

## NATIONAL UNIVERSITY OF IRELAND, GALWAY

**Master of Medical Science Degree Examination**  
**Core Course – Session 1999/2000****Examination Paper – Thursday 9<sup>th</sup> December, 1999-11-30****WRITE NOTES ON TEN (10) OF THE FOLLOWING****Time Allowed:        2 Hours****ANSWER QUESTIONS ON A SEPARATE ANSWER SHEET****Please do not remove Question Paper from Examination Hall**

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1. Write notes on (a) or (b)
    - (a) Write brief notes on three of the following:
      - (i) Gravimetric analysis
      - (ii) Electrometric analysis
      - (iii) Quantitative analysis
      - (iv) Accuracy
      - (v) Precision
    - (a) Reagent excess, sandwich immunoassays.  
*(Prof. J. Gosling).*
  2. Write notes on (a) or (b)
    - (a) Mutation and genetic disease
    - (b) Polymerase chain reaction  
*(Dr. P. Creighton)*
  3. Write notes on either (a) or (b)
    - (a) Information management strategies in medical practice
    - (b) The electronic medical journal  
*( Dr. R. Comerford)*
  4. Write notes on either (a) or (b)
    - (a) Cell-based DNA cloning
    - (b) Mouse models for human  
*(Dr. P. Creighton)*
  5. Write notes on either (a) or (b)
    - (a) Chromosome banding techniques
    - (b) Fluorescence in situ hybridization (FISH) and diagnostic cytogenetics.  
*(Prof. J. Houghton)*
  6. Write notes on either (a) or (b)
    - (a) Why, in your opinion, is the use of visual aids in teaching much more important at the present time than they were for teachers earlier this century ?
    - (b) Briefly describe some of the effects that the movement of the lecturer may have on the audience.  
*(Dr. O. Ryan)*

7. Write notes on either (a) or (b)
  - (a) The use of monoclonal antibodies as tumour markers in pathology.
  - (b) What do we mean by "masking" of antigens ?  
What techniques are used in the lab to "unmask" them.

**(Prof. C.E. Connolly)**
8. Write notes on either (a) or (b)
  - (a) Discuss the application of cell culture in haematology
  - (b) Discuss techniques of cell identification used in haematology practice.

**(Dr. M. Murray)**
9. Write notes on either (a) or (b)
  - (a) Discuss the rationale for stem cell transplantation in cancer therapy.
  - (b) Cytotoxic chemotherapy. Discuss the problems of marrow suppression and techniques for "avoidance".

**(Prof. E.L. Egan)**
10. Write notes on either (a) or (b)
  - (a) Is mammography an effective screening test for the early diagnosis of breast cancer ?
  - (b) Is transrectal ultrasound alone an effective screening test for prostate cancer?

**(Prof. P. McCarthy)**
11. Write notes on either (a) or (b)
  - (a) Moral arguments concerning the determination of a human (personal) life at different stages of pregnancy.
  - (b) Moral arguments for and against abortion.

**(Prof. M. Worner)**
12. Write notes on either (a) or (b)
  - (a) Reasons for increases in health expenditure.
  - (b) Cost-effectiveness analysis.

**(Dr. D. McKeon)**
13. Write notes on either (a) or (b)
  - (a) How does Rogers' Innovation-Diffusion theory affect likelihood of individual success in changing lifestyle habits ?
  - (b) Comment on the usefulness of the Hospital Inpatient Enquiry System (HIPE) in assessing population morbidity.

**(Prof. C. Kelleher)**
14. Write notes on either (a) or (b)
  - (a) Outline current healthy eating guidelines
  - (b) Write an account of all those involved in the food chain, who would contribute to healthy eating in the Irish population.

**(Ms. G. Nolan)**