation. (5)
- 3D) Briefly discuss the effect of radiation on DNA. (5)
- 3E) Effect of radiation on Skin and Ovary. (5)
- 3F) Effect of radiation on mammalian cell cycle. (5)
- 4A) Direct and indirect effects of radiation (2)
- 4B) Genetically Significant Dose (GSD) (2)
- 4C) SLD and PLD repair (2)
- 4D) Factors influencing cellular radiosensitivity (2)
- 4E) Effect of radiation on cell membrane. (2)

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Question Paper

Exam Date & Time: 31-May-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER BPT AND SECOND SEMESTER B.Sc. M.R.T./BASLP DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT: PSYC 204/BMRT 110 - PSYCHOLOGY/ CLINICAL PSYCHOLOGY
(2016/2017 SCHEME)
Friday, May 31, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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|-----|---|------|
| 1A) | Define emotion. Discuss various theories of emotion. | (20) |
| 1B) | Explain personality disorders according to ICD - 10 classification. | (20) |
| 2A) | Describe any two models of mental disorders. | (10) |
| 2B) | Piaget's theory of cognitive development. | (10) |
| 3A) | Mental retardation | (5) |
| 3B) | Perceptual organization | (5) |
| 3C) | Schizophrenia- Subtypes | (5) |
| 3D) | Types of conflict | (5) |
| 3E) | Classical conditioning | (5) |
| 3F) | Concepts of normality | (5) |
| 4A) | Shaping | (2) |
| 4B) | Phobia | (2) |
| 4C) | Introspection method | (2) |
| 4D) | Intelligence | (2) |
| 4E) | Types of memory | (2) |

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Question Paper

Exam Date & Time: 11-Jun-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY/B.Sc. RADIOTHERAPY TECHNOLOGY DEGREE
EXAMINATION - MAY/JUNE 2019

SUBJECT: BMRT 106/BRTT 104 - RADIATION QUANTITIES AND DETECTION
(2016 SCHEME/2016 RV SCHEME)

Tuesday, June 11, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Write briefly about V-I characteristic curve of gas filled detector with a neat diagram. (10)
- 2) Discuss in detail about radiometric quantities with relevant expression and units. (10)
- 3A) Write a short note on thimble chamber. (5)
- 3B) Define equivalent dose and effective dose. (5)
- 3C) Write a short note on Photomultiplier tube. (5)
- 3D) **Define:** (5)
 - a) Unit of exposure
 - b) Activity
- 4A) What is Townsend Avalanche? (2)
- 4B) Give examples for inorganic scintillation detectors. (2)
- 4C) Explain p-type and n-type semiconductors. (2)
- 4D) Define LET and mention its unit. (2)
- 4E) Mention different filters used in TLD badges. (2)

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Question Paper

Exam Date & Time: 31-May-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. RRT&DT / BOPT / B.O.T. / B.Sc. H.I.M. / B.Sc. E.S.S.
AND SECOND SEMESTER B.Sc. M.R.T. DEGREE EXAMINATION - MAY/JUNE 2019
SUBJECT : GENERAL PSYCHOLOGY/ PSYCHOLOGY (PSYC 202)
(2016/2016 RV SCHEME)
Friday, May 31, 2019 (14.00 - 16.00)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

Write essays on:

- 1) Explain Classical conditioning along with its applications. (10)
- 2) Elaborate on any two theories of motivation. (10)

3) Write short notes on:

- 3A) Perceptual organization (5)
- 3B) Heuristics (5)
- 3C) Defence mechanisms (5)
- 3D) Types of conflicts (5)

4) Write very short answers on:

- 4A) Introspection (2)
- 4B) Shaping (2)
- 4C) Frustration (2)
- 4D) IQ (2)
- 4E) Fine motor skills (2)

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