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
- Draw tables/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. Intra-renal vascular anatomy, calyceal anatomy and technique of puncture for PCNL.

2. Discuss the pathophysiological mechanism of varicocele-induced infertility. Mention the controversies in the management of adolescent varicocele.

3. Embryology and surgical importance of Horse-shoe kidney.

4. Explain in brief bacterial virulence and bacterial adherence. Discuss their role in pathogenesis of urinary tract infections.

5. Indications, patient preparation, contrast used, method and complications of retrograde urethrography.

6. What is Contrast Induced Nephropathy (CIN)? What are the risk factors for CIN? Discuss its preventive strategies.

7. What are PDE-5 inhibitors? Describe mechanism of action, indications and side effects of PDE-5 inhibitors.


10. 'Inhibitors and promoters' of crystal formation in urinary tract.