

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**SELECTION EXAMINATION IN MD (OBSTETRICS & GYNAECOLOGY)**  
**FEBRUARY/APRIL 2022**

**Date:-** 19<sup>th</sup> April 2022

**Time:-** 1.00 p.m. – 4.00 p.m.

**Answer all six (06) questions.**

**Answer each question in a separate answer book.**

**SHORT ANSWER QUESTIONS**

1. Describe the macroscopic anatomy and the nerve supply of the female pelvic diaphragm with reference to its clinical importance. (100 marks)
2. Discuss the cardiovascular adaptations in the antenatal period in a healthy woman. Explain the pathophysiological basis of their derangements in pregnancy induced hypertension. (100 marks)

**STRUCTURED ESSAY QUESTIONS**

3.
  - 3.1. List the potential pre-malignant lesions detected by a cervical smear test. Outline their significance and methods of management. (40 marks)
  - 3.2. Describe the pathogenesis of cervical carcinoma. (40 marks)
  - 3.3. Outline how vaccination prevents cervical carcinoma. (20 marks)
4.
  - 4.1. Describe the physiological and endocrine changes associated with menopause. (25 marks)
  - 4.2. In a postmenopausal woman there is still some circulating estrogen. Describe the production and endocrine effects of this. (10 marks)
  - 4.3. Discuss the clinical effects and symptoms experienced by menopausal women. (25 marks)
  - 4.4. Describe the types of hormone replacement therapy available for treating menopausal symptoms and their side effects. (40 marks)

Contd...../2-

5. A 35-year-old otherwise healthy woman was found to have abnormal liver function tests in routine investigation at a well woman clinic. Hepatitis B was suspected.

5.1. Outline the pathogenesis of Hepatitis B infection. (60 marks)

5.2. Describe the laboratory diagnosis of hepatitis B infection indicating the changes in laboratory investigations in acute and chronic stages. (40 marks)

6.

6.1. A 35-year-old primigravida with a period of amenorrhoea of 32 weeks presents to the emergency treatment unit with dizziness of acute onset, generalized itching and vomiting. She has eaten a mixed fried rice 20 minutes before. She is not in labour.

Her blood pressure is 90/70 mmHg, pulse rate is 90 beats/minute oxygen saturation on air is 96%. On auscultation she has wide spread rhonchi on both lung fields.

6.1.1. Describe briefly the immediate drug management of this patient. (15 marks)

6.1.2. Describe the pharmacological basis for use of the above drug in this patient. (25 marks)

6.1.3. State two (02) other drugs you would use in the management of this patients. Give the routes of administration. (10 marks)

6.2. This is an extract from an abstract of a randomized controlled trial conducted among Caucasian pregnant women who were either supplemented with antenatal vitamin D (n = 21) (25 µg/day) in the third trimester or given no vitamin D supplement (n = 29). **The authors reported a significant increase in maternal serum 25-OHD concentrations (nmol/litre) in the daily dose group, compared with the control group (25.3 ± 7.7 versus 9.4 ± 4.9).** There was a positive correlation between the maternal and cord blood 25-OHD concentrations (r = 0.95; P < 0.0001).

6.2.1. What type of a variable is “maternal serum 25-OHD concentration”? (05 marks)

6.2.2. Evaluate the statistical inferences included in the sentence underlined in the abstract. (30 marks)

6.2.3. Interpret the positive correlation between the maternal and cord blood 25-OHD concentrations of r = 0.95 observed in this study. (15 marks)