



**ANATOMY**  
**PAPER – I**

ANT/D/14/02/I

Time : 3 hours

Max. Marks : 100

**Important instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. Development and congenital anomalies of the vertebral column. 6+4
2. Development and microanatomy of urinary bladder. 5+5
3. Blood-air barrier and its modifications in the respiratory tract epithelium in relation to its function. 10
4. Development and congenital anomalies of inferior vena cava. Add a note on retrocaval ureter. (4+4)+2
5. Describe the phenomenon of compaction and the pathways of determination for normal development. Add a note on molecular regulation of these events. (4+4)+2
6. Microstructure of hairy skin & pilo-sebaceous unit. 6+4
7. Development of conotruncal swellings, especially with reference to the congenital septal defects of heart. 6+4
8. Structure and function of mitochondria. Add a note on special staining procedure for mitochondria. 6+4
9. Enumerate the radioimaging techniques for (a) visualization of gastrointestinal tract. (b) Draw diagram(s) to show the supracolic compartment of abdomen. 4+6
10. Describe the formation and circulation of lymphocytes in the body and their role in the immune system. Enumerate various subtypes of T-lymphocytes and their role in immune mechanism. 6+4

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